



सत्यमेव जयते

GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

**ANALYSIS OF RATES
FOR DELHI**

(VOL. 2)

2016



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Director General



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FOREWORD

Central Public Works Department Analysis of Rates for Delhi is a very comprehensive and useful document forming basis for the rates of various items. It is based on scientific assessment of Inputs of materials, labour and machinery in various items of work normally involved in civil construction projects.

It was first compiled in the year 1950, followed by subsequent publication or revision in the years 1955, 1962, 1972, 1977, 1985, 1997, 2007, 2012, 2013 & 2014. Since publication of Analysis of Rates for Delhi 2014, prices of labour and materials have registered some changes. Besides the decrease in the cost of Cement and Steel, a number of new construction materials have also emerged. Innovation & introduction of new technology and mechanization of construction techniques have also taken place. This has necessitated revision of existing Analysis of Rates for Delhi 2014 to include the above changes. Accordingly, this Analysis of Rates for Delhi 2016 has been prepared.

The analysis of existing items has been updated in conformity with updated items of works in DSR 2016.

I wish to place on record the technical input and the effective coordination on the part of Shri Abhai Sinha, Special D.G.(HQ), Shri Balraj Chadha, ADG (TD), Shri M.K. Sharma, Chief Engineer(CSQ) and the efforts put in by Shri S.P. Chaudhary, Director (Tech & PR) and team of officers in CSQ unit in finalizing Analysis of Rates for Delhi 2016 in a record time.

I am sure that C.P.W.D. Analysis of Rates for Delhi 2016 shall be very useful document to various Central Govt. Ministries, Departments & Public Sector Undertakings also besides various units of CPWD.

(Divakar Garg)
DIRECTOR GENERAL

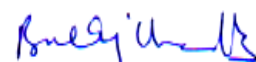
Place : New Delhi
Date : July, 2016

PREFACE

1. C.P.W.D. Analysis of Rates for Delhi 2016 is the revised edition of C.P.W.D. Analysis of Rates for Delhi 2014.
2. Analysis of Rates for Delhi 2016 incorporates most of the analysis of items of Analysis of Rates for Delhi 2014 with updated correction slips, including analysis of existing items and also corresponding new items introduced in DSR 2016.
3. Analysis of Rates for Delhi, 2016 is published in two volumes i.e. volume I & II as under:

Volume Number	Sub-head No.	Content/ Sub-head
One	00	Basic Rates
	01	Carriage of Materials
	02	Earth Work
	03	Mortars
	04	Concrete Work
	05	Reinforced Cement Concrete
	06	Brick Work
	07	Stone Work
	08	Marble & Granite Work
	09	Wood and PVC Work
	10	Steel Work
	11	Flooring
	12	Roofing
Two	13	Finishing
	14	Repairs to Buildings
	15	Dismantling and Demolishing
	16	Road Work
	17	Sanitary Installations
	18	Water Supply
	19	Drainage
	20	Pile work
	21	Aluminium Work
	22	Water Proofing
	23	Rain Water Harvesting & Tubewells
	24	Conservation of Heritage Buildings.
	25	Structural Glazing Aluminium Composite Panel
	26	New Technologies and Materials

4. Analysis of few existing items in sub head - 4 (RCC Work) and 18 (Water Supply) have been deleted. Similarly, analysis of many items have been modified to correspond to items of DSR 2016. Several new analysis and sub items have been introduced in Analysis of Rates for Delhi 2016. Labour coefficients for items of dry stone cladding, stone jali work in sub head 07 have also been modified. Similarly, the labour coefficient for marble work 08 have also been modified.
5. Analysis of Rates for Delhi, 2016 is based on the study of current market rates of materials at Delhi, prevailing as on 01-04-2016. The basic rates of materials, incorporated in the analysis, pertain to materials conforming to BIS Standards/ CPWD Specifications/Materials of good quality generally available in the market. Labour rates are taken from the minimum wages issued by the Government of Delhi and Central Govt. (whichever is higher) w.e.f. 01.04.2016.
6. The nomenclatures of main items have been printed along with the analysis of first Sub item only to conserve the space and number of pages.
7. Sundries have been considered as 1.73 times based on Cost Index of Delhi as on 01.04.2016 (102) with base as per PAR-2012 as 100.
8. Lot of efforts have gone into the preparation of this Analysis of Rates for Delhi 2016. I convey my deep appreciation and sincere thanks to Shri M K Sharma CE(CSQ), Shri S P Chaudhary, Director (T& PR), Shri P.P Singh, SE (QA-cum-TLC), Shri S.K. Srivastava, E EE (QA) Shri D.K. Choudhary, EE (QA) and team, Shri Sanjeev Rastogi , SE (C& M), Shri Virender Kumar, EE (C), Shri Keshav Ram, EE (M) and his team, Shri R B Garg, EE(TAS-II), Shri K R Meena, EE(TAD) and his team, Shri D.S. Adhikari, AE (QA) and other officers and staff of CSQ unit whose names are not mentioned here, for sincere efforts made in the preparation of this document in such a short time. Various Committees and field units, who contributed field inputs, also deserve appreciation for their timely help.
9. Due care has been taken to print the C.P.W.D. Analysis of Rates for Delhi as correctly as possible. It is, however possible that some errors might have crept in. In case any error or omission is noticed, it may be brought to the notice of the Superintending Engineer (TAS), CPWD, Room no. 418, A-wing, Nirman Bhawan, New Delhi.



(Balraj Chadha)

ADG (TD), CPWD,
Nirman Bhawan, New Delhi.

New Delhi

Dated: July, 2016

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Note: For Sub Heads 1 to 12 refer to Vol. 1

SUB HEAD : 13.0
FINISHING

13.1 12 mm cement plaster of mix :**13.1.1 1:4 (1 cement: 4 fine sand)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand)	cum	0.144	3499.70	503.96
	Rate as per Item Number 3.4 of SH: Mortars				
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1489.11
	Add 1 % Water charges				14.89
	TOTAL				1504.00
	Add 15 % Contractor's profit and overheads				225.60
	Cost of 10.00 sqm				1729.60
	Cost of 1.00 sqm				172.96
	Say				172.95

13.1.2 1:6 (1 cement: 6 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand)	cum	0.144	2746.70	395.52
	Rate as per Item Number 3.6 of SH: Mortars				
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1380.67
	Add 1 % Water charges				13.81
	TOTAL				1394.48
	Add 15 % Contractor's profit and overheads				209.17
	Cost of 10.00 sqm				1603.65
	Cost of 1.00 sqm				160.36
	Say				160.35

13.2 15 mm cement plaster on the rough side of single or half brick wall of mix :**13.2.1 1:4 (1 cement: 4 fine sand)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand)	cum	0.172	3499.70	601.95
	Rate as per Item Number 3.4 of SH: Mortars				
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1724.14
	Add 1 % Water charges				17.24
	TOTAL				1741.38
	Add 15 % Contractor's profit and overheads				261.21
	Cost of 10.00 sqm				2002.59
	Cost of 1.00 sqm				200.25
	Say				200.25

13.2.2 1:6 (1 cement: 6 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand)				
	Rate as per Item Number 3.6 of SH: Mortars	cum	0.172	2746.70	472.43
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1594.62
	Add 1 % Water charges				15.95
	TOTAL				1610.57
	Add 15 % Contractor's profit and overheads				241.59
	Cost of 10.00 sqm				1852.16
	Cost of 1.00 sqm				185.21
	Say				185.20

13.3 20 mm cement plaster of mix :

13.3.1 1:4 (1 cement: 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
	Rate as per Item Number 3.4 of SH: Mortars	cum	0.224	3499.70	783.93
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2067.79
	Add 1 % Water charges				20.68
	TOTAL				2088.47
	Add 15 % Contractor's profit and overheads				313.27
	Cost of 10.00 sqm				2401.74
	Cost of 1.00 sqm				240.17
	Say				240.15

13.3.2 1:6 (1 cement: 6 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand)				
	Rate as per Item Number 3.6 of SH: Mortars	cum	0.224	2746.70	615.26
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1899.12
	Add 1 % Water charges				18.99
	TOTAL				1918.11
	Add 15 % Contractor's profit and overheads				287.72
	Cost of 10.00 sqm				2205.83
	Cost of 1.00 sqm				220.58
	Say				220.60

13.4 12 mm cement plaster of mix :**13.4.1 1:4 (1 cement: 4 coarse sand)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.9	Cement mortar 1 : 4 (1 cement : 4 coarse sand)				
	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3970.50	571.75
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1556.90
	Add 1 % Water charges				15.57
	TOTAL				1572.47
	Add 15 % Contractor's profit and overheads				235.87
	Cost of 10.00 sqm				1808.34
	Cost of 1.00 sqm				180.83
	Say				180.85

13.4.2 1:6 (1 cement: 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.11	Cement mortar 1 : 6 (1 cement : 6 coarse sand)				
	Rate as per Item Number 3.11 of SH: Mortars	cum	0.144	3217.50	463.32
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1448.47
	Add 1 % Water charges				14.48
	TOTAL				1462.95
	Add 15 % Contractor's profit and overheads				219.44
	Cost of 10.00 sqm				1682.39
	Cost of 1.00 sqm				168.23
	Say				168.25

13.5 15 mm cement plaster on rough side of single or half brick wall of mix:

13.5.1 1:4 (1 cement: 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1 : 4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.172	3970.50	682.93
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1805.12
	Add 1 % Water charges				18.05
	TOTAL				1823.17
	Add 15 % Contractor's profit and overheads				273.48
	Cost of 10.00 sqm				2096.65
	Cost of 1.00 sqm				209.66
	Say				209.65

13.5.2 1:6 (1 cement: 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1 : 6 (1 cement : 6 coarse sand)				
3.11	Rate as per Item Number 3.11 of SH: Mortars	cum	0.172	3217.50	553.41
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1675.60
	Add 1 % Water charges				16.76
	TOTAL				1692.36
	Add 15 % Contractor's profit and overheads				253.85
	Cost of 10.00 sqm				1946.21
	Cost of 1.00 sqm				194.62
	Say				194.60

13.6 20 mm cement plaster of mix :**13.6.1 1:4 (1 cement: 4 coarse sand)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL Cement mortar 1 : 4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.224	3970.50	889.39
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2173.25
	Add 1 % Water charges				21.73
	TOTAL				2194.98
	Add 15 % Contractor's profit and overheads				329.25
	Cost of 10.00 sqm				2524.23
	Cost of 1.00 sqm				252.42
	Say				252.40

13.6.2 1:6 (1 cement: 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL Cement mortar 1 : 6 (1 cement : 6 coarse sand)				
3.11	Rate as per Item Number 3.11 of SH: Mortars	cum	0.224	3217.50	720.72
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2004.58
	Add 1 % Water charges				20.05
	TOTAL				2024.63
	Add 15 % Contractor's profit and overheads				303.69
	Cost of 10.00 sqm				2328.32
	Cost of 1.00 sqm				232.83
	Say				232.85

13.7 12 mm cement plaster finished with a floating coat of neat cement of mix :**13.7.1 1:3 (1 cement: 3 fine sand)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL Cement mortar 1 : 3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.144	4252.70	612.39

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				1952.77
	Add 1 % Water charges				19.53
	TOTAL				1972.30
	Add 15 % Contractor's profit and overheads				295.85
	Cost of 10.00 sqm				2268.15
	Cost of 1.00 sqm				226.81
	Say				226.80

13.7.2 1:4 (1 cement: 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
	Rate as per Item Number 3.4 of SH: Mortars	cum	0.144	3499.70	503.96
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				1844.34
	Add 1 % Water charges				18.44
	TOTAL				1862.78
	Add 15 % Contractor's profit and overheads				279.42
	Cost of 10.00 sqm				2142.20
	Cost of 1.00 sqm				214.22
	Say				214.20

13.8 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :

13.8.1 1:3 (1 cement: 3 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.3	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
	Rate as per Item Number 3.3 of SH: Mortars	cum	0.172	4252.70	731.46

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				2208.88
	Add 1 % Water charges				22.09
	TOTAL				2230.97
	Add 15 % Contractor's profit and overheads				334.65
	Cost of 10.00 sqm				2565.62
	Cost of 1.00 sqm				256.56
	Say				256.55

13.8.2 1:4 (1 cement: 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
	Rate as per Item Number 3.4 of SH: Mortars	cum	0.172	3499.70	601.95
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				2079.37
	Add 1 % Water charges				20.79
	TOTAL				2100.16
	Add 15 % Contractor's profit and overheads				315.02
	Cost of 10.00 sqm				2415.18
	Cost of 1.00 sqm				241.51
	Say				241.50

13.9 Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.

13.9.1 12 mm cement plaster

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1:3 (1 cement : 3 coarse sand)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.8	Rate as per Item Number 3.8 of SH: Mortars LABOUR	cum	0.144	4723.50	680.18
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				2020.56
	Add 1 % Water charges				20.21
	TOTAL				2040.77
	Add 15 % Contractor's profit and overheads				306.12
	Cost of 10.00 sqm				2346.89
	Cost of 1.00 sqm				234.68
	Say				234.70

13.9.2 20 mm cement plaster

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
3.8	Cement mortar 1:3 (1 cement : 3 coarse sand) Rate as per Item Number 3.8 of SH: Mortars LABOUR	cum	0.224	4723.50	1058.06
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				2697.15
	Add 1 % Water charges				26.97
	TOTAL				2724.12
	Add 15 % Contractor's profit and overheads				408.62
	Cost of 10.00 sqm				3132.74
	Cost of 1.00 sqm				313.27
	Say				313.25

13.10 15 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL Cement mortar 1:3 (1 cement : 3 coarse sand)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.8	Rate as per Item Number 3.8 of SH: Mortars LABOUR	cum	0.172	4723.50	812.44
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				2289.86
	Add 1 % Water charges				22.90
	TOTAL				2312.76
	Add 15 % Contractor's profit and overheads				346.91
	Cost of 10.00 sqm				2659.67
	Cost of 1.00 sqm				265.96
	Say				265.95

13.11 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement : 6 fine sand).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
	Under layer Cement mortar 1 : 5 (1 cement : 5 coarse sand)				
3.10	Rate as per Item Number 3.10 of SH: Mortars Top layer Cement mortar 1 : 6 (1 cement : 6 fine sand)	cum	0.144	3565.05	513.37
3.6	Rate as per Item Number 3.6 of SH: Mortars LABOUR	cum	0.072	2746.70	197.76
0155	Mason (average)	day	1.21	467.00	565.07
0115	Coolie	day	1.29	368.00	474.72
0101	Bhisti	day	1.05	407.00	427.35
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2200.09
	Add 1 % Water charges				22.00
	TOTAL				2222.09
	Add 15 % Contractor's profit and overheads				333.31
	Cost of 10.00 sqm				2555.40
	Cost of 1.00 sqm				255.54
	Say				255.55

13.12 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
3.10	Under layer Cement mortar 1 : 5 (1 cement : 5 coarse sand) Rate as per Item Number 3.10 of SH: Mortars	cum	0.144	3565.05	513.37
3.8	Top layer Cement mortar 1:3 (1 cement : 3 coarse sand) Rate as per Item Number 3.8 of SH: Mortars	cum	0.072	4723.50	340.09
	LABOUR				
0155	Mason (average)	day	1.21	467.00	565.07
0115	Coolie	day	1.29	368.00	474.72
0101	Bhisti	day	1.05	407.00	427.35
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2342.42
	Add 1 % Water charges				23.42
	TOTAL				2365.84
	Add 15 % Contractor's profit and overheads				354.88
	Cost of 10.00 sqm				2720.72
	Cost of 1.00 sqm				272.07
	Say				272.05

13.13 12 mm cement plaster 1:2 (1 cement : 2 stone dust).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
3.12	Cement mortar 1:2 (1 Cement : 2 stone dust) Rate as per Item Number 3.12 of SH: Mortars	cum	0.144	5233.50	753.62
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1738.77
	Add 1 % Water charges				17.39
	TOTAL				1756.16
	Add 15 % Contractor's profit and overheads				263.42
	Cost of 10.00 sqm				2019.58
	Cost of 1.00 sqm				201.95
	Say				201.95

13.14 15 mm cement plaster 1:2 (1 cement : 2 stone dust) on the rough side of single or half brick wall.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
	Cement mortar 1:2 (1 Cement : 2 stone dust)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.12	Rate as per Item Number 3.12 of SH: Mortars	cum	0.172	5233.50	900.16
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0115	Coolie	day	0.88	368.00	323.84
0101	Bhisti	day	0.99	407.00	402.93
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2022.35
	Add 1 % Water charges				20.22
	TOTAL				2042.57
	Add 15 % Contractor's profit and overheads				306.39
	Cost of 10.00 sqm				2348.96
	Cost of 1.00 sqm				234.89
	Say				234.90

13.15 20 mm cement plaster 1:2 (1 cement : 2 stone dust).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1:2 (1 Cement : 2 stone dust)				
3.12	Rate as per Item Number 3.12 of SH: Mortars	cum	0.224	5233.50	1172.30
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2456.16
	Add 1 % Water charges				24.56
	TOTAL				2480.72
	Add 15 % Contractor's profit and overheads				372.11
	Cost of 10.00 sqm				2852.83
	Cost of 1.00 sqm				285.28
	Say				285.30

13.16 6 mm cement plaster of mix :

13.16.1 1:3 (1 cement : 3 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.072	4252.70	306.19
	LABOUR				
0155	Mason (average)	day	0.51	467.00	238.17
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Extra for removing burrs, cleaning with wire brushes, pock making with pointed tool etc. complete.	L.S.	13.39	1.73	23.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and sundries	L.S.	11.70	1.73	20.24
	TOTAL				1238.20
	Add 1 % Water charges				12.38
	TOTAL				1250.58
	Add 15 % Contractor's profit and overheads				187.59
	Cost of 10.00 sqm				1438.17
	Cost of 1.00 sqm				143.81
	Say				143.80

13.17 6 mm cement plaster 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.3	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
	Rate as per Item Number 3.3 of SH: Mortars	cum	0.072	4252.70	306.19
	LABOUR				
0155	Mason (average)	day	0.51	467.00	238.17
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Extra for removing burrs, cleaning with wire brushes, pock making with pointed tool etc. complete.	L.S.	13.39	1.73	23.16
9999	Scaffolding and sundries	L.S.	11.7	1.73	20.24
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
0776	Satna lime	quintal	0.01	370.00	3.70
9999	Indigo gum etc	L.S.	2.08	1.73	3.60
9999	Sundries ladder etc.	L.S.	0.52	1.73	0.90
0141	White Washer	day	0.07	407.00	28.49
0115	Coolie	day	0.07	368.00	25.76
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				1660.60
	Add 1 % Water charges				16.61
	TOTAL				1677.21
	Add 15 % Contractor's profit and overheads				251.58
	Cost of 10.00 sqm				1928.79
	Cost of 1.00 sqm				192.87
	Say				192.85

13.18 Neat cement punning.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0367	Portland Cement (OPC-43 grade)	tonne	0.022	5700.00	125.40
2209	Carriage of Cement	tonne	0.022	92.24	2.03

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				366.82
	Add 1 % Water charges				3.67
	TOTAL				370.49
	Add 15 % Contractor's profit and overheads				55.57
	Cost of 10.00 sqm				426.06
	Cost of 1.00 sqm				42.60
	Say				42.60

13.19 Rough cast plaster upto 10 m height above ground level with a mixture of sand and gravel or crushed stone from 6 mm to 10 mm nominal size, dashed over and including the fresh plaster in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.

13.19.1 Ordinary cement finish using ordinary cement

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Under layer 12 mm thick cement plaster				
	Cement mortar 1 : 4 (1 cement :				
	4 coarse sand)				
3.9	Rate as per Item Number 3.9 of				
	SH: Mortars	cum	0.144	3970.50	571.75
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0114	Beldar	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	9.88	1.73	17.09
	Top layer 10 mm thick cement plaster				
	Cement mortar 1 : 3 (1 cement :				
	3 fine sand)				
3.3	Rate as per Item Number 3.3 of				
	SH: Mortars	cum	0.12	4252.70	510.32
0155	Mason (average)	day	0.61	467.00	284.87
0114	Beldar	day	0.69	368.00	253.92
0101	Bhisti	day	0.85	407.00	345.95
9999	Scaffolding and sundries	L.S.	9.88	1.73	17.09
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	0.10	900.00	90.00
0101	Bhisti	day	0.01	407.00	4.07
0777	Dry hydrated lime (factory made)	quintal	0.09	280.00	25.20
9977	Carriage of lime	L.S.	3.64	1.73	6.30
0155	Mason (average)	day	0.50	467.00	233.50
0114	Beldar	day	0.50	368.00	184.00
0101	Bhisti	day	0.10	407.00	40.70
9999	Scaffolding and sundries	L.S.	9.88	1.73	17.09
	Labour for scooping				
0123	Mason (brick layer) 1st class	day	0.25	487.00	121.75

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.25	368.00	92.00
	TOTAL				3778.93
	Add 1 % Water charges				37.79
	TOTAL				3816.72
	Add 15 % Contractor's profit and overheads				572.51
	Cost of 10.00 sqm				4389.23
	Cost of 1.00 sqm				438.92
	Say				438.90

13.20 Pebble dash plaster upto 10 m height above ground level with a mixture of washed pebble or crushed stone 6 mm to 12.5 mm nominal size, dashed over and including fresh plaster in two layers under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 10% finely ground hydrated lime by volume of cement.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Under layer 12 mm thick cement plaster				
	Cement mortar 1 : 4 (1 cement :				
	4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3970.50	571.75
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0114	Beldar	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	9.88	1.73	17.09
	Top layer 10 mm thick cement plaster				
	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.12	4252.70	510.32
0155	Mason (average)	day	0.61	467.00	284.87
0114	Beldar	day	0.69	368.00	253.92
0101	Bhisti	day	0.85	407.00	345.95
9999	Scaffolding and sundries	L.S.	9.88	1.73	17.09
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	0.10	900.00	90.00
0101	Bhisti	day	0.01	407.00	4.07
0777	Dry hydrated lime (factory made)	quintal	0.09	280.00	25.20
9977	Carriage of lime	L.S.	3.64	1.73	6.30
0155	Mason (average)	day	0.50	467.00	233.50
0114	Beldar	day	0.50	368.00	184.00
0101	Bhisti	day	0.10	407.00	40.70
9999	Scaffolding and sundries	L.S.	9.88	1.73	17.09
9999	Scaffolding and sundries	L.S.	4.42	1.73	7.65
	TOTAL				3572.83
	Add 1 % Water charges				35.73
	TOTAL				3608.56
	Add 15 % Contractor's profit and overheads				541.28
	Cost of 10.00 sqm				4149.84
	Cost of 1.00 sqm				414.98
	Say				415.00

13.21 Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1213	Detail of cost for 12mm cement plaster 1:3 (1 cement :3 sand) = 10 sqm or 1.48 bags of cement used in the mix.				
	Cement required for 10 sqm = 73.89kg.				
	Water proofing material required @ 1 kg per 50 kg of cement = 1.48 kg.				
9999	Water proofing materials	kilogram	1.48	35.00	51.80
	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				64.17
	Add 1 % Water charges				0.64
	TOTAL				64.81
	Add 15 % Contractor's profit and overheads				9.72
	Cost of 1.48 bags of cement used in the mix.				74.53
	Cost of 1.00 bag of 50 kg cement used in the mix.				50.35
	Say				50.35

13.22 Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Detail of cost for 10 sqm Scaffolding and sundries	L.S.	53.82	1.73	93.11
	LABOUR				
0155	Mason (average)	day	0.20	467.00	93.40
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.10	407.00	40.70
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				349.98
	Add 1 % Water charges				3.50
	TOTAL				353.48
	Add 15 % Contractor's profit and overheads				53.02
	Cost of 10.00 sqm				406.50
	Cost of 1.00 sqm				40.65
	Say				40.65

13.23 Extra for plastering on circular work not exceeding 6 m in radius:

13.23.1 In one coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0155	Mason (average)	day	0.20	467.00	93.40
0114	Beldar	day	0.20	368.00	73.60
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				179.37
	Add 1 % Water charges				1.79
	TOTAL				181.16
	Add 15 % Contractor's profit and overheads				27.17
	Cost of 10.00 sqm				208.33
	Cost of 1.00 sqm				20.83
	Say				20.85

13.23.2 In two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	0.30	467.00	140.10
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				273.66
	Add 1 % Water charges				2.74
	TOTAL				276.40
	Add 15 % Contractor's profit and overheads				41.46
	Cost of 10.00 sqm				317.86
	Cost of 1.00 sqm				31.78
	Say				31.80

13.24 Extra for plastering done on moulding, cornices or architraves including neat finish to line and level:**13.24.1 In one coat**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	3.00	467.00	1401.00
0114	Beldar	day	2.00	368.00	736.00
0115	Coolie	day	1.00	368.00	368.00
0101	Bhisti	day	0.25	407.00	101.75
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				2629.91
	Add 1 % Water charges				26.30
	TOTAL				2656.21
	Add 15 % Contractor's profit and overheads				398.43
	Cost of 10.00 sqm				3054.64
	Cost of 1.00 sqm				305.46
	Say				305.45

13.24.2 In two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	5.00	467.00	2335.00
0114	Beldar	day	3.00	368.00	1104.00
0115	Coolie	day	2.00	368.00	736.00
0101	Bhisti	day	0.33	407.00	134.31
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				4332.47
	Add 1 % Water charges				43.32
	TOTAL				4375.79
	Add 15 % Contractor's profit and overheads				656.37
	Cost of 10.00 sqm				5032.16
	Cost of 1.00 sqm				503.21
	Say				503.20

13.25 Extra for plastering:**13.25.1 Spherical ceiling**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	0.75	467.00	350.25
0114	Beldar	day	0.74	368.00	272.32
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				669.12
	Add 1 % Water charges				6.69
	TOTAL				675.81
	Add 15 % Contractor's profit and overheads				101.37
	Cost of 10.00 sqm				777.18
	Cost of 1.00 sqm				77.71
	Say				77.70

13.25.2 Groined ceiling

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	0.80	467.00	373.60
0114	Beldar	day	0.80	368.00	294.40
9999	Sundries	L.S.	34.06	1.73	58.92
	TOTAL				726.92
	Add 1 % Water charges				7.27
	TOTAL				734.19
	Add 15 % Contractor's profit and overheads				110.13
	Cost of 10.00 sqm				844.32
	Cost of 1.00 sqm				84.43
	Say				84.45

13.25.3 Flewing soffits

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	0.50	467.00	233.50
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				440.66
	Add 1 % Water charges				4.41
	TOTAL				445.07
	Add 15 % Contractor's profit and overheads				66.76
	Cost of 10.00 sqm				511.83
	Cost of 1.00 sqm				51.18
	Say				51.20

13.26 Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Plaster of paris 10x0.002x1121 = 22.42kg				
	Add 2% wastage= 0.45kg				
	Total = 22.87kg				
0869	Say 23kg				
	Plaster of Paris	kilogram	23.00	4.00	92.00
9977	Carriage of plaster of paris	L.S.	3.90	1.73	6.75
	LABOUR				
0122	Mason (for plaster of paris work) 1st class	day	0.91	487.00	443.17
0114	Beldar	day	0.91	368.00	334.88
9999	Scaffolding and sundries	L.S.	83.98	1.73	145.29
	TOTAL				1022.09
	Add 1 % Water charges				10.22
	TOTAL				1032.31
	Add 15 % Contractor's profit and overheads				154.85
	Cost of 10.00 sqm				1187.16
	Cost of 1.00 sqm				118.71
	Say				118.70

13.27 Extra for lining out plaster to imitate stone or concrete blocks walling.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason (average)	day	0.50	467.00	233.50
0114	Beldar	day	0.50	368.00	184.00
9999	Solution of lime putty	L.S.	1.82	1.73	3.15
	TOTAL				420.65
	Add 1 % Water charges				4.21
	TOTAL				424.86
	Add 15 % Contractor's profit and overheads				63.73
	Cost of 10.00 sqm				488.59
	Cost of 1.00 sqm				48.85
	Say				48.85

13.28 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand):

13.28.1 Flush Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	3499.70	49.00
	LABOUR				
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
0101	Bhisti	day	0.05	407.00	20.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				297.27
	Add 1 % Water charges				2.97
	TOTAL				300.24
	Add 15 % Contractor's profit and overheads				45.04
	Cost of 10.00 metre long and 10 cm wide band				345.28
	Cost of 1.00 metre long and 1 cm wide band				3.45
	Say				3.45

13.28.2 Sunk Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	3499.70	49.00
	LABOUR				
0155	Mason (average)	day	0.30	467.00	140.10
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Sundries	L.S.	2.08	1.73	3.60
	TOTAL				323.45
	Add 1 % Water charges				3.23
	TOTAL				326.68
	Add 15 % Contractor's profit and overheads				49.00
	Cost of 10.00 metre long and 10 cm wide band				375.68
	Cost of 1.00 metre long and 1 cm wide band				3.75
	Say				3.75

13.28.3 Raised Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	3499.70	49.00
	LABOUR				
0155	Mason (average)	day	0.35	467.00	163.45
0115	Coolie	day	0.35	368.00	128.80
0101	Bhisti	day	0.05	407.00	20.35
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				366.32
	Add 1 % Water charges				3.66
	TOTAL				369.98
	Add 15 % Contractor's profit and overheads				55.50
	Cost of 10.00 metre long and 10 cm wide band				425.48
	Cost of 1.00 metre long and 1 cm wide band				4.25
	Say				4.25

13.28.4 Moulded Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand) Rate as per Item Number 3.4 of SH: Mortars	cum	0.014	3499.70	49.00
	LABOUR				
0155	Mason (average)	day	0.65	467.00	303.55
0115	Coolie	day	0.65	368.00	239.20
0101	Bhisti	day	0.05	407.00	20.35
9999	Sundries	L.S.	1.56	1.73	2.70
	TOTAL				614.80
	Add 1 % Water charges				6.15
	TOTAL				620.95
	Add 15 % Contractor's profit and overheads				93.14
	Cost of 10.00 metre long and 10 cm wide band				714.09
	Cost of 1.00 metre long and 1 cm wide band				7.14
	Say				7.15

13.29 18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):**13.29.1 Flush Band**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand) Rate as per Item Number 3.4 of SH: Mortars	cum	0.02	3499.70	69.99
	LABOUR				
0155	Mason (average)	day	0.32	467.00	149.44
0115	Coolie	day	0.32	368.00	117.76
0101	Bhisti	day	0.06	407.00	24.42
9999	Sundries	L.S.	2.08	1.73	3.60
	TOTAL				365.21
	Add 1 % Water charges				3.65
	TOTAL				368.86
	Add 15 % Contractor's profit and overheads				55.33
	Cost of 10.00 metre long and 10 cm wide band				424.19
	Cost of 1.00 metre long and 1 cm wide band				4.24
	Say				4.25

13.29.2 Sunk Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand) Rate as per Item Number 3.4 of SH: Mortars	cum	0.02	3499.70	69.99

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0155	Mason (average)	day	0.36	467.00	168.12
0115	Coolie	day	0.36	368.00	132.48
0101	Bhisti	day	0.06	407.00	24.42
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				399.73
	Add 1 % Water charges				4.00
	TOTAL				403.73
	Add 15 % Contractor's profit and overheads				60.56
	Cost of 10.00 metre long and 10 cm wide band				464.29
	Cost of 1.00 metre long and 1 cm wide band				4.64
	Say				4.65

13.29.3 Raised Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand) Rate as per Item Number 3.4 of SH: Mortars	cum	0.02	3499.70	69.99
	LABOUR				
0155	Mason (average)	day	0.42	467.00	196.14
0115	Coolie	day	0.42	368.00	154.56
0101	Bhisti	day	0.06	407.00	24.42
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				452.76
	Add 1 % Water charges				4.53
	TOTAL				457.29
	Add 15 % Contractor's profit and overheads				68.59
	Cost of 10.00 metre long and 10 cm wide band				525.88
	Cost of 1.00 metre long and 1 cm wide band				5.25
	Say				5.25

13.29.4 Moulded Band

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
3.10	Cement mortar 1 : 5 (1 cement : 5 coarse sand) Rate as per Item Number 3.4 of SH: Mortars	cum	0.024	3565.05	85.56
	LABOUR				
0155	Mason (average)	day	0.86	467.00	401.62
0115	Coolie	day	0.86	368.00	316.48
0101	Bhisti	day	0.05	407.00	20.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				828.73
	Add 1 % Water charges				8.29
	TOTAL				837.02
	Add 15 % Contractor's profit and overheads				125.55
	Cost of 10.00 metre long and 10 cm wide band				962.57
	Cost of 1.00 metre long and 1 cm wide band				9.62
	Say				9.60

13.30 18 mm thick moulded cement mortar band in two coats under layer 12 mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6 mm thick with cement mortar 1:4 (1 cement : 4 fine sand).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIAL				
	Cement mortar 1 : 5 (1 cement : 5 coarse sand)				
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.014	3565.05	49.91
	Cement mortar 1 : 4 (1 cement : 4 fine sand)				
3.4	Rate as per Item Number 3.4 of SH: Mortars	cum	0.01	3499.70	35.00
	LABOUR				
0155	Mason (average)	day	0.86	467.00	401.62
0115	Coolie	day	0.86	368.00	316.48
0101	Bhisti	day	0.05	407.00	20.35
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				828.08
	Add 1 % Water charges				8.28
	TOTAL				836.36
	Add 15 % Contractor's profit and overheads				125.45
	Cost of 1.00 metre long and 1 cm wide band				961.81
	Cost of 1.00 metre long and 1 cm wide band				9.61
	Say				9.60

13.31 Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand):

13.31.1 Flush / Ruled/ Struck or weathered pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.03	4252.70	127.58
	LABOUR				
0155	Mason (average)	day	0.50	467.00	233.50
0115	Coolie	day	0.60	368.00	220.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.93	407.00	378.51
9999	Sundries	L.S.	7.15	1.73	12.37
9999	Scaffolding and racking out joints including sundries	L.S.	14.30	1.73	24.74
	TOTAL				997.50
	Add 1 % Water charges				9.98
	TOTAL				1007.48
	Add 15 % Contractor's profit and overheads				151.12
	Cost of 10.00 sqm				1158.60
	Cost of 1.00 sqm				115.86
	Say				115.85

13.31.2 Raised and cut pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.3	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
	Rate as per Item Number 3.3 of SH: Mortars	cum	0.046	4252.70	195.62
	LABOUR				
0155	Mason (average)	day	1.07	467.00	499.69
0115	Coolie	day	1.31	368.00	482.08
0101	Bhisti	day	1.00	407.00	407.00
9999	Sundries	L.S.	7.15	1.73	12.37
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.73	27.89
	TOTAL				1624.65
	Add 1 % Water charges				16.25
	TOTAL				1640.90
	Add 15 % Contractor's profit and overheads				246.14
	Cost of 10.00 sqm				1887.04
	Cost of 1.00 sqm				188.70
	Say				188.70

13.32 Pointing on tile brick work with cement mortar 1:3 (1 cement : 3 fine sand):

13.32.1 Flush/ Ruled/ Struck or weathered pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.3	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
	Rate as per Item Number 3.3 of SH: Mortars	cum	0.046	4252.70	195.62
9999	Sundries	L.S.	7.15	1.73	12.37
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.80	368.00	294.40
0101	Bhisti	day	1.28	407.00	520.96

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.73	27.89
	TOTAL				1364.13
	Add 1 % Water charges				13.64
	TOTAL				1377.77
	Add 15 % Contractor's profit and overheads				206.67
	Cost of 10.00 sqm				1584.44
	Cost of 1.00 sqm				158.44
	Say				158.45

13.33 Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :

13.33.1 Flush/ Ruled pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.3	Cement mortar 1 : 3 (1 cement : 3 fine sand)	cum	0.023	4252.70	97.81
9999	Rate as per Item Number 3.3 of SH: Mortars	L.S.	7.15	1.73	12.37
	Sundries				
	LABOUR				
0155	Mason (average)	day	0.92	467.00	429.64
0115	Coolie	day	1.37	368.00	504.16
0101	Bhisti	day	0.93	407.00	378.51
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.73	27.89
	TOTAL				1450.38
	Add 1 % Water charges				14.50
	TOTAL				1464.88
	Add 15 % Contractor's profit and overheads				219.73
	Cost of 10.00 sqm				1684.61
	Cost of 1.00 sqm				168.46
	Say				168.45

13.33.2 Raised and cut pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.3	Cement mortar 1 : 3 (1 cement : 3 fine sand)	cum	0.038	4252.70	161.60
9999	Rate as per Item Number 3.3 of SH: Mortars	L.S.	7.15	1.73	12.37
	Sundries				
	LABOUR				
0155	Mason (average)	day	2.00	467.00	934.00
0115	Coolie	day	2.96	368.00	1089.28
0101	Bhisti	day	1.00	407.00	407.00
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.73	27.89
	TOTAL				2632.14
	Add 1 % Water charges				26.32
	TOTAL				2658.46
	Add 15 % Contractor's profit and overheads				398.77
	Cost of 10.00 sqm				3057.23
	Cost of 1.00 sqm				305.72
	Say				305.70

13.34 Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	White Cement mortar 1:3 (1 white cement : 3 marble dust)				
3.16	Rate as per Item Number 3.16 of SH: Mortars	cum	0.038	7314.50	277.95
9999	Sundries	L.S.	7.15	1.73	12.37
	LABOUR				
0155	Mason (average)	day	2.00	467.00	934.00
0115	Coolie	day	2.96	368.00	1089.28
0101	Bhisti	day	1.00	407.00	407.00
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.73	27.89
	TOTAL				2748.49
	Add 1 % Water charges				27.48
	TOTAL				2775.97
	Add 15 % Contractor's profit and overheads				416.40
	Cost of 10.00 sqm				3192.37
	Cost of 1.00 sqm				319.23
	Say				319.25

13.35 Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):

13.35.1 Flush/ Ruled pointing

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1:2 (1 cement : 2 fine sand)				
3.2	Rate as per Item Number 3.2 of SH: Mortars	cum	0.015	5133.75	77.01
	LABOUR				
0155	Mason (average)	day	0.47	467.00	219.49
0115	Coolie	day	0.69	368.00	253.92
0101	Bhisti	day	0.59	407.00	240.13
9999	Scaffolding and racking out joints including sundries	L.S.	16.12	1.73	27.89
	TOTAL				818.44
	Add 1 % Water charges				8.18
	TOTAL				826.62
	Add 15 % Contractor's profit and overheads				123.99
	Cost of 10.00 sqm				950.61
	Cost of 1.00 sqm				95.06
	Say				95.05

13.36 Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part there of.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
9999	Scaffolding	L.S.	13.39	1.73	23.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				46.32
	Add 1 % Water charges				0.46
	TOTAL				46.78
	Add 15 % Contractor's profit and overheads				7.02
	Cost of 10.00 sqm				53.80
	Cost of 1.00 sqm				5.38
	Say				5.40

13.37 White washing with lime to give an even shade :

13.37.1 New work (three or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0775	Dehradun white lime	quintal	0.03	550.00	16.50
9977	Carriage of lime	L.S.	0.91	1.73	1.57
	LABOUR				
0141	White Washer	day	0.20	407.00	81.40
0115	Coolie	day	0.10	368.00	36.80
9999	Indigo gum etc	L.S.	4.42	1.73	7.65
9999	Sundries ladders etc	L.S.	2.73	1.73	4.72
	TOTAL				148.64
	Add 1 % Water charges				1.49
	TOTAL				150.13
	Add 15 % Contractor's profit and overheads				22.52
	Cost of 10.00 sqm				172.65
	Cost of 1.00 sqm				17.26
	Say				17.25

13.38 Satna lime wash on walls with one coat.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0776	Satna lime	quintal	0.01	370.00	3.70
9977	Carriage of lime	L.S.	2.08	1.73	3.60
9999	Indigo gum etc	L.S.	0.52	1.73	0.90
	LABOUR				
0141	White Washer	day	0.08	407.00	32.56
0115	Coolie	day	0.04	368.00	14.72
9999	Sundries ladders etc	L.S.	2.73	1.73	4.72
	TOTAL				60.20
	Add 1 % Water charges				0.60
	TOTAL				60.80
	Add 15 % Contractor's profit and overheads				9.12
	Cost of 10.00 sqm				69.92
	Cost of 1.00 sqm				6.99
	Say				7.00

13.39 Colour washing such as green, blue or buff to give an even shade :

13.39.1 New work (two or more coats) with a base coat of white washing with lime

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0775	Dehradun white lime	quintal	0.03	550.00	16.50
9977	Carriage of lime	L.S.	8.06	1.73	13.94
9999	Add for colouring stuff	L.S.	0.91	1.73	1.57
	LABOUR				
0141	White Washer	day	0.30	407.00	122.10
0115	Coolie	day	0.10	368.00	36.80
9999	Indigo gum etc	L.S.	4.42	1.73	7.65
9999	Sundries ladders etc	L.S.	2.73	1.73	4.72
	TOTAL				203.28
	Add 1 % Water charges				2.03
	TOTAL				205.31
	Add 15 % Contractor's profit and overheads				30.80
	Cost of 10.00 sqm				236.11
	Cost of 1.00 sqm				23.61
	Say				23.60

13.39.2 New work (two or more coats) with a base coat of whitening

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0775	Dehradun white lime	quintal	0.03	550.00	16.50
9977	Carriage of lime	L.S.	8.06	1.73	13.94
9999	Add for colouring stuff	L.S.	0.91	1.73	1.57
	LABOUR				
0141	White Washer	day	0.30	407.00	122.10
0115	Coolie	day	0.10	368.00	36.80
9999	Indigo gum etc	L.S.	2.73	1.73	4.72
9999	Sundries ladders etc	L.S.	2.73	1.73	4.72
	TOTAL				200.35
	Add 1 % Water charges				2.00
	TOTAL				202.35
	Add 15 % Contractor's profit and overheads				30.35
	Cost of 10.00 sqm				232.70
	Cost of 1.00 sqm				23.27
	Say				23.25

13.40 Distemping with dry distemper of approved brand and manufacture (two or more coats) of required shade on new work, over and including water thinnable priming coat to give an even shade.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 gms/lit.	litre	0.70	56.00	39.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Putty, glue etc For distempering	L.S.	2.73	1.73	4.72
0815	Dry distemper	kilogram	1.50	30.00	45.00
9977	Carriage of material	L.S.	1.56	1.73	2.70
9999	Brushes, sand paper etc LABOUR	L.S.	7.15	1.73	12.37
0131	Painter	day	0.80	448.00	358.40
0115	Coolie	day	0.40	368.00	147.20
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				618.81
	Add 1 % Water charges				6.19
	TOTAL				625.00
	Add 15 % Contractor's profit and overheads				93.75
	Cost of 10.00 sqm				718.75
	Cost of 1.00 sqm				71.87
	Say				71.85

13.41 Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :

13.41.1 New work (two or more coats) over and including water thinnable priming coat with cement primer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 gms/lit.	litre	0.70	56.00	39.20
9999	Brushes, putty etc	L.S.	7.15	1.73	12.37
9988	Sundries including Carriage	L.S.	8.06	1.73	13.94
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.50	45.00	67.50
9977	Carriage of material	L.S.	4.42	1.73	7.65
9999	Brushes, sand paper and putty for filling holes LABOUR	L.S.	11.70	1.73	20.24
0131	Painter	day	1.00	448.00	448.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				806.84
	Add 1 % Water charges				8.07
	TOTAL				814.91
	Add 15 % Contractor's profit and overheads				122.24
	Cost of 10.00 sqm				937.15
	Cost of 1.00 sqm				93.71
	Say				93.70

13.42 Distemping with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.50	45.00	67.50
9977	Carriage of material	L.S.	4.42	1.73	7.65
9999	Brushes, sand paper and putty for filling holes	L.S.	11.57	1.73	20.02
	LABOUR				
0131	Painter	day	0.40	448.00	179.20
0114	Beldar	day	0.46	368.00	169.28
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				457.59
	Add 1 % Water charges				4.58
	TOTAL				462.17
	Add 15 % Contractor's profit and overheads				69.33
	Cost of 10.00 sqm				531.50
	Cost of 1.00 sqm				53.15
	Say				53.15

13.43 Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :

13.43.1 Water thinnable cement primer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 gms/lit.	litre	0.70	56.00	39.20
9999	Brushes, putty etc	L.S.	7.15	1.73	12.37
	LABOUR				
0131	Painter	day	0.40	448.00	179.20
0115	Coolie	day	0.20	368.00	73.60
9988	Sundries including carriage	L.S.	8.06	1.73	13.94
	TOTAL				318.31
	Add 1 % Water charges				3.18
	TOTAL				321.49
	Add 15 % Contractor's profit and overheads				48.22
	Cost of 10.00 sqm				369.71
	Cost of 1.00 sqm				36.97
	Say				36.95

13.44 Finishing walls with water proofing cement paint of required shade :**13.44.1 New work (Two or more coats applied @ 3.84 kg/10 sqm)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0851	Water proofing cement paint	kilogram	3.84	38.00	145.92
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.46	448.00	206.08
0115	Coolie	day	0.23	368.00	84.64
0101	Bhisti	day	0.10	407.00	40.70
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				506.35
	Add 1 % Water charges				5.06
	TOTAL				511.41
	Add 15 % Contractor's profit and overheads				76.71
	Cost of 10.00 sqm				588.12
	Cost of 1.00 sqm				58.81
	Say				58.80

13.45 Finishing walls with textured exterior paint of required shade :**13.45.1 New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8507	Textured exterior paint	litre	3.28	230.00	754.40
0809	Exterior primer	kilogram	2.20	52.00	114.40
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.02	1.73	12.14
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				1297.13
	Add 1 % Water charges				12.97
	TOTAL				1310.10
	Add 15 % Contractor's profit and overheads				196.52
	Cost of 10.00 sqm				1506.62
	Cost of 1.00 sqm				150.66
	Say				150.65

13.46 Finishing walls with Acrylic Smooth exterior paint of required shade :**13.46.1 New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8505	Acrylic exterior paint	litre	1.67	170.00	283.90
0809	Exterior Primer	Kg	2.20	52.00	114.40
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				826.86
	Add 1 % Water charges				8.27
	TOTAL				835.13
	Add 15 % Contractor's profit and overheads				125.27
	Cost of 10.00 sqm				960.40
	Cost of 1.00 sqm				96.04
	Say				96.05

13.47 Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:**13.47.1 New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8506	Premium Acrylic exterior paint	litre	1.43	203.00	290.29
0809	Exterior primer	kilogram	2.20	52.00	114.40
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				833.25
	Add 1 % Water charges				8.33
	TOTAL				841.58
	Add 15 % Contractor's profit and overheads				126.24
	Cost of 10.00 sqm				967.82
	Cost of 1.00 sqm				96.78
	Say				96.80

13.48 Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :

13.48.1 Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8504	Multi surface paint	litre	1.25	255.00	318.75
8509	Special Primer (C.W.)	litre	0.75	140.00	105.00
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.02	1.73	12.14
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				852.08
	Add 1 % Water charges				8.52
	TOTAL				860.60
	Add 15 % Contractor's profit and overheads				129.09
	Cost of 10.00 sqm				989.69
	Cost of 1.00 sqm				98.96
	Say				98.95

13.48.2 Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/10 sqm of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8504	Multi surface paint	litre	0.90	255.00	229.50
8509	Special Primer (C.W.)	litre	0.75	140.00	105.00
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.02	1.73	12.14
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				762.83
	Add 1 % Water charges				7.63
	TOTAL				770.46
	Add 15 % Contractor's profit and overheads				115.57
	Cost of 10.00 sqm				886.03
	Cost of 1.00 sqm				88.60
	Say				88.60

13.48.3 Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8504	Multi surface paint	litre	0.90	255.00	229.50
8510	Metal Primer (U.G.)	litre	0.80	90.00	72.00
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.30	368.00	110.40
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.02	1.73	12.14
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				729.83
	Add 1 % Water charges				7.30
	TOTAL				737.13
	Add 15 % Contractor's profit and overheads				110.57
	Cost of 10.00 sqm				847.70
	Cost of 1.00 sqm				84.77
	Say				84.75

13.50 Applying priming coat:

13.50.1 With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0823	Pink primer (for wood)	litre	0.75	85.00	63.75
9999	Putty	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	10.79	1.73	18.67
	TOTAL				301.03
	Add 1 % Water charges				3.01
	TOTAL				304.04
	Add 15 % Contractor's profit and overheads				45.61
	Cost of 10.00 sqm				349.65
	Cost of 1.00 sqm				34.96
	Say				34.95

13.50.2 With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
4201	Aluminium primer	litre	0.75	88.00	66.00
9999	Putty	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	10.79	1.73	18.67
	TOTAL				303.28
	Add 1 % Water charges				3.03
	TOTAL				306.31
	Add 15 % Contractor's profit and overheads				45.95
	Cost of 10.00 sqm				352.26
	Cost of 1.00 sqm				35.22
	Say				35.20

13.50.3 With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.54	65.00	35.10
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.24	448.00	107.52
0115	Coolie	day	0.24	368.00	88.32
9999	Brushes,sand paper including sundries	L.S.	10.79	1.73	18.67
	TOTAL				250.51
	Add 1 % Water charges				2.51
	TOTAL				253.02
	Add 15 % Contractor's profit and overheads				37.95
	Cost of 10.00 sqm				290.97
	Cost of 1.00 sqm				29.09
	Say				29.10

13.50.4 With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.36	65.00	23.40
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.12	448.00	53.76
0115	Coolie	day	0.12	368.00	44.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Brushes,sand paper including	L.S.	7.15	1.73	12.37
	TOTAL				134.36
	Add 1 % Water charges				1.34
	TOTAL				135.70
	Add 15 % Contractor's profit and overheads				20.36
	Cost of 10.00 sqm				156.06
	Cost of 1.00 sqm				15.60
	Say				15.60

13.51 Painting with silicon & acrylic emulsion based water thinnable sealer of approved brand and manufacture on wet or patchy portion of plastered surfaces :

13.51.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0801	Silicon and acrylic emulsion	litre	1.80	130.00	234.00
9977	Carriage of material	L.S.	0.52	1.73	0.90
9999	Putty etc	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.27	448.00	120.96
0115	Coolie	day	0.27	368.00	99.36
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	10.79	1.73	18.67
	TOTAL				487.83
	Add 1 % Water charges				4.88
	TOTAL				492.71
	Add 15 % Contractor's profit and overheads				73.91
	Cost of 10.00 sqm				566.62
	Cost of 1.00 sqm				56.66
	Say				56.65

13.51.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0801	Silicon and acrylic emulsion	litre	2.88	130.00	374.40
9977	Carriage of material	L.S.	0.52	1.73	0.90
9999	Putty etc	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.43	448.00	192.64
0115	Coolie	day	0.43	368.00	158.24
9999	Brushes, sand paper etc	L.S.	8.53	1.73	14.76
9999	Sundries	L.S.	17.26	1.73	29.86
	TOTAL				775.52
	Add 1 % Water charges				7.76
	TOTAL				783.28
	Add 15 % Contractor's profit and overheads				117.49
	Cost of 10.00 sqm				900.77
	Cost of 1.00 sqm				90.07
	Say				90.05

13.52 Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.

13.52.1 On steel work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm PRIMING COAT MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.75	65.00	48.75
9999	Putty	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
9999	Brushes, sand paper etc	L.S.	5.46	1.73	9.45
9999	Sundries	L.S.	10.66	1.73	18.44
	EPOXY PAINTING MATERIAL				
7239	Epoxy paint	litre	1.25	240.00	300.00
9977	Carriage of material	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Putty, brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				1054.77
	Add 1 % Water charges				10.55
	TOTAL				1065.32
	Add 15 % Contractor's profit and overheads				159.80
	Cost of 10.00 sqm				1225.12
	Cost of 1.00 sqm				122.51
	Say				122.50

13.52.2 On concrete work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm PRIMING COAT MATERIAL				
0821	Distemper primer	litre	0.84	59.00	49.56
9999	Putty	L.S.	13.52	1.73	23.39
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
9999	Brushes, sand paper etc	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	8.06	1.73	13.94
	EPOXY PAINTING MATERIAL				
7239	Epoxy paint	litre	1.21	240.00	290.40
9999	Materials for filling in holes and cracks	L.S.	6.76	1.73	11.69
9977	Carriage of material	L.S.	1.43	1.73	2.47

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Putty, brushes, sand paper etc	L.S.	10.79	1.73	18.67
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				1072.07
	Add 1 % Water charges				10.72
	TOTAL				1082.79
	Add 15 % Contractor's profit and overheads				162.42
	Cost of 10.00 sqm				1245.21
	Cost of 1.00 sqm				124.52
	Say				124.50

13.53 Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :

13.53.1 New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	PRIMING COAT				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.36	65.00	23.40
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.12	448.00	53.76
0114	Beldar	day	0.12	368.00	44.16
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
	EPOXY PAINTING				
	MATERIAL				
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.80	150.00	120.00
9977	Carriage	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Putty, brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				723.10
	Add 1 % Water charges				7.23
	TOTAL				730.33
	Add 15 % Contractor's profit and overheads				109.55
	Cost of 10.00 sqm				839.88
	Cost of 1.00 sqm				83.98
	Say				84.00

13.54 Applying a coat of mordant solution on G.S. sheet:**13.54.1 With a solution of 38 gms of copper acetate in a litre of soft water**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 25 sqm				
	MATERIAL				
4203	Copper acetate	kilogram	0.038	300.00	11.40
9999	Soft Water	L.S.	1.82	1.73	3.15
9977	Carriage	L.S.	0.91	1.73	1.57
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.60	368.00	220.80
9999	Brushes, sand paper etc	L.S.	35.88	1.73	62.07
9999	Sundries	L.S.	35.88	1.73	62.07
	TOTAL				629.86
	Add 1 % Water charges				6.30
	TOTAL				636.16
	Add 15 % Contractor's profit and overheads				95.42
	Cost of 25 sqm				731.58
	Cost of 1.00 sqm				29.26
	Say				29.25

13.54.2 With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride, copper nitrate and ammonium chloride dissolved in a litre of soft water

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 25 sqm				
	MATERIAL				
4204	Hydrochloric acid	kilogram	0.013	35.00	0.46
4205	Copper chloride	kilogram	0.013	280.00	3.64
4206	Copper nitrate	kilogram	0.013	220.00	2.86
4207	Ammonium chloride	kilogram	0.013	20.00	0.26
9999	Soft Water	L.S.	1.82	1.73	3.15
9977	Carriage	L.S.	0.91	1.73	1.57
	LABOUR				
0131	Painter	day	0.60	448.00	268.80
0115	Coolie	day	0.60	368.00	220.80
9999	Brushes, sand paper etc	L.S.	35.88	1.73	62.07
9999	Sundries	L.S.	35.88	1.73	62.07
	TOTAL				625.68
	Add 1 % Water charges				6.26
	TOTAL				631.94
	Add 15 % Contractor's profit and overheads				94.79
	Cost of 25 sqm				726.73
	Cost of 1.00 sqm				29.06
	Say				29.05

13.55 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture, over and including a priming of ready mixed zinc chromate yellow primer on new work:

13.55.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Area=22/7 x106.4mm x30m =10.032sqm MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.54	65.00	35.10
9977	Carriage LABOUR	L.S.	0.52	1.73	0.90
0131	Painter	day	0.24	448.00	107.52
0115	Coolie	day	0.24	368.00	88.32
9999	Brushes, sand paper etc MATERIAL	L.S.	10.79	1.73	18.67
0828	Anticorrosive bituminous paint (black)	litre	0.95	100.00	95.00
9977	Carriage LABOUR	L.S.	1.43	1.73	2.47
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Putty, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
9999	Wire brushes for cleaning	L.S.	5.33	1.73	9.22
9999	Extra for delays	L.S.	61.10	1.73	105.70
	TOTAL				926.70
	Add 1 % Water charges				9.27
	TOTAL				935.97
	Add 15 % Contractor's profit and overheads				140.40
	Cost of 30.00 mtrs				1076.37
	Cost of 1.00 metre				35.87
	Say				35.85

13.55.2 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Area=22/7 x0.1572 m x30m =14.82sqm MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.80	65.00	52.00
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc	L.S.	15.99	1.73	27.66
9977	Carriage MATERIAL	L.S.	0.91	1.73	1.57
0828	Anticorrosive bituminous paint (black)	litre	1.41	100.00	141.00
9977	Carriage LABOUR	L.S.	2.08	1.73	3.60
0131	Painter	day	0.80	448.00	358.40
0115	Coolie	day	0.80	368.00	294.40
9999	Putty, sand paper etc	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	11.96	1.73	20.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Wire brushes for cleaning	L.S.	7.15	1.73	12.37
9999	Extra for delays	L.S.	94.12	1.73	162.83
	TOTAL				1382.22
	Add 1 % Water charges				13.82
	TOTAL				1396.04
	Add 15 % Contractor's profit and overheads				209.41
	Cost of 30.00 mtrs				1605.45
	Cost of 1.00 metre				53.51
	Say				53.50

13.56 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.

13.56.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Area=22/7x0.1064m x30m =10.032sqm MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.54	65.00	35.10
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.24	448.00	107.52
0115	Coolie	day	0.24	368.00	88.32
9999	Sundries	L.S.	10.79	1.73	18.67
	MATERIAL				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.16	170.00	197.20
9977	Carriage	L.S.	1.43	1.73	2.47
9999	Putty, sand paper etc	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Sundries	L.S.	6.76	1.73	11.69
9999	Wire brushes for cleaning	L.S.	11.96	1.73	20.69
9999	Extra for delays	L.S.	66.43	1.73	114.92
	TOTAL				1047.34
	Add 1 % Water charges				10.47
	TOTAL				1057.81
	Add 15 % Contractor's profit and overheads				158.67
	Cost of 30.00 mtrs				1216.48
	Cost of 1.00 metre				40.54
	Say				40.55

13.56.2 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Area=22/7 x157.2mm x30m =14.82sqm MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.80	65.00	52.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage	L.S.	0.65	1.73	1.12
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Sundries	L.S.	15.99	1.73	27.66
	MATERIAL				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.72	170.00	292.40
9977	Carriage	L.S.	2.08	1.73	3.60
9999	Putty, sand paper etc	L.S.	7.93	1.73	13.72
	LABOUR				
0131	Painter	day	0.80	448.00	358.40
0115	Coolie	day	0.80	368.00	294.40
9999	Sundries	L.S.	10.01	1.73	17.32
9999	Wire brushes for cleaning	L.S.	17.81	1.73	30.81
9999	Extra for delays	L.S.	101.40	1.73	175.42
	TOTAL				1560.61
	Add 1 % Water charges				15.61
	TOTAL				1576.22
	Add 15 % Contractor's profit and overheads				236.43
	Cost of 30.00 mtrs				1812.65
	Cost of 1.00 metre				60.42
	Say				60.40

13.57 Painting with oil type wood preservative of approved brand and manufacture :

13.57.1 New work (two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0859	Oil type wood preservative	litre	1.00	140.00	140.00
9977	Carriage of material	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.15	448.00	67.20
0115	Coolie	day	0.15	368.00	55.20
9999	Brushes etc	L.S.	4.16	1.73	7.20
9999	Sundries	L.S.	3.90	1.73	6.75
	TOTAL				277.25
	Add 1 % Water charges				2.77
	TOTAL				280.02
	Add 15 % Contractor's profit and overheads				42.00
	Cost of 10.00 sqm				322.02
	Cost of 1.00 sqm				32.20
	Say				32.20

13.58 Providing and applying two coats of fire retardant paint on cleaned wood / ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
7240	Fire retardant paint	litre	5.70	269.00	1533.30
9977	Carriage of material	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0114	Beldar	day	0.54	368.00	198.72
9999	Putty, brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				2002.04
	Add 1 % Water charges				20.02
	TOTAL				2022.06
	Add 15 % Contractor's profit and overheads				303.31
	Cost of 10.00 sqm				2325.37
	Cost of 1.00 sqm				232.53
	Say				232.55

13.59 Coal tarring two coats on new work using 0.16 Litre and 0.12 litre coal tar per sqm in the first coat and second coat respectively.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
9999	Lime	L.S.	1.43	1.73	2.47
0324	Coal Tar	litre	2.80	30.00	84.00
9977	Carriage of material	L.S.	1.43	1.73	2.47
0771	Kerosene oil	litre	0.50	45.00	22.50
	LABOUR				
0114	Beldar	day	0.43	368.00	158.24
9999	Brushes etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				288.12
	Add 1 % Water charges				2.88
	TOTAL				291.00
	Add 15 % Contractor's profit and overheads				43.65
	Cost of 10.00 sqm				334.65
	Cost of 1.00 sqm				33.46
	Say				33.45

13.60 Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :

13.60.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0835	Plastic emulsion paint	litre	1.21	200.00	242.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	MATERIAL	L.S.	6.76	1.73	11.69
9977	Carriage of material	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc	L.S.	10.79	1.73	18.67
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				727.16
	Add 1 % Water charges				7.27
	TOTAL				734.43
	Add 15 % Contractor's profit and overheads				110.16
	Cost of 10.00 sqm				844.59
	Cost of 1.00 sqm				84.45
	Say				84.45

13.61 Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :

13.61.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.16	170.00	197.20
9999	MATERIAL	L.S.	5.33	1.73	9.22
9977	Carriage	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				675.16
	Add 1 % Water charges				6.75
	TOTAL				681.91
	Add 15 % Contractor's profit and overheads				102.29
	Cost of 10.00 sqm				784.20
	Cost of 1.00 sqm				78.42
	Say				78.40

13.62 Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :

13.62.1 Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0823	Pink primer (for wood)	litre	0.75	85.00	63.75
9999	Putty	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	0.39	1.73	0.67

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	10.79	1.73	18.67
	MATERIAL				
0833	Synthetic enamel paint in black or chocolate shade	litre	1.16	170.00	197.20
9977	Carriage of paint and material	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				966.97
	Add 1 % Water charges				9.67
	TOTAL				976.64
	Add 15 % Contractor's profit and overheads				146.50
	Cost of 10.00 sqm				1123.14
	Cost of 1.00 sqm				112.31
	Say				112.30

13.63 Painting with aluminium paint of approved brand and manufacture to give an even shade .

13.63.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0826	Aluminium paint	litre	0.80	130.00	104.00
9977	Carriage of paint and material	L.S.	1.43	1.73	2.47
9999	Putty etc	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	11.96	1.73	20.69
	TOTAL				588.71
	Add 1 % Water charges				5.89
	TOTAL				594.60
	Add 15 % Contractor's profit and overheads				89.19
	Cost of 10.00 sqm				683.79
	Cost of 1.00 sqm				68.37
	Say				68.35

13.64 Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :

13.64.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0827	Acid proof paint (chocolate or black)	litre	1.16	225.00	261.00
9977	Carriage of paint	L.S.	1.43	1.73	2.47
9999	Putty etc	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				738.96
	Add 1 % Water charges				7.39
	TOTAL				746.35
	Add 15 % Contractor's profit and overheads				111.95
	Cost of 10.00 sqm				858.30
	Cost of 1.00 sqm				85.83
	Say				85.85

13.65 Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :

13.65.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.95	100.00	95.00
9977	Carriage	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Putty, brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				561.27
	Add 1 % Water charges				5.61
	TOTAL				566.88
	Add 15 % Contractor's profit and overheads				85.03
	Cost of 10.00 sqm				651.91
	Cost of 1.00 sqm				65.19
	Say				65.20

13.66 Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade :

13.66.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0831	Floor enamel paint in all shades except green	litre	1.48	122.00	180.56
9977	Carriage	L.S.	1.43	1.73	2.47
9999	Putty etc	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				658.52
	Add 1 % Water charges				6.59
	TOTAL				665.11
	Add 15 % Contractor's profit and overheads				99.77
	Cost of 10.00 sqm				764.88
	Cost of 1.00 sqm				76.48
	Say				76.50

13.67 Varnishing with varnish of approved brand and manufacture :

13.67.1 Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0856	Ordinary varnish	litre	0.70	90.00	63.00
0763	Glue	kilogram	0.07	70.00	4.90
0857	Superior copal varnish	litre	1.16	130.00	150.80
9977	Carriage	L.S.	1.43	1.73	2.47
9999	Putty for repair to holes etc	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.90	448.00	403.20
	(0.36+0.54=0.90)				
0115	Coolie	day	0.90	368.00	331.20
	(0.36+0.54=0.90)				
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				988.85
	Add 1 % Water charges				9.89
	TOTAL				998.74
	Add 15 % Contractor's profit and overheads				149.81
	Cost of 10.00 sqm				1148.55
	Cost of 1.00 sqm				114.85
	Say				114.85

13.67.2 Two or more coats glue sizing with spar varnish or an under coat of flatting varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0856	Ordinary varnish	litre	0.70	90.00	63.00
0763	Glue	kilogram	0.07	70.00	4.90
0858	Superior spar varnish	litre	1.26	130.00	163.80
9977	Carriage	L.S.	1.43	1.73	2.47
9999	Repair etc	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter (0.36+0.54=0.90)	day	0.90	448.00	403.20
0115	Coolie (0.36+0.54=0.90)	day	0.90	368.00	331.20
9999	Brushes, sand paper etc	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				997.35
	Add 1 % Water charges				9.97
	TOTAL				1007.32
	Add 15 % Contractor's profit and overheads				151.10
	Cost of 10.00 sqm				1158.42
	Cost of 1.00 sqm				115.84
	Say				115.85

13.68 French spirit polishing :

13.68.1 Two or more coats on new works including a coat of wood filler

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
1000	Spirit	litre	1.63	50.00	81.50
9999	Pigment	L.S.	7.15	1.73	12.37
0999	Shellac	kilogram	0.24	300.00	72.00
9977	Carriage of material	L.S.	2.73	1.73	4.72
9999	White woolen cloth, putty	L.S.	16.12	1.73	27.89
9999	Sand paper cotton etc	L.S.	13.39	1.73	23.16
9999	Linseed oil	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	3.50	448.00	1568.00
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				1806.05
	Add 1 % Water charges				18.06
	TOTAL				1824.11
	Add 15 % Contractor's profit and overheads				273.62
	Cost of 10.00 sqm				2097.73
	Cost of 1.00 sqm				209.77
	Say				209.75

13.69 Polishing on wood work with ready mixed wax polish of approved brand and manufacture :

13.69.1 New work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0855	Wax polish (ready made)	kilogram	0.50	250.00	125.00
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.80	448.00	358.40
0115	Coolie	day	0.80	368.00	294.40
9999	Soap, brushes, cloth etc	L.S.	4.16	1.73	7.20
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				798.04
	Add 1 % Water charges				7.98
	TOTAL				806.02
	Add 15 % Contractor's profit and overheads				120.90
	Cost of 10.00 sqm				926.92
	Cost of 1.00 sqm				92.69
	Say				92.70

13.70 Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0855	Wax polish (ready made)	kilogram	0.10	250.00	25.00
	LABOUR				
0131	Painter	day	0.40	448.00	179.20
0115	Coolie	day	0.40	368.00	147.20
9999	Acetic acid soap, cloth etc	L.S.	5.33	1.73	9.22
9988	Sundries including Carriage	L.S.	8.06	1.73	13.94
	TOTAL				374.56
	Add 1 % Water charges				3.75
	TOTAL				378.31
	Add 15 % Contractor's profit and overheads				56.75
	Cost of 10.00 sqm				435.06
	Cost of 1.00 sqm				43.50
	Say				43.50

13.71 Lettering with black Japan paint of approved brand and manufacture

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 100 letters of 15 cm height				
	MATERIAL				
0829	Black Japan paint	litre	0.56	90.00	50.40
9977	Carriage	L.S.	0.91	1.73	1.57
	LABOUR				
0131	Painter	day	6.00	448.00	2688.00
0115	Coolie	day	2.00	368.00	736.00
9999	Painting brushes, turpentine, stencil etc	L.S.	13.39	1.73	23.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				3513.07
	Add 1 % Water charges				35.13
	TOTAL				3548.20
	Add 15 % Contractor's profit and overheads				532.23
	Cost of 100 letters of 15 cm height				4080.43
	Cost of 1 letters of 1 cm height				2.72
	Say				2.70

13.72 Washed stone grit plaster on exterior walls height upto 10 metre above ground level, in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand), furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15 mm cement plaster 1:1/ 2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size), in panels with groove all around as per approved pattern, including scrubbing and washing the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in-charge (payment for providing grooves shall be made separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
	Under layer 12 mm cement plaster with Cement mortar 1 : 4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.144	3970.50	571.75
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0114	Beldar	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding	L.S.	8.97	1.73	15.52
	Applying cement slurry				
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
2209	Carriage of Cement	tonne	0.02	92.24	1.84
0114	Beldar	day	0.25	368.00	92.00
	Top layer 15 mm thick stone chipping plaster Quantity required = 0.172 cum including wastage Preparation of cement concrete mix 1:1/2:2 (1 cement : 1/2 coarse sand : 2 stone chipping 10 mm nominal size)				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.14	1200.00	168.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.14	103.77	14.53
0982	Coarse sand (zone III)	cum	0.04	1200.00	48.00
2203	Carriage of Coarse sand	cum	0.04	103.77	4.15
0367	Portland Cement (OPC-43 grade)	tonne	0.10	5700.00	570.00
2209	Carriage of Cement	tonne	0.10	92.24	9.22
0114	Beldar	day	0.10	368.00	36.80
0101	Bhisti	day	0.05	407.00	20.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Hire and running charges of mechanical mixer	L.S.	4.29	1.73	7.42
9999	Sundries	L.S.	2.08	1.73	3.60
	LABOUR				
0123	Mason (brick layer) 1st class	Day	1.75	487.00	852.25
0114	Beldar	Day	1.75	368.00	644.00
0101	Bhisti	Day	0.30	407.00	122.10
9999	Scaffolding	L.S.	24.44	1.73	42.28
	Labour for washing				
0123	Mason (brick layer) 1st class	Day	1.00	487.00	487.00
0115	Coolie	Day	0.50	368.00	184.00
9999	Sundries soft brushes etc	L.S.	25.22	1.73	43.63
	TOTAL				5015.77
	Add 1 % Water charges				50.16
	TOTAL				5065.93
	Add 15 % Contractor's profit and overheads				759.89
	Cost of 10.00 sqm				5825.82
	Cost of 1.00 sqm				582.58
	Say				582.60

13.73 Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer, including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :

13.73.1 15 mm wide and 15 mm deep groove

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Second class kail wood in plank 30 x0.015 x0.015m =6.75cudm Wastage @ 10% = 0.68 Total = 7.43 cudm Assuming that the battens shall become unserviceable after using 5 times Cost for using once = 7.43 / 5 = 1.48 cudm MATERIAL				
1198	Second class kail wood in planks	10 cudm	1.48	260.00	38.48
9977	Carriage of wood	L.S.	0.39	1.73	0.67
	Labour for making battens				
0112	Carpenter 2nd class	day	0.15	448.00	67.20
0114	Beldar	day	0.15	368.00	55.20
9999	Sundries	L.S.	2.86	1.73	4.95
	Labour for nailing the battens to under layer and finishing and repairing grooves				
0123	Mason (brick layer) 1st class	day	0.70	487.00	340.90
0114	Beldar	day	0.70	368.00	257.60
9999	Nails and cement mortar	L.S.	71.76	1.73	124.14
	TOTAL				889.14
	Add 1 % Water charges				8.89
	TOTAL				898.03
	Add 15 % Contractor's profit and overheads				134.70
	Cost of 30.00 mtrs				1032.73
	Cost of 1.00 metre				34.42
	Say				34.40

13.73.2 20 mm wide and 15 mm deep groove

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Second class kail wood in plank 30 x0.02 x0.015m =9.00 cudm Wastage @ 10% = 0.90 Total = 9.90 cudm Assuming that the battens shall become unserviceable after using 5 times Cost for using once = 9.9 / 5 = 1.98 cudm MATERIAL				
1198	Second class kail wood in planks	10 cudm	1.98	260.00	51.48
9977	Carriage of wood	L.S.	0.52	1.73	0.90
	Labour for making battens				
0112	Carpenter 2nd class	day	0.15	448.00	67.20
0114	Beldar	day	0.15	368.00	55.20
9999	Sundries	L.S.	2.86	1.73	4.95
	Labour for nailing the battens to under layer and finishing and repairing grooves				
0123	Mason (brick layer) 1st class	day	0.70	487.00	340.90
0114	Beldar	day	0.70	368.00	257.60
9999	Nails and cement mortar	L.S.	71.76	1.73	124.14
	TOTAL				902.37
	Add 1 % Water charges				9.02
	TOTAL				911.39
	Add 15 % Contractor's profit and overheads				136.71
	Cost of 30.00 mtrs				1048.10
	Cost of 1.00 metre				34.93
	Say				34.95

13.74 Extra for washed grit plaster on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
9999	Scaffolding	L.S.	215.28	1.73	372.43
0123	Mason (brick layer) 1st class	day	0.30	487.00	146.10
0114	Beldar	day	0.30	368.00	110.40
0101	Bhisti	day	0.15	407.00	61.05
9999	Sundries	L.S.	28.60	1.73	49.48
	TOTAL				739.46
	Add 1 % Water charges				7.39
	TOTAL				746.85
	Add 15 % Contractor's profit and overheads				112.03
	Cost of 10.00 sqm				858.88
	Cost of 1.00 sqm				85.88
	Say				85.90

13.75 Extra for washed stone grit plaster on circular work not exceeding 6 m in radius (in two coats).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	53.82	1.73	93.11
	TOTAL				520.61
	Add 1 % Water charges				5.21
	TOTAL				525.82
	Add 15 % Contractor's profit and overheads				78.87
	Cost of 10.00 sqm				604.69
	Cost of 1.00 sqm				60.46
	Say				60.45

13.76 Forming groove of uniform size from 12x12 mm and upto 25x15 mm in the top layer of washed stone grit plastered surface as per approved pattern, including providing and fixing aluminum channels of appropriate size and thickness (not less than 2 mm), nailed to the under layer with rust proof screws and nails and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 mtrs Aluminium channel section 15 x 15 x 2 mm (weight 0.221 kg/mtr) Qty = 30 + 5% wastage = 31.5 m @ 0.221 kg/m = 6.96 kg.				
7306	Aluminium T or L sections	kilogram	6.96	200.00	1392.00
9977	Carriage of timber	L.S.	38.98	1.73	67.44
	Labour for fixing				
0117	Assistant Fitter or 2nd class Fitter	day	0.46	448.00	206.08
0114	Beldar	day	0.15	368.00	55.20
9999	Sundries	L.S.	2.86	1.73	4.95
9999	Nails and cement mortar	L.S.	71.76	1.73	124.14
	TOTAL				1849.81
	Add 1 % Water charges				18.50
	TOTAL				1868.31
	Add 15 % Contractor's profit and overheads				280.25
	Cost of 30.00 mtrs				2148.56
	Cost of 1.00 metre				71.61
	Say				71.60

13.77 Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
0368	Add for White Cement	tonne	0.10	11200.00	1120.00
	Deduct for ordinary cement				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0367	Portland Cement (OPC-43 grade)	tonne	-0.10	5700.00	-570.00
	TOTAL				550.00
	Add 1 % Water charges				5.50
	TOTAL				555.50
	Add 15 % Contractor's profit and overheads				83.33
	Cost of 10.00 sqm				638.83
	Cost of 1.00 sqm				63.88
	Say				63.90

13.78 Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Premixed super white gypsum plaster @ 16.14kg /sqm = 61.40 + 5% wastage = 161.40+8.07= 169.47 kg				
0868	Premixed super white gypsum plaster.	kg	169.47	5.00	847.35
	LABOUR				
0155	Mason (average)	day	1.20	467.00	560.40
0115	Coolie	day	1.20	368.00	441.60
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1871.17
	Add 1 % Water charges				18.71
	TOTAL				1889.88
	Add 15 % Contractor's profit and overheads				283.48
	Cost of 10.00 sqm				2173.36
	Cost of 1.00 sqm				217.33
	Say				217.35

13.79 Extra for addition of synthetic Polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/ mortar by using 125 gms. of synthetic Polyester triangular fibre for 50 Kgs. cement used in cement mortar as per directions of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for per bag of 50 kg of cement used in mortar				
	MATERIAL				
8733	Synthetic ployster triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 including labour for mixing	kg	0.125	400.00	50.00
	TOTAL				50.00
	Add 1 % Water charges				0.50
	TOTAL				50.50
	Add 15 % Contractor's profit and overheads				7.58
	Cost per bag of cement				58.08
	Say				58.10

13.80 Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0824	Cement base wall care putty 10x0.001x1429 = 14.29kg Add 2% wastage= 0.29kg Total = 14.58kg Say 14.58 kg	kg	14.58	20.00	291.60
9977	Carriage	L.S.	3.90	1.73	6.75
	LABOUR				
0122	Mason (for plaster of paris work) 1st class	day	0.45	487.00	219.15
0114	Beldar	day	0.45	368.00	165.60
9999	Scaffolding and sundries	L.S.	40.00	1.73	69.20
	TOTAL				752.30
	Add 1 % Water charges				7.52
	TOTAL				759.82
	Add 15 % Contractor's profit and overheads				113.97
	Cost of 10.00 sqm				873.79
	Cost of 1.00 sqm				87.37
	Say				87.35

13.81 Distempering with 1st quality acrylic distemper, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.

13.81.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0802	Acrylic distemper 1st quality , having VOC content less than 50 gm/kg	Kg	0.62	38.00	23.56
9999	Brushes, putty etc.	L.S.	0.52	1.73	0.90
9988	Sundries including carriage	L.S.	10.79	1.73	18.67
	LABOUR				
0131	Painter	day	0.33	448.00	147.84
0115	Coolie	day	0.17	368.00	62.56
9999	Scaffolding and sundries	L.S.	7.15	1.73	12.37
	TOTAL				265.90
	Add 1 % Water charges				2.66
	TOTAL				268.56
	Add 15 % Contractor's profit and overheads				40.28
	Cost of 10.00 sqm				308.84
	Cost of 1.00 sqm				30.88
	Say				30.90

13.81.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0802	Acrylic distemper 1st quality, having VOC content less than 50 gm/kg	Kg	0.99	38.00	37.62
9999	Brushes, putty etc.	L.S.	11.57	1.73	20.02
9988	Sundries including carriage	L.S.	4.42	1.73	7.65
	LABOUR				
0131	Painter	day	0.40	448.00	179.20
0115	Coolie	day	0.46	368.00	169.28
9999	Scaffolding and sundries	L.S.	8.06	1.73	13.94
	TOTAL				427.71
	Add 1 % Water charges				4.28
	TOTAL				431.99
	Add 15 % Contractor's profit and overheads				64.80
	Cost of 10.00 sqm				496.79
	Cost of 1.00 sqm				49.67
	Say				49.65

13.82 Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.

13.82.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0803	Acrylic emulsion , having VOC content less than 50 gm/ltr	litre	0.53	180.00	95.40
9999	MATERIAL	L.S.	0.52	1.73	0.90
9977	Carriage of material	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc.	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				424.91
	Add 1 % Water charges				4.25
	TOTAL				429.16
	Add 15 % Contractor's profit and overheads				64.37
	Cost of 10.00 sqm				493.53
	Cost of 1.00 sqm				49.35
	Say				49.35

13.82.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0803	Acrylic emulsion , having VOC content less than 50 gm/ltr	litre	0.84	180.00	151.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	MATERIAL	L.S.	1.43	1.73	2.47
9977	Carriage of material	L.S.	6.76	1.73	11.69
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc.	L.S.	10.79	1.73	18.67
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				636.36
	Add 1 % Water charges				6.36
	TOTAL				642.72
	Add 15 % Contractor's profit and overheads				96.41
	Cost of 10.00 sqm				739.13
	Cost of 1.00 sqm				73.91
	Say				73.90

13.83 Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.

13.83.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0804	Premium acrylic emulsion of interior grade, having VOC content less than 50 gm/ltr.	litre	0.38	210.00	79.80
9999	MATERIAL	L.S.	0.52	1.73	0.90
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc.	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				401.66
	Add 1 % Water charges				4.02
	TOTAL				405.68
	Add 15 % Contractor's profit and overheads				60.85
	Cost of 10.00 sqm				466.53
	Cost of 1.00 sqm				46.65
	Say				46.65

13.83.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0804	Premium acrylic emulsion of interior grade, having VOC content less than 50 gm/ltr.	litre	0.60	210.00	126.00
9999	MATERIAL	L.S.	1.43	1.73	2.47
9977	Carriage of material	L.S.	6.76	1.73	11.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc.	L.S.	10.79	1.73	18.67
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				611.16
	Add 1 % Water charges				6.11
	TOTAL				617.27
	Add 15 % Contractor's profit and overheads				92.59
	Cost of 10.00 sqm				709.86
	Cost of 1.00 sqm				70.98
	Say				71.00

13.84 Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.

13.84.1 One coat

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0805	Synthetic enamel paint , having VOC (Volatile Organic Compound) content less than 150 gm/ltr.	litre	0.53	200.00	106.00
9999	Material for filling in holes and cracks (putty) etc.	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Putty	L.S.	2.73	1.73	4.72
9999	Brushes, sand paper etc.	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				428.54
	Add 1 % Water charges				4.29
	TOTAL				432.83
	Add 15 % Contractor's profit and overheads				64.92
	Cost of 10.00 sqm				497.75
	Cost of 1.00 sqm				49.77
	Say				49.75

13.84.2 Two coats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0805	Synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 gm/ltr.	litre	0.84	200.00	168.00
9999	MATERIAL	L.S.	5.33	1.73	9.22
9977	Carriage of material	L.S.	1.43	1.73	2.47

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0115	Coolie	day	0.54	368.00	198.72
9999	Brushes, sand paper etc.	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				645.96
	Add 1 % Water charges				6.46
	TOTAL				652.42
	Add 15 % Contractor's profit and overheads				97.86
	Cost of 10.00 sqm				750.28
	Cost of 1.00 sqm				75.02
	Say				75.00

13.85 Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.

13.85.1 With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0806	Ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 gms/lit.	litre	0.75	125.00	93.75
9999	Putty	L.S.	2.73	1.73	4.72
9977	Carriage of material	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
9999	Brushes, sand paper etc.	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	10.79	1.73	18.67
	TOTAL				331.03
	Add 1 % Water charges				3.31
	TOTAL				334.34
	Add 15 % Contractor's profit and overheads				50.15
	Cost of 10.00 sqm				384.49
	Cost of 1.00 sqm				38.44
	Say				38.45

13.85.2 With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 250 grams/ litre

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0807	Ready mixed red oxide zinc chromatic on steel/ iron work, having VOC content less than 250 gms/lit.	litre	0.54	120.00	64.80
9977	Carriage of material	L.S.	0.52	1.73	0.90

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0131	LABOUR Painter	day	0.24	448.00	107.52
0115	Coolie	day	0.24	368.00	88.32
9999	Brushes, sand paper etc.	L.S.	10.79	1.73	18.67
	TOTAL				280.21
	Add 1 % Water charges				2.80
	TOTAL				283.01
	Add 15 % Contractor's profit and overheads				42.45
	Cost of 10.00 sqm				325.46
	Cost of 1.00 sqm				32.54
	Say				32.55

13.85.3 With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0808	Detail of cost for 10 sqm MATERIAL Water thinnable cement primer for interior wall surface, having VOC content less than 50 gms/lit.	litre	0.70	56.00	39.20
9977	Carriage of material	L.S.	8.06	1.73	13.94
	LABOUR				
0131	Painter	day	0.40	448.00	179.20
0115	Coolie	day	0.20	368.00	73.60
9999	Brushes, sand paper etc.	L.S.	7.15	1.73	12.37
	TOTAL				318.31
	Add 1 % Water charges				3.18
	TOTAL				321.49
	Add 15 % Contractor's profit and overheads				48.22
	Cost of 10.00 sqm				369.71
	Cost of 1.00 sqm				36.97
	Say				36.95

13.86 6 mm plaster on cement concrete or reinforced cement concrete work with white cement based polymer modified self curing mortar of approved make as per the direction of Engineer-In-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0772	Detail of cost for 10 sqm MATERIAL White cement based polymer modified self curing compound in powder form i/c 2% wastage	kg	46.00	15.00	690.00
9977	Carriage of white cement based polymer modified self curing compound in powder form	L.S.	7.80	1.73	13.49
	LABOUR				
0155	Mason (average)	day	0.51	467.00	238.17
0115	Coolie	day	0.75	368.00	276.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Extra for removing burrs, cleaning with wire brushes and pock making with pointed tools etc.	L.S.	13.39	1.73	23.16
9999	Scaffolding and sunderies	L.S.	11.70	1.73	20.24
	TOTAL				1261.06
	Add 1 % Water charges				12.61
	TOTAL				1273.67
	Add 15 % Contractor's profit and overheads				191.05
	Cost of 10 sqm				1464.72
	Cost of 1 sqm				146.47
	Say				146.45

SUB HEAD : 14.0
REPAIRS TO BUILDING

14.1 Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.

14.1.1 With cement mortar 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
3.4	Cement mortar 1 : 4 (1 cement : 4 fine sand) Rate as per Item Number 3.4 of SH: Mortars	cum	0.183	3499.70	640.45
	LABOUR				
0155	Mason (average)	day	1.21	467.00	565.07
0115	Coolie	day	1.29	368.00	474.72
0114	Beldar	day	0.54	368.00	198.72
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	15.21	1.73	26.31
	TOTAL				2279.71
	Add 1 % Water charges				22.80
	TOTAL				2302.51
	Add 15 % Contractor's profit and overheads				345.38
	Cost of 10.00 sqm				2647.89
	Cost of 1.00 sqm				264.78
	Say				264.80

14.1.2 With cement mortar 1:4 (1cement: 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
3.9	Cement mortar 1 : 4 (1 cement : 4 coarse sand) Rate as per Item Number 3.9 of SH: Mortars	cum	0.183	3970.50	726.60
	LABOUR				
0155	Mason (average)	day	1.21	467.00	565.07
0115	Coolie	day	1.29	368.00	474.72
0114	Beldar	day	0.54	368.00	198.72
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	15.21	1.73	26.31
	TOTAL				2365.86
	Add 1 % Water charges				23.66
	TOTAL				2389.52
	Add 15 % Contractor's profit and overheads				358.43
	Cost of 10.00 sqm				2747.95
	Cost of 1.00 sqm				274.79
	Say				274.80

14.2 Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts, embedding hold fasts in cement concrete blocks of size 15 x 10 x 10 cm with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.

14.2.1 Door chowkhats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Detail of cost for each Stone Aggregate (Single size) : 20 mm nominal size	cum	0.021	1300.00	27.30
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0072	1300.00	9.36
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.0282	103.77	2.93
0982	Coarse sand (zone III)	cum	0.0141	1200.00	16.92
2203	Carriage of Coarse sand	cum	0.0141	103.77	1.46
0367	Portland Cement (OPC-43 grade)	tonne	0.0066	5700.00	37.62
2209	Carriage of Cement	tonne	0.0066	92.24	0.61
0114	Beldar	day	0.027	368.00	9.94
0115	Coolie	day	0.0195	368.00	7.18
0130	Mistry	day	0.0084	487.00	4.09
0123	Mason (brick layer) 1st class	day	0.0018	487.00	0.88
0124	Mason (brick layer) 2nd class	day	0.0018	448.00	0.81
0128	Mate	day	0.0012	407.00	0.49
9999	Scaffolding	L.S.	1.43	1.73	2.47
9999	Hire and running charges of mechanical mixer	L.S.	0.78	1.73	1.35
9999	Sundries	L.S.	0.39	1.73	0.67
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand) Rate as per Item Number 3.6 of SH: Mortars	cum	0.01	2746.70	27.47
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.18	1.73	41.83
9999	Painting two coats of coaltar	L.S.	13.52	1.73	23.39
9999	Disposal of mulba	L.S.	1.82	1.73	3.15
0155	Mason (average)	day	0.50	467.00	233.50
0114	Beldar	day	0.75	368.00	276.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				734.14
	Add 1 % Water charges				7.34
	TOTAL				741.48
	Add 15 % Contractor's profit and overheads				111.22
	Cost of each				852.70
	Say				852.70

14.2.2 Window chowkhats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Detail of cost for each Stone Aggregate (Single size) : 20 mm nominal size	cum	0.014	1300.00	18.20
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0048	1300.00	6.24

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.0188	103.77	1.95
0982	Coarse sand (zone III)	cum	0.0094	1200.00	11.28
2203	Carriage of Coarse sand	cum	0.0094	103.77	0.98
0367	Portland Cement (OPC-43 grade)	tonne	0.0044	5700.00	25.08
2209	Carriage of Cement	tonne	0.0044	92.24	0.41
0114	Beldar	day	0.018	368.00	6.62
0115	Coolie	day	0.013	368.00	4.78
0130	Mistry	day	0.0056	487.00	2.73
0123	Mason (brick layer) 1st class	day	0.0012	487.00	0.58
0124	Mason (brick layer) 2nd class	day	0.0012	448.00	0.54
0128	Mate	day	0.0008	407.00	0.33
9999	Scaffolding and sundries	L.S.	0.91	1.73	1.57
9999	Hire and running charges of mechanical mixer	L.S.	0.52	1.73	0.90
9999	Sundries	L.S.	0.26	1.73	0.45
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand)	cum	0.006	2746.70	16.48
9999	Rate as per Item Number 3.6 of SH: Mortars	L.S.	9.88	1.73	17.09
9999	Cement concrete 1:2:4	L.S.	0.91	1.73	1.57
9999	Painting two coats of coaltar	L.S.	0.91	1.73	1.57
0155	Mason (average)	day	0.33	467.00	154.11
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				455.89
	Add 1 % Water charges				4.56
	TOTAL				460.45
	Add 15 % Contractor's profit and overheads				69.07
	Cost of each				529.52
	Say				529.50

14.2.3 Clerestory window chowkhats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Detail of cost for each Stone Aggregate (Single size) : 20 mm nominal size	cum	0.007	1300.00	9.10
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0024	1300.00	3.12
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.0094	103.77	0.98
0982	Coarse sand (zone III)	cum	0.0047	1200.00	5.64
2203	Carriage of Coarse sand	cum	0.0047	103.77	0.49
0367	Portland Cement (OPC-43 grade)	tonne	0.0022	5700.00	12.54
2209	Carriage of Cement	tonne	0.0022	92.24	0.20
0114	Beldar	day	0.009	368.00	3.31
0115	Coolie	day	0.0065	368.00	2.39
0130	Mistry	day	0.0028	487.00	1.36
0123	Mason (brick layer) 1st class	day	0.0006	487.00	0.29
0124	Mason (brick layer) 2nd class	day	0.0006	448.00	0.27
0128	Mate	day	0.0004	407.00	0.16
9999	Scaffolding and sundries	L.S.	0.52	1.73	0.90
9999	Hire and running charges of mechanical mixer	L.S.	0.26	1.73	0.45
9999	Sundries	L.S.	0.13	1.73	0.22
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand)	cum	0.003	2746.70	8.24
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.003	2746.70	8.24

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	8.06	1.73	13.94
9999	Painting two coats of coaltar	L.S.	0.91	1.73	1.57
0155	Mason (average)	day	0.17	467.00	79.39
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				333.28
	Add 1 % Water charges				3.33
	TOTAL				336.61
	Add 15 % Contractor's profit and overheads				50.49
	Cost of each				387.10
	Say				387.10

14.3 Fixing chowkhat in existing opening in brick/ RCC wall with dash fasteners/ Chemical fasteners of appropriate size (3 nos on each vertical member of door chowkhat and 2 nos on each vertical member of window chowkhats), including Cost of dash fasteners/ chemical fastener.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 chowkhat.				
0114	Beldar	day	0.027	368.00	9.94
0115	Coolie	day	0.0195	368.00	7.18
0130	Mistry	day	0.0084	487.00	4.09
0128	Mate	day	0.0012	407.00	0.49
9999	Disposal of mulba	L.S.	1.82	1.73	3.15
7019	Dash fastner/ chemical fastener	each	6.00	15.00	90.00
9999	Hire charges of drill machine hire charges, Scaffolding and Sundries	L.S.	12.22	1.73	21.14
	TOTAL				135.99
	Add 1 % Water charges				1.36
	TOTAL				137.35
	Add 15 % Contractor's profit and overheads				20.60
	Cost of each				157.95
	Say				157.95

14.4 Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs complete, to match existing surface i/c disposal of mulba/ rubbish to the nearest municipal dumping ground, all complete as per direction of Engineer-in-Charge.

14.4.1 For door/ window/ clerestory window

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one opening of size 0.90x2.10m = 1.89 sqm				
	Cement mortar 1:6 (1 cement: 6 fine sand)				
3.6	Rate as per Item Number 3.6 of SH: Mortars	cum	0.01	2746.70	27.47
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.57	1.73	42.51
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.20	368.00	441.60
0115	Coolie	day	0.40	368.00	147.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and Sundries	L.S.	3.50	1.73	6.06
	TOTAL				888.84
	Add 1 % Water charges				8.89
	TOTAL				897.73
	Add 15 % Contractor's profit and overheads				134.66
	Cost of 1.89sqm.				1032.39
	Cost of 1.00 sqm.				546.23
	Say				546.25

14.5 Renewing glass panes, with putty and nails wherever necessary including racking out the old putty:

14.5.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 glasses area each 0.1sqm.				
	MATERIAL				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm). 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	286.00	314.60
9988	Carriage including sundries	L.S.	1.82	1.73	3.15
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Painting or varnishing or beewaxing	L.S.	5.33	1.73	9.22
9999	Sundries Nails etc.	L.S.	6.76	1.73	11.69
0119	Glazier	day	0.23	448.00	103.04
0114	Beldar	day	0.23	368.00	84.64
9999	Sundries such as Rag, cotton etc	L.S.	1.43	1.73	2.47
	TOTAL				549.21
	Add 1 % Water charges				5.49
	TOTAL				554.70
	Add 15 % Contractor's profit and overheads				83.21
	Cost of 1.00 sqm				637.91
	Say				637.90

14.5.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 glasses area each 0.1sqm.				
	MATERIAL				
2407	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm). 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	490.00	539.00
9988	Carriage including sundries	L.S.	1.82	1.73	3.15
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Painting or varnishing or beewaxing	L.S.	5.33	1.73	9.22
9999	Sundries Nails etc.	L.S.	6.76	1.73	11.69
0119	Glazier	day	0.23	448.00	103.04
0114	Beldar	day	0.23	368.00	84.64

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries such as Rag, cotton etc	L.S.	1.43	1.73	2.47
	TOTAL				773.61
	Add 1 % Water charges				7.74
	TOTAL				781.35
	Add 15 % Contractor's profit and overheads				117.20
	Cost of 1.00 sqm				898.55
	Say				898.55

14.6 Renewing glass panes, with wooden fillets wherever necessary:

14.6.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 glasses area each 0.1sqm.				
	MATERIAL				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm). 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	286.00	314.60
1189	Second class teak wood in scantling	10 cudm	0.025	660.00	16.50
1194	Second class deodar wood in planks	10 cudm	0.025	500.00	12.50
1196	First class kail wood in planks	10 cudm	0.025	310.00	7.75
9999	Painting or varnishing or beewaxing	L.S.	4.42	1.73	7.65
9999	Sundries Nails etc.	L.S.	2.73	1.73	4.72
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0119	Glazier	day	0.25	448.00	112.00
0114	Beldar	day	0.45	368.00	165.60
9999	Sundries such as Rag, cotton etc	L.S.	1.82	1.73	3.15
	TOTAL				734.07
	Add 1 % Water charges				7.34
	TOTAL				741.41
	Add 15 % Contractor's profit and overheads				111.21
	Cost of 1.00 sqm				852.62
	Say				852.60

14.6.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 glasses area each 0.1sqm.				
	MATERIAL				
2407	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm). 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	490.00	539.00
1189	Second class teak wood in scantling	10 cudm	0.025	660.00	16.50
1194	Second class deodar wood in planks	10 cudm	0.025	500.00	12.50
1196	First class kail wood in planks	10 cudm	0.025	310.00	7.75
9999	Painting or varnishing or beewaxing	L.S.	4.42	1.73	7.65
9999	Sundries Nails etc.	L.S.	2.73	1.73	4.72
0112	Carpenter 2nd class	day	0.20	448.00	89.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0119	Glazier	day	0.25	448.00	112.00
0114	Beldar	day	0.45	368.00	165.60
9999	Sundries such as Rag, cotton etc	L.S.	1.82	1.73	3.15
	TOTAL				958.47
	Add 1 % Water charges				9.58
	TOTAL				968.05
	Add 15 % Contractor's profit and overheads				145.21
	Cost of 1.00 sqm				1113.26
	Say				1113.25

14.7 Renewing glass panes and refixing existing wooden fillets:

14.7.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 glasses area each 0.1sqm. MATERIAL				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm). 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	286.00	314.60
9977	Carriage of glasspanes and other materials	L.S.	2.73	1.73	4.72
9999	Sundries Nails etc.	L.S.	9.88	1.73	17.09
9999	Methylated spirit	L.S.	5.33	1.73	9.22
0119	Glazier	day	0.30	448.00	134.40
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				592.90
	Add 1 % Water charges				5.93
	TOTAL				598.83
	Add 15 % Contractor's profit and overheads				89.82
	Cost of 1.00 sqm				688.65
	Say				688.65

14.7.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 glasses area each 0.1sqm. MATERIAL				
2407	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm). 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	490.00	539.00
9977	Carriage of glasspanes and other materials	L.S.	2.73	1.73	4.72
9999	Sundries Nails etc.	L.S.	9.88	1.73	17.09
9999	Methylated spirit	L.S.	5.33	1.73	9.22
0119	Glazier	day	0.30	448.00	134.40
0114	Beldar	day	0.30	368.00	110.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				817.30
	Add 1 % Water charges				8.17
	TOTAL				825.47
	Add 15 % Contractor's profit and overheads				123.82
	Cost of 1.00 sqm				949.29
	Say				949.30

14.8 Supplying and fixing new wooden fillets wherever necessary:

14.8.1 2nd class teak wood fillets

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1190	Details of cost for 10 metres length MATERIAL Second class teak wood in planks 10.00x0.01x0.01 = 1.00 cudm Add 15% wastage = 0.15 cudm Total = 1.15 cudm	10 cudm	0.115	675.00	77.63
9999	Nails	L.S.	26.91	1.73	46.55
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				332.90
	Add 1 % Water charges				3.33
	TOTAL				336.23
	Add 15 % Contractor's profit and overheads				50.43
	Cost of 10.00 metre				386.66
	Cost of 1.00 metre				38.66
	Say				38.65

14.8.2 Hollock wood fillets

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2466	Details of cost for 10 metres length MATERIAL Hollock wood in scantling 10.00x0.01x0.01 = 1.00 cudm Add 15% wastage = 0.15 cudm Total = 1.15 cudm	10 cudm	0.115	340.00	39.10
9999	Nails	L.S.	26.91	1.73	46.55
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				294.37
	Add 1 % Water charges				2.94
	TOTAL				297.31
	Add 15 % Contractor's profit and overheads				44.60
	Cost of 10.00 metre				341.91
	Cost of 1.00 metre				34.19
	Say				34.20

14.9 Renewal of old putty of glass panes (length)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 13 metres length				
	MATERIAL				
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Nails	L.S.	7.15	1.73	12.37
9999	Spirit	L.S.	2.73	1.73	4.72
	LABOUR				
0112	Carpenter 2nd class	day	0.30	448.00	134.40
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				284.76
	Add 1 % Water charges				2.85
	TOTAL				287.61
	Add 15 % Contractor's profit and overheads				43.14
	Cost of 13.00 metres				330.75
	Cost of 1.00 metre				25.44
	Say				25.45

14.10 Refixing old glass panes with putty and nails

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 sqm				
	MATERIAL				
0863	Putty for wood work	kilogram	0.68	30.00	20.40
9999	Spirit	L.S.	2.73	1.73	4.72
9999	Nails	L.S.	7.15	1.73	12.37
	LABOUR				
0119	Glazier	day	0.30	448.00	134.40
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				284.76
	Add 1 % Water charges				2.85
	TOTAL				287.61
	Add 15 % Contractor's profit and overheads				43.14
	Cost of 1.00 sqm				330.75
	Say				330.75

14.11 Fixing old glass panes with wooden fillets (excluding cost of fillets)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 sqm				
	LABOUR				
0119	Glazier	day	0.30	448.00	134.40
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	1.43	1.73	2.47
9999	Nails	L.S.	3.90	1.73	6.75
	TOTAL				254.02
	Add 1 % Water charges				2.54
	TOTAL				256.56
	Add 15 % Contractor's profit and overheads				38.48
	Cost of 1.00 sqm				295.04
	Say				295.05

14.12 Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab, including cutting chase, anchoring clamp to reinforcement bar, including cleaning, refilling, making good the chase with matching concrete, plastering and painting the exposed portion of the clamps complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for each fan clamp. MATERIAL				
1003	M.S.bar 16mm dia = 40cm (including wastage) @ 1.58 kg/m = 0.632 kg	quintal	0.00632	3575.00	22.59
9999	Mild steel round bar above 12 mm dia				
	Cement concrete 1:2:4 (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) mortar for rendering or plastering	L.S.	13.52	1.73	23.39
9999	Painting two or more coats to exposed portion of the clamp including priming coat	L.S.	7.15	1.73	12.37
	Labour for fixing				
0102	Blacksmith 1st class	day	0.03	487.00	14.61
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				223.44
	Add 1 % Water charges				2.23
	TOTAL				225.67
	Add 15 % Contractor's profit and overheads				33.85
	Cost of each				259.52
	Say				259.50

14.13 Regrading terracing of mud phaska covered with tiles or brick, in cement by dismantling tiles or bricks, removing mud plaster, preparing the surface of mud phaska to proper slope, relaying mud plaster gobri leaping and tiles or bricks, grouted in cement mortar 1:3 (1 cement : 3 fine sand), including replacing unserviceable tiles or bricks with new ones and disposal of unserviceable material to the dumping ground (the cost of the new tiles or brick excluded), all complete as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	(i) Dismantling tiles/bricks in cement mortar including removing mud plaster and cleaning the tiles/bricks				
	LABOUR				
0155	Mason (average)	day	0.54	467.00	252.18
0114	Beldar	day	0.54	368.00	198.72
	(ii) Preparing the surface, for mud phuska to proper slope, relaying mud plaster gobri leaping.				
0155	Mason (average)	day	0.27	467.00	126.09
	25mm thick mud plaster including gobri leaping				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MATERIAL				
3.18	Mud mortar	cum	0.24	533.20	127.97
0308	Rate as per Item Number 3.18 of SH: Mortars Bhusa	quintal	0.084	600.00	50.40
3.18	Gobri mortar				
	Rate as per Item Number 3.18 of SH: Mortars	cum	0.12	533.20	63.98
0114	LABOUR Beldar	day	0.25	368.00	92.00
3.3	(iii) relaying tiles/bricks (Rate as per item No 3.3) including Cement mortar 1:3 (1 Cement : 3 fine sand) for grouting	cum	0.061	4252.70	259.41
0155	LABOUR Mason (average)	day	1.20	467.00	560.40
0114	Beldar	day	1.50	368.00	552.00
0101	Bhisti	day	1.00	407.00	407.00
9999	Disposal of mulba	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				2704.09
	Add 1 % Water charges				27.04
	TOTAL				2731.13
	Add 15 % Contractor's profit and overheads				409.67
	Cost of 10.00 sqm				3140.80
	Cost of 1.00 sqm				314.08
	Say				314.10

14.14 Replacing sand stone slabs in roofing, laid in cement mortar 1:4 (1 cement : 4 coarse sand), including necessary repairs and cement pointing with same mortar complete, including disposal of rubbish to dumping ground, all complete as per direction of Engineer-in-Charge.

14.14.1 Red/ white sand stone slabs 30 to 50 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm Dismantling existing stone, slabs roofing 1x10 sqmx0.05m = 0.50 cum.				
0114	Beldar	day	0.885	368.00	325.68
0115	Coolie	day	0.375	368.00	138.00
9999	Sundries	L.S.	4.03	1.73	6.97
9999	Cleaning the surface including necessary repairs	L.S.	40.43	1.73	69.94
1174	Red sand stone slab 45 mm and 50 mm thick (un-dressed)	sqm	11.00	225.00	2475.00
2216	Carriage of Stone blocks white & red sand stone & kota stone slab	tonne	1.41	92.24	130.06
	Cement mortar 1 : 4 (1 cement : 4 coarse sand)				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	0.0105	3970.50	41.69
	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.0075	4252.70	31.90
0155	Mason (average)	day	1.69	467.00	789.23

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0100	Bandhani	day	2.03	407.00	826.21
0115	Coolie	day	1.69	368.00	621.92
0101	Bhisti	day	0.34	407.00	138.38
9999	Sundries	L.S.	16.12	1.73	27.89
2264	Carriage of Rubbish	cum	0.50	103.77	51.88
	TOTAL				5674.75
	Add 1 % Water charges				56.75
	TOTAL				5731.50
	Add 15 % Contractor's profit and overheads				859.73
	Cost of 10.00 sqm				6591.23
	Cost of 1.00 sqm				659.12
	Say				659.10

14.15 Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.

14.15.1 Sal wood battens

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 battens i.e. 300 cudm 3 metres long of 100x100mm 10x3x0.1x0.1 = 0.3cum =300cudm Add wastage @ 2%= 6 cudm, Total = 306 cudm MATERIAL				
1199	Sal wood in scantling	10 cudm	30.60	600.00	18360.00
2204	Carriage of Timber	cum	0.306	118.59	36.29
	LABOUR				
	Taking out the existing battens and refixing new one including supporting the roof				
0112	Carpenter 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	2.00	368.00	736.00
9999	Disposal of mulba	L.S.	5.33	1.73	9.22
9999	Making good the holes including sundries	L.S.	80.73	1.73	139.66
0859	Oil type wood preservative	litre	1.22	140.00	170.80
0131	Painter	day	0.183	448.00	81.98
0115	Coolie	day	0.183	368.00	67.34
9977	Carriage	L.S.	0.78	1.73	1.35
9999	Brushes	L.S.	5.07	1.73	8.77
9999	Sundries	L.S.	4.81	1.73	8.32
	TOTAL				19843.73
	Add 1 % Water charges				198.44
	TOTAL				20042.17
	Add 15 % Contractor's profit and overheads				3006.33
	Cost of 300 Cudm				23048.50
	Cost of 1.00 cum				76828.33
	Say				76828.35

14.16 Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.

14.16.1 Not exceeding 4.00 metres in length.

14.16.1.1 Sal wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cum or 0.3 cum Consider one beam i.e. 300 cum. 0.25 x 0.30m x 4.0m (long) = 0.30 cum Add wastage @ 2% (0.006 cum) = 0.306 cum =306 cum (i) Propping the roof MATERIAL 100mm diameter ballies 4m long 10 nos. 100x100mm salwood battens 1.0 metre long 5 nos.x1.0x0.1x0.1 =0.05cum = 50 cum. These materials can be used for 16 times Hence qty for one operation 1/16 = 3.125 cum				
1199	Sal wood in scantling	10 cum	0.3125	600.00	187.50
2204	Carriage of Timber	cum	0.0228	118.59	2.70
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
	(ii) Taking out the existing beams etc. LABOUR				
0155	Mason (average)	day	0.13	467.00	60.71
0100	Bandhani	day	0.50	407.00	203.50
0114	Beldar	day	0.33	368.00	121.44
	(iii) Renewal Materials and Labour				
1199	Sal wood in scantling	10 cum	30.60	600.00	18360.00
2204	Carriage of Timber	cum	0.306	118.59	36.29
0112	Carpenter 2nd class	day	1.00	448.00	448.00
0100	Bandhani	day	0.50	407.00	203.50
0114	Beldar	day	1.00	368.00	368.00
	Painting with oil preservative (4x1.1) +(2.0x0.25x0.30) =4.4 + 0.15 = 4.55 sqm				
0859	Oil type wood preservative	litre	0.455	140.00	63.70
0131	Painter	day	0.07	448.00	31.36
0115	Coolie	day	0.07	368.00	25.76
9999	Sundries	L.S.	0.13	1.73	0.22
9977	Carriage	L.S.	1.82	1.73	3.15
9999	Brushes	L.S.	1.82	1.73	3.15
9999	Making good the holes	L.S.	20.67	1.73	35.76
9999	Sundries	L.S.	26.91	1.73	46.55

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0302	Safeda ballies 125 mm diameter	metre	2.50	35.00	87.50
	TOTAL				20492.79
	Add 1 % Water charges				204.93
	TOTAL				20697.72
	Add 15 % Contractor's profit and overheads				3104.66
	Cost of 300 Cudm				23802.38
	Cost of 1.00 cum				79341.26
	Say				79341.25

14.16.1.2 Hollock wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 cudm or 0.3 cum Consider one beam 0.25 x 0.30m x 4.0m (long) = 0.30 cum = 300 cudm Add wastage @ 2% (0.006 cum) = 0.306 cum =306cudm (I) Propping the roof MATERIAL 100mm diameter ballies 4m long 10 nos. 100x100mm salwood battens 1.0metre long 5 nos.x1.0x0.1x0.1 =0.05cum = 50 cudm. These materials can be used for 16 times hence qty for one operation 1/16 = 3.125 cudm				
2466	Hollock wood in scantling	10 cudm	0.3125	340.00	106.25
2204	Carriage of Timber	cum	0.0228	118.59	2.70
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
	(ii) Taking out the existing beams etc. LABOUR				
0155	Mason (average)	day	0.13	467.00	60.71
0100	Bandhani	day	0.50	407.00	203.50
0114	Beldar	day	0.33	368.00	121.44
	(iii) Renewal Materials and Labour				
2466	Hollock wood in scantling	10 cudm	30.60	340.00	10404.00
2204	Carriage of Timber	cum	0.306	118.59	36.29
0112	Carpenter 2nd class	day	1.00	448.00	448.00
0100	Bandhani	day	0.50	407.00	203.50
0114	Beldar	day	1.00	368.00	368.00
	Painting with oil preservative (4x1.1) + (2.0x0.25x0.30) =4.4 + 0.15 = 4.55 sqm				
0859	Oil type wood preservative	litre	0.455	140.00	63.70
0131	Painter	day	0.07	448.00	31.36
0115	Coolie	day	0.07	368.00	25.76
9999	Sundries	L.S.	0.13	1.73	0.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage	L.S.	1.82	1.73	3.15
9999	Brushes	L.S.	1.82	1.73	3.15
9999	Making good the holes	L.S.	20.67	1.73	35.76
9999	Sundries	L.S.	26.91	1.73	46.55
0302	Safeda ballies 125 mm diameter	metre	2.50	35.00	87.50
	TOTAL				12455.54
	Add 1 % Water charges				124.56
	TOTAL				12580.10
	Add 15 % Contractor's profit and overheads				1887.02
	Cost of 300 Cudm				14467.12
	Cost of 1.00 cum				48223.73
	Say				48223.75

14.16.2 Above 4.00 metres and upto 5.00 metres length.

14.16.2.1 Sal wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 375 cudm or 0.375 cum Consider one beam i.e. 375 cudm. 0.25 x 0.30m x 5.0m (long) = 0.375 cum Add wastage @ 2% (0.008 cum) = 0.383 cum = 383cudm (i) Propping the roof MATERIAL 125mm diameter ballies 5m long 12 nos 100x100mm salwood battens 1.0 metre long 6 nos. x1.0x0.1x0.1 = 60 cudm. These materials can be used for 16 times hence qty for one operation 1/16 = 3.75 cudm				
1199	Sal wood in scantling	10 cudm	0.375	600.00	225.00
2204	Carriage of Timber	cum	0.0498	118.59	5.91
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
	(ii) Taking out the existing beams etc. LABOUR				
0155	Mason (average)	day	0.25	467.00	116.75
0100	Bandhani	day	0.63	407.00	256.41
0114	Beldar	day	0.50	368.00	184.00
	(iii) Renewal Materials and Labour				
1199	Sal wood in scantling	10 cudm	38.30	600.00	22980.00
2204	Carriage of Timber	cum	0.383	118.59	45.42
0112	Carpenter 2nd class	day	1.00	448.00	448.00
0100	Bandhani	day	1.00	407.00	407.00
0114	Beldar	day	2.00	368.00	736.00
	Painting with oil preservative (2x5x0.25)+3.0 + 2.0x0.25x0.30 = 5.5 + 0.15 = 5.65 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0859	Oil type wood preservative	litre	0.565	140.00	79.10
0131	Painter	day	0.08	448.00	35.84
0115	Coolie	day	0.08	368.00	29.44
9999	Sundries	L.S.	0.26	1.73	0.45
9977	Carriage	L.S.	2.34	1.73	4.05
9999	Brushes	L.S.	2.21	1.73	3.82
9999	Making good the holes	L.S.	20.67	1.73	35.76
9999	Sundries	L.S.	33.15	1.73	57.35
0302	Safeda ballies 125 mm diameter	metre	3.75	35.00	131.25
	TOTAL				25985.55
	Add 1 % Water charges				259.86
	TOTAL				26245.41
	Add 15 % Contractor's profit and overheads				3936.81
	Cost of 375 Cudm				30182.22
	Cost of 1.00 cum				80485.92
	Say				80485.90

14.16.2.2 Hollock wood beams

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 375 cudm or 0.375 cum Consider one beam i.e. 375 cudm. 0.25 x 0.30m x 5.0m (long) = 0.375 cum Add wastage @ 2% (0.008 cum) = 0.383 cum = 383cudm (i) Propping the roof MATERIAL 125mm diameter ballies 5m long 12 nos 100x100mm salwood battens 1.0 metre long 6 nos. x1.0x0.1x0.1 = 60 cudm. These materials can be used for 16 times hence qty for one operation 1/16 = 3.75 cudm				
2466	Hollock wood in scantling	10 cudm	0.375	340.00	127.50
2204	Carriage of Timber	cum	0.0375	118.59	4.45
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
	(ii) Taking out the existing beams etc. LABOUR				
0155	Mason (average)	day	0.25	467.00	116.75
0100	Bandhani	day	0.63	407.00	256.41
0114	Beldar	day	0.50	368.00	184.00
	(iii) Renewal Materials and Labour				
2466	Hollock wood in scantling	10 cudm	38.30	340.00	13022.00
2204	Carriage of Timber	cum	0.383	118.59	45.42
0112	Carpenter 2nd class	day	1.00	448.00	448.00
0100	Bandhani	day	1.00	407.00	407.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar Painting with oil preservative (2x5x0.25)+3.0 + 2.0x0.25x0.30 = 5.5 + 0.15 = 5.65 sqm	day	2.00	368.00	736.00
0859	Oil type wood preservative	litre	0.565	140.00	79.10
0131	Painter	day	0.08	448.00	35.84
0115	Coolie	day	0.08	368.00	29.44
9999	Sundries	L.S.	0.26	1.73	0.45
9977	Carriage	L.S.	2.34	1.73	4.05
9999	Brushes	L.S.	2.21	1.73	3.82
9999	Making good the holes	L.S.	20.67	1.73	35.76
9999	Sundries	L.S.	33.15	1.73	57.35
0302	Safeda ballies 125 mm diameter	metre	3.75	35.00	131.25
	TOTAL				15928.59
	Add 1 % Water charges				159.29
	TOTAL				16087.88
	Add 15 % Contractor's profit and overheads				2413.18
	Cost of 375 Cudm				18501.06
	Cost of 1.00 cum				49336.16
	Say				49336.15

14.17 Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0114	Beldar	day	0.53	368.00	195.04
0115	Coolie	day	0.08	368.00	29.44
0101	Bhisti	day	0.07	407.00	28.49
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				255.44
	Add 1 % Water charges				2.55
	TOTAL				257.99
	Add 15 % Contractor's profit and overheads				38.70
	Cost of 10.00 sqm				296.69
	Cost of 1.00 sqm				29.66
	Say				29.65

14.18 Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :

14.18.1 With F.P.S. brick tiles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL Cement mortar 1 : 3 (1 cement : 3 fine sand)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.015	4252.70	63.79
1213	Water proofing materials	kilogram	0.153	35.00	5.36
	2% of wt. of cement				
	LABOUR				
0115	Coolie	day	0.36	368.00	132.48
0124	Mason (brick layer) 2nd class	day	0.36	448.00	161.28
0101	Bhisti	day	0.36	407.00	146.52
9999	Sundries	L.S.	18.85	1.73	32.61
	TOTAL				542.04
	Add 1 % Water charges				5.42
	TOTAL				547.46
	Add 15 % Contractor's profit and overheads				82.12
	Cost of 10.00 sqm				629.58
	Cost of 1.00 sqm				62.95
	Say				62.95

14.18.2 With modular brick tiles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
	Cement mortar 1 : 3 (1 cement : 3 fine sand)				
3.3	Rate as per Item Number 3.3 of SH: Mortars	cum	0.017	4252.70	72.30
1213	Water proofing materials	kilogram	0.173	35.00	6.06
	2% of wt. of cement				
	LABOUR				
0115	Coolie	day	0.36	368.00	132.48
0124	Mason (brick layer) 2nd class	day	0.36	448.00	161.28
0101	Bhisti	day	0.36	407.00	146.52
9999	Sundries	L.S.	18.85	1.73	32.61
	TOTAL				551.25
	Add 1 % Water charges				5.51
	TOTAL				556.76
	Add 15 % Contractor's profit and overheads				83.51
	Cost of 10.00 sqm				640.27
	Cost of 1.00 sqm				64.02
	Say				64.00

14.19 Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 mtrs of weight 63 kgs M.S. Flats 40x6mm @ 1.9kg./m = 30x1.9 = 57 kg. (A) J' hook bolts @ 30cm centre to centre = 101 Nos. x 0.15 m = 15.15 m @ 0.40kg./ m = 6.06kg (B) Total (A+B) = 63.06 kg Say 63 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0103	Blacksmith 2nd class	day	0.09	448.00	40.32
0100	Bandhani	day	0.06	407.00	24.42
0114	Beldar	day	0.16	368.00	58.88
	TOTAL				123.62
	Add 1 % Water charges				1.24
	TOTAL				124.86
	Add 15 % Contractor's profit and overheads				18.73
	Cost for 63 kg.				143.59
	Cost of 1.00 kg				2.27
	Say				2.25

14.20 Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 20.2 m wind tie				
	MATERIAL				
1023	Galvanised steel J or L hooks 8 mm dia @ 30 cm center to center = 68 Nos	10 Nos	6.80	115.00	782.00
1208	Bitumen washer	100 Nos	0.68	30.00	20.40
1209	G.I. plain washer thick	100 Nos	0.68	35.00	23.80
9977	Carriage of bolts, nuts and washers etc.	L.S.	1.17	1.73	2.02
	LABOUR				
0102	Blacksmith 1st class	day	0.34	487.00	165.58
0114	Beldar	day	0.34	368.00	125.12
9999	Sundries	L.S.	13.91	1.73	24.06
	Applying priming coat with ready mixed zink chromate yellow primer 20.2x2x(0.04+0.006) = 1.86 sqm				
13.50.3	Rate as per item no 13.50.3 of SH : Finishing	sqm	1.86	29.10	54.13(A)
	Painting with ready mixed black anticorrosive bitumastic paint				
13.65.1	Rate as per item No.13.65.1 SH: Finishing	sqm	1.86	65.20	121.27(A)
	TOTAL				1318.38
	Add 1 % Water charges on all except (A) i.e. on (1318.38 - 175.40) = 1142.98				11.43
	TOTAL				1329.81
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1329.81 - 175.40) = 1154.41				173.16
	Cost of 20.2 metres				1502.97
	Cost of 1.00 metre				74.40
	Say				74.40

14.21 Renewing bottom rail and/or top runner of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for gate of size 1.52x2.4 m (weight 11.55 kg) MATERIAL M.S. Tee 40x40x6 mm Top rail = 1.725 m Bottom rail = 1.570 m Total = 3.295 m say 3.30 m @ 3.5 kg/m = 11.55 kg Add 10% wastage = 1.155 kg Total = 12.705 kg = 0.1270 q say 0.13 q				
1007	Structurals such as tees,angles channels and R.S. joists	quintal	0.13	3775.00	490.75
2205	Carriage of Steel	tonne	0.013	92.24	1.20
15.12.2	Taking out collapsible gate including frame (Rate as per item no 15.12.2 of SH Dismantling and Demolishing)	each	1.00	216.40	216.40
	Refixing of collapsible gate including mending good the damaged floor, wall etc.frame Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
4.2.5	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.03	5992.75	179.78(A)
3.6	Cement mortar 1 : 6 (1 cement : 6 fine sand) (Rate as per item No 3.6)	cum	0.01	2746.70	27.47
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.18	1.73	41.83
9999	Disposal of mulba	L.S.	1.82	1.73	3.15
	Priming coat on Tees 0.16x3.3 = 0.53 sqm				
13.50.3	Rate as per item no 13.50.3 of SH : Finishing	sqm	0.53	29.10	15.42(A)
	LABOUR				
	Labour for fixing the gate				
0155	Mason (average)	day	0.50	467.00	233.50
0114	Beldar	day	0.75	368.00	276.00
9999	Sundries	L.S.	2.60	1.73	4.50
	TOTAL				1490.00
	Add 1 % Water charges on all except (A) i.e. on (1490.00 - 411.60) = 1078.40				10.78
	TOTAL				1500.78
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1500.78 - 411.60) = 1089.18				163.38
	Cost of 11.55 kg				1664.16
	Cost of 1.00 kg				144.08
	Say				144.10

14.22 Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.

14.22.1 Wheel 50 mm dia and below

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos wheels of 40 mm dia. MATERIAL Weight of 10 nos wheels $10 \times [3.14 \times \{(4/2) \times (4/2)\} \times 4] \times 7.850/1000$ = 3.94 kg Weight of 10 nos clamps 6 mm thick = $10 \times$ length of clamp = $10 \times 0.17\text{m} @ 1.90\text{kg/m} =$ 3.23 kg Weight of 10 nos 10 mm dia. Bolts, 10 cm long $10 \times 0.10\text{m} = 1\text{m} @ 0.60\text{ kg/m} = 0.60\text{ kg}$ Total = 7.70 kg say 8 kg Labour for dismantling :				
0103	Blacksmith 2nd class	day	0.01	448.00	4.48
0100	Bandhani	day	0.01	407.00	4.07
0114	Beldar	day	0.02	368.00	7.36
9999	Sundries	L.S.	0.39	1.73	0.67
	Renewing the wheels with clamps :- MATERIAL				
7442	Wheel 75 mm dia. 40 mm wide 10 nos clamps out of M.S. flat 40x6 mm, 170 mm long = $10 \times 0.17\text{m} = 1.70\text{m} @ 1.9$ kg/m = 3.23 kg Add 5% wastage = 0.16 kg Total = 3.39 kg say 3.50 kg	each	10.00	65.00	650.00
1008	Flats upto 10 mm in thickness M.S. bolt/pin 10 mm dia 10 cm long 10 Nos $10 \times 0.06 = 0.6\text{ kg} = 0.006\text{ q}$	quintal	0.035	3675.00	128.63
1034	Bolts and nuts upto 300 mm in length	quintal	0.006	5100.00	30.60
1215	Welding by electric plant length = $10 \times (2 \times 4) = 80\text{cm}$	cm	80.00	2.00	160.00
	LABOUR Labour for cutting, assembling and erection charges				
0102	Blacksmith 1st class	day	0.03	487.00	14.61
0100	Bandhani	day	0.02	407.00	8.14
0114	Beldar	day	0.11	368.00	40.48
13.50.3	Priming coat : = $10 \times 2(0.06 + 0.008) \times 0.25\text{m}$ = 0.34 sqm on Tees $0.16 \times 3.3 = 0.53\text{ sqm}$	sqm	0.165	29.10	4.80(A)
9999	Rate as per item no 13.50.3 of SH : Finishing Sundries	L.S.	1.69	1.73	2.92
	TOTAL				1056.76
	Add 1 % Water charges on all except (A) i.e. on $(1056.76 - 4.80) = 1051.96$				10.52
	TOTAL				1067.28
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on $(1067.28$ $- 4.80) = 1062.48$				159.37
	Cost of 10 nos wheels				1226.65
	Cost per wheel				122.66
	Say				122.65

14.22.2 Wheel above 50 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos wheels Considering average wheel dia =75 mm Width of wheel = 40 mm M.S. flat for clamp = 60x8 mm Bolt size 16 mm dia. Lenth of one clamp : $2 \times (0.04 + 0.0375 + 0.02) + 0.05 = 0.195 + 0.05 = 0.245\text{m}$ say 0.25m MATERIAL Weight of 10 nos wheels $10 \times [3.14 \times \{(7.5/2) \times (7.5/2)\} \times 4] \times 7.850 / 1000 = 13.87 \text{ kg}$ Weight of 10 nos clamps 8 mm thick $= 10 \times 0.25 \text{ m} @ 3.8\text{kg/m} = 9.50 \text{ kg}$ Weight of 10 nos 16 mm dia. Bolts, 10 cm long $10 \times 0.10 \text{ m} @ 1.60 \text{ kg/m} = 1.60 \text{ kg}$ Total = 24.97 kg say 25 kg Labour for dismantling :				
0103	Blacksmith 2nd class	day	0.04	448.00	17.92
0100	Bandhani	day	0.03	407.00	12.21
0114	Beldar	day	0.06	368.00	22.08
9999	Sundries	L.S.	1.04	1.73	1.80
	Renewing the wheels with clamps :- MATERIAL				
7442	Wheel 75 mm dia. 40 mm wide 10 nos clamps out of M.S. flat 60x8 mm $= 10 \times 0.25 \text{ m} @ 3.8 \text{ kg/m} = 9.5 \text{ kg}$ Add 5% wastage = 0.48 kg Total = 9.98 kg say 10 kg	each	10.00	65.00	650.00
1008	Flats upto 10 mm in thickness M.S. bolt/pin 16 mm dia 10 cm long 10 Nos $10 \times 0.16 = 1.6 \text{ kg} = 0.016 \text{ q}$	quintal	0.10	3675.00	367.50
1034	Bolts and nuts upto 300 mm in length	quintal	0.016	5100.00	81.60
1215	Welding by electric plant length = $10 \times (2 \times 6)$	cm	120.00	2.00	240.00
	LABOUR Labour for cutting, assembling and erection charges				
0102	Blacksmith 1st class	day	0.10	487.00	48.70
0100	Bandhani	day	0.05	407.00	20.35
0114	Beldar	day	0.36	368.00	132.48
13.50.3	Priming coat : = $10 \times 2 \times (0.06 + 0.008) \times 0.25\text{m} = 0.34 \text{ sqm}$ on Tees $0.16 \times 3.3 = 0.53 \text{ sqm}$	sqm	0.34	29.10	9.89(A)
9999	Rate as per item no 13.50.3 of SH : Finishing Sundries	L.S.	5.33	1.73	9.22
	TOTAL				1613.75
	Add 1 % Water charges on all except (A) i.e. on $(1613.75 - 9.89) = 1603.86$				16.04
	TOTAL				1629.79
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on $(1629.79 - 9.89) = 1619.90$				242.99
	Cost of 10 nos wheels				1872.78
	Cost per wheel				187.27
	Say				187.25

14.23 Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0011	Details for 10.91 kilolitre Pumping hours 3 hrs. or 0.375 days Hire charges of Pumpset of capacity 4000 litres/hour.	day	0.375	650.00	243.75
0114	Beldar for clearing slush	day	2.00	368.00	736.00
	TOTAL				979.75
	Add 1 % Water charges				9.80
	TOTAL				989.55
	Add 15 % Contractor's profit and overheads				148.43
	Cost of 10.91 kilolitre				1137.98
	Cost of 1 kilolitre				104.30
	Say				104.30

14.24 Mud mortar made with local clay good earth.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0811	Detail of cost for 1 cum MATERIAL	cum	1.08	150.00	162.00
0114	Mud (dry) LABOUR	day	0.63	368.00	231.84
0101	Bhisti	day	0.315	407.00	128.21
9999	Sundries	L.S.	6.45	1.73	11.16
	TOTAL				533.21
	Cost of 1 cum				533.21
	Say				533.20

14.25 Brick work with common burnt clay bricks of class designation 7.5 in mud mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2602	Details of cost for 1 cum. MATERIAL Common burnt clay F.P.S. (non modular) bricks class designation 7.5 Mud mortar	1000 Nos	0.494	4500.00	2223.00
3.18	Rate as per Item Number 3.18 of SH: Mortars	cum	0.25	533.20	133.30
2201	Carriage of Bricks	1000 Nos	0.494	276.72	136.70
9999	Sundries	L.S.	2.73	1.73	4.72
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.36	487.00	175.32
0124	Mason (brick layer) 2nd class	day	0.36	448.00	161.28
0115	Coolie	day	1.37	368.00	504.16
0101	Bhisti	day	0.2	407.00	81.40
	TOTAL				3419.88
	Add 1 % Water charges				34.20
	TOTAL				3454.08
	Add 15 % Contractor's profit and overheads				518.11
	Cost of 1 Cum.				3972.19
	Say				3972.20

14.26 Providing and fixing 25 mm thick shutters for cup board etc. :

14.26.1 Panelled or panelled & glazed shutters :

14.26.1.1 Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutter of cup-board 200x108cm = 2.16 sqm. MATERIAL Styles 4x200x8.0x2.5cm = 0.016 cum+ Rails Top rail 1x110.5x8.0x2.5cm = 0.0022cum+ Lock and bottom rails 2x110.5x8.0x2.5 cm = 0.0044 cum Panels 2x48x41x1.6cm = 0.006cum+ Sash bars 2x114x3.8x2.5cm = 0.003cum+ 6x48x3.8x2.5cm = 0.003 cum+ Beading 16x92x1.4x1.2cm = 0.002cum Total = 0.0366 Add for wastage @ 10% = 0.0037 cum. Grand Total = 0.0403 cum = 40.30 cudm say 40 cudm				
1186	Superior class teak wood such as Dandeli, Balارشah or Malabar in planks	10 cudm	4.00	1100.00	4400.00
2204	Carriage of Timber	cum	0.04	118.59	4.74
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).	sqm	0.99	286.00	283.14
	Fittings-				
0608	Nickel plated mild steel piono hinges 1 mm thick 25 mm wide	metre	4.00	40.00	160.00
0639	Bright finished or black enamelled mild steel screws 25 mm	100 Nos	1.20	37.00	44.40
	LABOUR				
0111	Carpenter 1st class	day	2.40	487.00	1168.80
0119	Glazier	day	0.18	448.00	80.64
0114	Beldar	day	0.77	368.00	283.36
9999	Sundries	L.S.	40.43	1.73	69.94
	TOTAL				6495.02
	Add 1 % Water charges				64.95
	TOTAL				6559.97
	Add 15 % Contractor's profit and overheads				984.00
	Cost of 2.16 sqm.				7543.97
	Cost of 1 sqm.				3492.57
	Say				3492.55

14.26.1.2 1st class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutters of a cup-board (half glazed and half panelled) 200x108cm = 2.16 sqm. MATERIAL Styles 4x200x8.0x2.5cm = 0.016 cum+ Rails Top rail 1x110.5x8.0x2.5cm = 0.0022cum+ Lock and bottom rail 2x110.5x8.0x2.5cm = 0.0044 cum. Panels 2x48x41x1.6cm = 0.006cum+ Sash bars 2x114x3.8x2.5cm = 0.003cum+ 6x48x3.8x2.5cm = 0.003 cum+ Beading 16x92x1.4x1.2cm = 0.002cum Total = 0.0366 Add for wastage @ 10% = 0.0037 cum. Grand Total = 0.0403 cum = 40.30 cudm say 40 cudm				
1188	First class teak wood in planks	10 cudm	4.00	850.00	3400.00
2204	Carriage of Timber	cum	0.04	118.59	4.74
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm). Fittings	sqm	0.99	286.00	283.14
0608	Nickel plated mild steel piono hinges 1 mm thick 25 mm wide	metre	4.00	40.00	160.00
0639	Bright finished or black enamelled mild steel screws 25 mm	100 Nos	1.20	37.00	44.40
	LABOUR				
0111	Carpenter 1st class	day	2.40	487.00	1168.80
0119	Glazier	day	0.18	448.00	80.64
0114	Beldar	day	0.77	368.00	283.36
9999	Sundries	L.S.	40.43	1.73	69.94
	TOTAL				5495.02
	Add 1 % Water charges				54.95
	TOTAL				5549.97
	Add 15 % Contractor's profit and overheads				832.50
	Cost of 2.16 sqm.				6382.47
	Cost of 1 sqm.				2954.84
	Say				2954.85

14.26.2 Glazed shutters :

14.26.2.1 Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutter of cup-board 200x108cm = 2.16 sqm.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MATERIAL (i) Teak wood first class Styles : 4x200x9.5x2.5 cm = 0.019 cum Rails Top & intermediate rails 2x110.5x9.5x2.5 cm = 0.006 cum Lock and bottom rails 2x110.5x19.7x2.5 cm = 0.011 cum Beadings- 2x186.1x1.9x1.2cm = 0.001cum+ 4x171.70x1.9x1.2cm = 0.002cum. Total = 0.039 cum. Add for wastage @ 10% = 0.004 cum. Grand Total = 0.043 cum = 43 cudm				
1186	Superior class teak wood such as Dandeli, Balارشah or Malabar in planks	10 cudm	4.30	1100.00	4730.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).	sqm	1.27	286.00	363.22
0608	Nickel plated mild steel piano hinges 1 mm thick 25 mm wide 75x45x3.2 mm	metre	4.00	40.00	160.00
0639	Bright finished or black enamelled mild steel screws 25 mm	100 Nos	1.20	37.00	44.40
0597	Bright finished or black enamelled mild steel butt hinges 50x37x1.50 mm	10 Nos	0.20	50.00	10.00
0640	Bright finished or black enamelled mild steel screws 20 mm	100 Nos	0.08	32.00	2.56
2204	Carriage of Timber	cum	0.043	118.59	5.10
	LABOUR				
0156	Carpenter (average)	day	1.83	467.00	854.61
0119	Glazier	day	0.23	448.00	103.04
0114	Beldar	day	0.77	368.00	283.36
9999	Sundries	L.S.	40.43	1.73	69.94
	TOTAL				6626.23
	Add 1 % Water charges				66.26
	TOTAL				6692.49
	Add 15 % Contractor's profit and overheads				1003.87
	Cost of 2.16 sqm.				7696.36
	Cost of 1 sqm.				3563.12
	Say				3563.10

14.26.2.2 Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutter of cup-board 200x108cm = 2.16 sqm. MATERIAL (i) Teak wood first class Styles : 4x200x9.5x2.5 cm = 0.019 cum Rails Top & intermediate rails 2x110.5x9.5x2.5 cm = 0.006 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Lock and bottom rails 2x110.5x19.7x2.5 cm = 0.011 cum Beadings- 2x186.1x1.9x1.2cm = 0.001cum+ 4x171.70x1.9x1.2cm = 0.002cum. Total = 0.039 cum. Add for wastage @ 10% = 0.004 cum. Grand Total = 0.043 cum = 43 cudm				
1188	First class teak wood in planks	10 cudm	4.30	850.00	3655.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).	sqm	1.27	286.00	363.22
0608	Nickel plated mild steel piono hinges 1 mm thick 25 mm wide 75x45x3.2 mm	metre	4.00	40.00	160.00
0639	Bright finished or black enamelled mild steel screws 25 mm	100 Nos	1.20	37.00	44.40
0597	Bright finished or black enamelled mild steel butt hinges50x37x1.50 mm	10 Nos	0.20	50.00	10.00
0640	Bright finished or black enamelled mild steel screws 20 mm	100 Nos	0.08	32.00	2.56
2204	Carriage of Timber LABOUR	cum	0.043	118.59	5.10
0156	Carpenter (average)	day	1.83	467.00	854.61
0119	Glazier	day	0.23	448.00	103.04
0114	Beldar	day	0.77	368.00	283.36
9999	Sundries	L.S.	40.43	1.73	69.94
	TOTAL				5551.23
	Add 1 % Water charges				55.51
	TOTAL				5606.74
	Add 15 % Contractor's profit and overheads				841.01
	Cost of 2.16 sqm.				6447.75
	Cost of 1 sqm.				2985.06
	Say				2985.05

14.27 Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10 mm laths placed 35 mm apart (frames to be paid separately), including fixing 50x12 mm beading complete with :

14.27.1 Second class teak wood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of a jaffri shutter 176x86 cm = 1.51 sqm MATERIAL Teak wood 2nd class Styles 2x176x7.5x3.5 cm = 0.0092 cum Rails 3x86x7.5x3.5 = 0.0068 cum Total 0.0160 cum Add wastage @ 10 % =0.0016 cum Total = 0.0176 cum Say 18 cudm				
1190	Second class teak wood in planks	10 cudm	1.80	675.00	1215.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2204	Carriage of Timber	cum	0.018	118.59	2.13
9.41.1	Palain Jaffri work				
	Rate as per Item Number 9.41.1 of SH:Wood and PVC work	sqm	1.51	1725.45	2605.43(A)
0595	Bright finished or black enamelled mild steel butt hinges 100x58x1.90 mm	10 Nos	0.60	85.00	51.00
0597	Bright finished or black enamelled mild steel butt hinges 50x37x1.50 mm	10 Nos	0.20	50.00	10.00
0637	Bright finished or black enamelled mild steel screws 40 mm	100 Nos	0.48	63.00	30.24
0640	Bright finished or black enamelled mild steel screws 20 mm	100 Nos	0.08	32.00	2.56
	LABOUR				
	For making frame and fixing fitting				
0112	Carpenter 2nd class	day	0.30	448.00	134.40
	TOTAL				4050.76
	Add 1 % Water charges on all except (A) i.e. on (4050.76 - 2605.43) = 1445.33				14.45
	TOTAL				4065.21
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4065.21 - 2605.43) = 1459.78				218.97
	Cost of 1.51 sqm.				4284.18
	Cost of 1 sqm.				2837.20
	Say				2837.20

14.28 Providing and fixing brass curtain rods of wall thickness 1.25 mm with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.

14.28.1 20 mm diameter.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 2 metre long				
	MATERIAL				
0444	Brass curtain rod 20 mm dia 1.25 mm thick	metre	2.00	120.00	240.00
0446	Brass brackets (curtain rods) 20 mm	each	2.00	45.00	90.00
9999	Screws	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	1.56	1.73	2.70
	Wooden plugs including cutting brick work and fixing in cement mortar				
9.32	Rate as per item no 9.32 of SH : Wood work	each	2.00	21.85	43.70(A)
9999	LABOUR	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	1.56	1.73	2.70
	TOTAL				388.54
	Add 1 % Water charges on all except (A) i.e. on (388.54 - 43.70) = 344.84				3.45
	TOTAL				391.99
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (391.99 - 43.70) = 348.29				52.24
	Cost of 2 metres				444.23
	Cost of 1 metre				222.11
	Say				222.10

14.28.2 25 mm diameter.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 2 metre long MATERIAL				
0445	Brass curtain rod 25 mm dia 1.25 mm thick	metre	2.00	140.00	280.00
0446	Brass brackets (curtain rods) 20 mm	each	2.00	45.00	90.00
9999	Screws	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	1.56	1.73	2.70
	Wooden plugs including cutting brick work and fixing in cement mortar				
9.32	Rate as per item no 9.32 of SH : Wood work	each	2.00	21.85	43.70(A)
9999	LABOUR	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	1.56	1.73	2.70
	TOTAL				428.54
	Add 1 % Water charges on all except (A) i.e. on (428.54 - 43.70) = 384.84				3.85
	TOTAL				432.39
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (432.39 - 43.70) = 388.69				58.30
	Cost of 2 metres				490.69
	Cost of 1 metre				245.34
	Say				245.35

14.29 Providing and fixing M.S. round or square bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for window -140x110cm MATERIAL				
	M.S. bar 16 mm dia 13x136 cm = 17.68 m @ 1.58 kg/m = 27.93 kg Add for wastage @ 10% =2.79 kg Total = 30.72 kg or 0.307 q				
1003	Mild steel round bar above 12 mm dia M.S. flat 40x6mm 2x96cm = 192cm+ 1x110cm = 110cm = 302cm+	quintal	0.307	3575.00	1097.53
	Add wastage @ 10% = 30cm Total = 332cm.@ 1.90 kg/m = 6.31 kg Say 0.063 q				
1008	Flats upto 10 mm in thickness	quintal	0.063	3675.00	231.53
2205	Carriage of Steel (0.307+0.063 = 0.37 q = 0.037 t)	tonne	0.037	92.24	3.41
9999	Sundries	L.S.	26.91	1.73	46.55
	LABOUR				
0103	Blacksmith 2nd class	day	0.35	448.00	156.80
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.45	368.00	165.60
	TOTAL				1791.02
	Add 1 % Water charges				17.91
	TOTAL				1808.93
	Add 15 % Contractor's profit and overheads				271.34
	Cost of 33.67 kg.(5.74+27.93=33.67kg)				2080.27
	Cost of 1 kg.				61.78
	Say				61.80

14.30 Providing joists (karries) including hoisting, fixing in position and applying wood preservative on unexposed surface etc. complete with :

14.30.1 Sal wood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300cudm. MATERIAL Sal wood 10x0.1mx0.1mx3.0m = 0.30 cum. or = 300 cudm Add wastage @ 2% = 6.00 cudm. Total = 306 cudm.				
1199	Sal wood in scantling	10 cudm	30.60	600.00	18360.00
2204	Carriage of Timber	cum	0.306	118.59	36.29
	LABOUR				
0112	Carpenter 2nd class	day	0.70	448.00	313.60
0114	Beldar	day	1.45	368.00	533.60
0100	Bandhani	day	0.70	407.00	284.90
	Priming coat (Wood preservative)				
13.57.1	Rate as per item no 13.57.1 SH : Finishing	sqm	0.80	32.20	25.76(A)
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				19600.70
	Add 1 % Water charges on all except (A) i.e. on (19600.70 - 25.76) = 19574.94				195.75
	TOTAL				19796.45
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (19796.45 - 25.76) = 19770.69				2965.60
	Cost of 300 cudm.				22762.05
	Cost of 1 cum.				75873.50
	Say				75873.50

14.30.2 Hollock wood

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300cudm. MATERIAL Hollock wood in scantling 10x0.1mx0.1mx3.0m = 0.30 cum. or = 300 cudm Add wastage @ 2% = 6.00 cudm. Total = 306 cudm.				
2466	Hollock wood in scantling	10 cudm	30.60	340.00	10404.00
2204	Carriage of Timber	cum	0.306	118.59	36.29
	LABOUR				
0112	Carpenter 2nd class	day	0.70	448.00	313.60
0114	Beldar	day	1.45	368.00	533.60
0100	Bandhani	day	0.70	407.00	284.90
	Priming coat (Wood preservative)				
13.57.1	Rate as per item no 13.57.1 SH : Finishing	sqm	0.80	32.20	25.76(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				11644.70
	Add 1 % Water charges on all except (A) i.e. on (11644.70 - 25.76) = 11618.94				116.19
	TOTAL				11760.89
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11760.89 - 25.76) = 11735.13				1760.27
	Cost of 300 cudm.				13521.16
	Cost of 1 cum.				45070.53
	Say				45070.55

14.31 Providing and fixing bright finished brass single acting spring hinges with necessary brass screws etc. complete :

14.31.1 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0389	Brass single acting spring hinges 150 mm	each	10.00	460.00	4600.00
0449	Brass screws 50 mm	100 Nos	0.80	220.00	176.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				5050.70
	Add 1 % Water charges				50.51
	TOTAL				5101.21
	Add 15 % Contractor's profit and overheads				765.18
	Cost of 10 hinges				5866.39
	Cost of each				586.63
	Say				586.65

14.31.2 125 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0390	Brass single acting spring hinges 125 mm	each	10.00	298.00	2980.00
0449	Brass screws 50 mm	100 Nos	0.80	220.00	176.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				3430.70
	Add 1 % Water charges				34.31
	TOTAL				3465.01
	Add 15 % Contractor's profit and overheads				519.75
	Cost of 10 hinges				3984.76
	Cost of each				398.47
	Say				398.45

14.31.3 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0391	Brass single acting spring hinges 100 mm	each	10.00	260.00	2600.00
0450	Brass screws 40 mm	100 Nos	0.80	170.00	136.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				3010.70
	Add 1 % Water charges				30.11
	TOTAL				3040.81
	Add 15 % Contractor's profit and overheads				456.12
	Cost of 10 hinges				3496.93
	Cost of each				349.69
	Say				349.70

14.32 Providing and fixing bright finished brass double acting spring hinges with necessary brass screws etc. complete :**14.32.1 150 mm**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0392	Brass double acting spring hinges 150 mm	each	10.00	498.00	4980.00
0449	Brass screws 50 mm	100 Nos	0.80	220.00	176.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				5430.70
	Add 1 % Water charges				54.31
	TOTAL				5485.01
	Add 15 % Contractor's profit and overheads				822.75
	Cost of 10 hinges				6307.76
	Cost of each				630.77
	Say				630.75

14.32.2 125 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0393	Brass double acting spring hinges 125 mm	each	10.00	410.00	4100.00
0449	Brass screws 50 mm	100 Nos	0.80	220.00	176.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				4550.70
	Add 1 % Water charges				45.51
	TOTAL				4596.21
	Add 15 % Contractor's profit and overheads				689.43
	Cost of 10 hinges				5285.64
	Cost of each				528.56
	Say				528.55

14.32.3 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0394	Brass double acting spring hinges 100 mm	each	10.00	370.00	3700.00
0450	Brass screws 40 mm	100 Nos	0.80	170.00	136.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				4110.70
	Add 1 % Water charges				41.11
	TOTAL				4151.81
	Add 15 % Contractor's profit and overheads				622.77
	Cost of 10 hinges				4774.58
	Cost of each				477.45
	Say				477.45

14.33 Providing and fixing bright finished brass flush bolts with necessary brass screws etc. complete :

14.33.1 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0404	Brass flush bolt 250 mm	each	10.00	150.00	1500.00
0452	Brass screws 25 mm	100 Nos	0.60	100.00	60.00
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	Day	0.20	487.00	97.40
	TOTAL				1663.70
	Add 1 % Water charges				16.64
	TOTAL				1680.34
	Add 15 % Contractor's profit and overheads				252.05
	Cost of 10 hinges				1932.39
	Cost of each				193.23
	Say				193.25

14.33.2 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0405	Brass flush bolt 150 mm	each	10.00	130.00	1300.00
0452	Brass screws 25 mm	100 Nos	0.60	100.00	60.00
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0111	Carpenter 1st class	day	0.17	487.00	82.79
	TOTAL				1447.51
	Add 1 % Water charges				14.48
	TOTAL				1461.99
	Add 15 % Contractor's profit and overheads				219.30
	Cost of 10 hinges				1681.29
	Cost of each				168.12
	Say				168.10

14.33.3 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0406	Brass flush bolt 100 mm	each	10.00	90.00	900.00
0452	Brass screws 25 mm	100 Nos	0.60	100.00	60.00
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0111	Carpenter 1st class	day	0.17	487.00	82.79
	TOTAL				1047.51
	Add 1 % Water charges				10.48
	TOTAL				1057.99
	Add 15 % Contractor's profit and overheads				158.70
	Cost of 10 hinges				1216.69
	Cost of each				121.66
	Say				121.65

14.34 Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, necessary brass screws etc. to suit shutter thickness complete

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0417	Brass 150 mm floor door stopper (0.357kg)	each	10.00	170.00	1700.00
0450	Brass screws 40 mm	100 Nos	0.40	170.00	68.00
9977	Carriage of material	L.S.	2.73	1.73	4.72
	LABOUR				
0111	Carpenter 1st class	day	0.07	487.00	34.09

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries (wooden plugs including fixing in the floor)	L.S.	6.37	1.73	11.02
	TOTAL				1817.83
	Add 1 % Water charges				18.18
	TOTAL				1836.01
	Add 15 % Contractor's profit and overheads				275.40
	Cost of 10 Nos				2111.41
	Cost of each				211.14
	Say				211.15

14.35 Providing and fixing bright finished brass hard drawn hooks and eyes :

14.35.1 300 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0418	Brass hard drawn hooks and eyes 300 mm	10 Nos	1.00	650.00	650.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
	TOTAL				680.79
	Add 1 % Water charges				6.81
	TOTAL				687.60
	Add 15 % Contractor's profit and overheads				103.14
	Cost of 10 Nos				790.74
	Cost of each				79.07
	Say				79.05

14.35.2 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0419	Brass hard drawn hooks and eyes 250 mm	10 Nos	1.00	635.00	635.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
	TOTAL				665.79
	Add 1 % Water charges				6.66
	TOTAL				672.45
	Add 15 % Contractor's profit and overheads				100.87
	Cost of 10 hooks and eyes				773.32
	Cost of 1 hook and eye				77.33
	Say				77.35

14.35.3 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0420	Brass hard drawn hooks and eyes 200 mm	10 Nos	1.00	590.00	590.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
	TOTAL				620.79
	Add 1 % Water charges				6.21
	TOTAL				627.00
	Add 15 % Contractor's profit and overheads				94.05
	Cost of 10 Nos				721.05
	Cost of each				72.10
	Say				72.10

14.35.4 150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0421	Brass hard drawn hooks and eyes 150 mm	10 Nos	1.00	450.00	450.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
	TOTAL				480.79
	Add 1 % Water charges				4.81
	TOTAL				485.60
	Add 15 % Contractor's profit and overheads				72.84
	Cost of 10 Nos				558.44
	Cost of each				55.84
	Say				55.85

14.35.5 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0422	Brass hard drawn hooks and eyes 100 mm	10 Nos	1.00	400.00	400.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
	TOTAL				430.79
	Add 1 % Water charges				4.31
	TOTAL				435.10
	Add 15 % Contractor's profit and overheads				65.27
	Cost of 10 Nos				500.37
	Cost of each				50.03
	Say				50.05

14.36 Providing and fixing bright finished brass fan light pivot with necessary brass screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0429	Brass fanlight pivot	10 Nos	1.00	195.00	195.00
0450	Brass screws 40 mm	100 Nos	0.40	170.00	68.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.08	487.00	38.96
	TOTAL				303.53
	Add 1 % Water charges				3.04
	TOTAL				306.57
	Add 15 % Contractor's profit and overheads				45.99
	Cost of 10 Nos				352.56
	Cost of each				35.25
	Say				35.25

14.37 Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary brass screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0430	Brass chain with hook for fan light catch	each	10.00	40.00	400.00
0452	Brass screws 25 mm	100 Nos	0.40	100.00	40.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.10	487.00	48.70
	TOTAL				490.27
	Add 1 % Water charges				4.90
	TOTAL				495.17
	Add 15 % Contractor's profit and overheads				74.28
	Cost of 10 Nos				569.45
	Cost of each				56.94
	Say				56.95

14.38 Providing and fixing bright finished brass quadrant stay 300 mm long with necessary brass screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0427	Brass quadrant stays 300 mm	each	10.00	125.00	1250.00
0452	Brass screws 25 mm	100 Nos	0.40	100.00	40.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.10	487.00	48.70
	TOTAL				1340.27
	Add 1 % Water charges				13.40
	TOTAL				1353.67
	Add 15 % Contractor's profit and overheads				203.05
	Cost of 10 quadrant stays				1556.72
	Cost of each				155.67
	Say				155.65

14.39 Providing and fixing bright finished brass helical door spring (superior quality).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0442	Brass helical spring 150 mm	each	10.00	310.00	3100.00
0449	Brass screws 50 mm	100 Nos	0.40	220.00	88.00
0452	Brass screws 25 mm	100 Nos	0.20	100.00	20.00
9977	Carriage of material	L.S.	3.84	1.73	6.64
	LABOUR				
0111	Carpenter 1st class	day	0.40	487.00	194.80
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				3483.04
	Add 1 % Water charges				34.83
	TOTAL				3517.87
	Add 15 % Contractor's profit and overheads				527.68
	Cost of 10 Nos				4045.55
	Cost of each				404.55
	Say				404.55

14.40 Providing and fixing chromium plated brass butt hinges with necessary chromium plated brass screws etc. complete.

14.40.1 125x70x4 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0525	Chromium plated Brass butt hinges (light/ordinary) type 125x70x4 mm	10 Nos	1.00	900.00	900.00
0585	Chromium plated Brass screws 50 mm	100 Nos	1.00	340.00	340.00
9977	Carriage of material	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.14	487.00	68.18
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				1351.28
	Add 1 % Water charges				13.51
	TOTAL				1364.79
	Add 15 % Contractor's profit and overheads				204.72
	Cost of 10 nos.				1569.51
	Cost of each				156.95
	Say				156.95

14.40.2 100x70x4 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0526	Chromium plated Brass butt hinges (light/ordinary) type 100x70x4 mm	10 Nos	1.00	750.00	750.00
0586	Chromium plated Brass screws 40 mm	100 Nos	0.80	310.00	248.00
9977	Carriage of material	L.S.	3.64	1.73	6.30
	LABOUR				
0111	Carpenter 1st class	day	0.14	487.00	68.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				1109.28
	Add 1 % Water charges				11.09
	TOTAL				1120.37
	Add 15 % Contractor's profit and overheads				168.06
	Cost of 10 nos.				1288.43
	Cost of each				128.84
	Say				128.85

14.40.3 75x65x4 mm (heavy type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0524	Chromium plated Brass butt hinges (heavy) type 75x65x4 .0 mm (200gms)	10 Nos	1.00	1000.00	1000.00
0587	Chromium plated Brass screws 30 mm	100 Nos	0.60	250.00	150.00
9977	Carriage of material	L.S.	1.82	1.73	3.15
	LABOUR				
0111	Carpenter 1st class	day	0.14	487.00	68.18
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				1258.13
	Add 1 % Water charges				12.58
	TOTAL				1270.71
	Add 15 % Contractor's profit and overheads				190.61
	Cost of 10 nos.				1461.32
	Cost of each				146.13
	Say				146.15

14.40.4 75x40x2.5 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0527	Chromium plated Brass butt hinges (light/ordinary) type 75x40x2.5 mm	10 Nos	1.00	460.00	460.00
0587	Chromium plated Brass screws 30 mm	100 Nos	0.60	250.00	150.00
9977	Carriage of material	L.S.	1.82	1.73	3.15
	LABOUR				
0111	Carpenter 1st class	day	0.14	487.00	68.18
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				718.13
	Add 1 % Water charges				7.18
	TOTAL				725.31
	Add 15 % Contractor's profit and overheads				108.80
	Cost of 10 nos.				834.11
	Cost of each				83.41
	Say				83.40

14.40.5 50x40x2.5 mm (ordinary type)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
0528	Chromium plated Brass butt hinges (light/ordinary) type 50x40x2.5 mm	10 Nos	1.00	200.00	200.00
0589	Chromium plated Brass screws 20 mm	100 Nos	0.40	170.00	68.00
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0111	Carpenter 1st class	day	0.08	487.00	38.96
	TOTAL				308.53
	Add 1 % Water charges				3.09
	TOTAL				311.62
	Add 15 % Contractor's profit and overheads				46.74
	Cost of 10 nos.				358.36
	Cost of each				35.83
	Say				35.85

14.41 Providing and fixing 85x42 mm chromium plated brass pull bolt lock with necessary chromium plated brass screws, nuts, bolts and washers etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 Nos				
	MATERIAL				
2467	Chromium plated Brass pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete	each	10.00	165.00	1650.00
9988	Carriage of materials & sundries	L.S.	6.37	1.73	11.02
	LABOUR				
0112	Carpenter 2nd class	day	0.25	448.00	112.00
	TOTAL				1773.02
	Add 1 % Water charges				17.73
	TOTAL				1790.75
	Add 15 % Contractor's profit and overheads				268.61
	Cost of 10 nos.				2059.36
	Cost of each				205.93
	Say				205.95

14.42 White washing with lime to give an even shade :**14.42.1 Old work (two or more coats)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0775	Dehradun white lime	quintal	0.02	550.00	11.00
9977	Carriage of lime	L.S.	0.52	1.73	0.90
	LABOUR				
0141	White Washer	day	0.11	407.00	44.77
0115	Coolie	day	0.06	368.00	22.08
9999	Indigo gum etc	L.S.	2.73	1.73	4.72

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries ladders etc	L.S.	2.73	1.73	4.72
	TOTAL				88.19
	Add 1 % Water charges				0.88
	TOTAL				89.07
	Add 15 % Contractor's profit and overheads				13.36
	Cost of 10.00 sqm				102.43
	Cost of 1.00 sqm				10.24
	Say				10.25

14.42.2 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0775	Dehradun white lime	quintal	0.01	550.00	5.50
9977	Carriage of lime	L.S.	0.52	1.73	0.90
	LABOUR				
0141	White Washer	day	0.07	407.00	28.49
0115	Coolie	day	0.03	368.00	11.04
9999	Indigo gum etc	L.S.	2.08	1.73	3.60
9999	Sundries ladders etc	L.S.	2.73	1.73	4.72
	TOTAL				54.25
	Add 1 % Water charges				0.54
	TOTAL				54.79
	Add 15 % Contractor's profit and overheads				8.22
	Cost of 10.00 sqm				63.01
	Cost of 1.00 sqm				6.30
	Say				6.30

14.43 Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	LABOUR				
0114	Beldar	day	0.09	368.00	33.12
0115	Coolie	day	0.04	368.00	14.72
0101	Bhisti	day	0.04	407.00	16.28
9999	Sundries such as sand paper and scrapper	L.S.	2.73	1.73	4.72
9999	Repair to scratches	L.S.	1.82	1.73	3.15
	TOTAL				71.99
	Add 1 % Water charges				0.72
	TOTAL				72.71
	Add 15 % Contractor's profit and overheads				10.91
	Cost of 10 sqm.				83.62
	Cost of 1 sqm.				8.36
	Say				8.35

14.44 Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
0815	Dry distemper	kilogram	1.00	30.00	30.00
9977	Carriage of distemper	L.S.	0.91	1.73	1.57
9999	Brushes, sand-paper etc.	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.33	448.00	147.84
0115	Coolie	day	0.17	368.00	62.56
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				258.84
	Add 1 % Water charges				2.59
	TOTAL				261.43
	Add 15 % Contractor's profit and overheads				39.21
	Cost of 10 sqm.				300.64
	Cost of 1 sqm.				30.06
	Say				30.05

14.45 Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :

14.45.1 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.00	45.00	45.00
9999	Brushes, putty etc.	L.S.	0.52	1.73	0.90
9988	Sundries including carriage	L.S.	10.79	1.73	18.67
	LABOUR				
0131	Painter	day	0.33	448.00	147.84
0115	Coolie	day	0.17	368.00	62.56
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				287.34
	Add 1 % Water charges				2.87
	TOTAL				290.21
	Add 15 % Contractor's profit and overheads				43.53
	Cost of 10 sqm.				333.74
	Cost of 1 sqm.				33.37
	Say				33.35

14.46 Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	LABOUR				
0114	Beldar	day	0.11	368.00	40.48
0115	Coolie	day	0.05	368.00	18.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.05	407.00	20.35
9999	Scraper, sand paper etc.	L.S.	6.24	1.73	10.80
9999	Sundries including mortar to repair the surface	L.S.	1.82	1.73	3.15
	TOTAL				93.18
	Add 1 % Water charges				0.93
	TOTAL				94.11
	Add 15 % Contractor's profit and overheads				14.12
	Cost of 10 sqm.				108.23
	Cost of 1 sqm.				10.82
	Say				10.80

14.47 Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :

14.47.1 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
0845	Roofing paint for iron sheets in red colour	litre	0.46	120.00	55.20
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Putty, brushes sand paper etc.	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				375.49
	Add 1 % Water charges				3.75
	TOTAL				379.24
	Add 15 % Contractor's profit and overheads				56.89
	Cost of 10 sqm.				436.13
	Cost of 1 sqm.				43.61
	Say				43.60

14.48 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture over and including a priming coat of ready mixed zinc chromate yellow primer on new work :

14.48.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 metres Area=22/7 x0.0814m x30m =7.67 sqm				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.41	65.00	26.65
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.18	448.00	80.64
0115	Coolie	day	0.18	368.00	66.24
9999	Brushes, sand paper etc	L.S.	8.19	1.73	14.17

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.73	100.00	73.00
9977	Carraige	L.S.	1.04	1.73	1.80
	LABOUR				
0131	Painter	day	0.41	448.00	183.68
0115	Coolie	day	0.41	368.00	150.88
9999	Putty, sand paper etc	L.S.	4.16	1.73	7.20
9999	Sundries	L.S.	6.24	1.73	10.80
9999	Wire brushes for cleaning	L.S.	4.42	1.73	7.65
9999	Extra for delays	L.S.	40.3	1.73	69.72
	TOTAL				693.10
	Add 1 % Water charges				6.93
	TOTAL				700.03
	Add 15 % Contractor's profit and overheads				105.00
	Cost of 30.00 metres				805.03
	Cost of 1.00 metre				26.83
	Say				26.85

14.49 Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :

14.49.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 metres Area=22/7 x0.0814m x30m =7.67 sqm				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.43	100.00	43.00
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.27	448.00	120.96
0115	Coolie	day	0.27	368.00	99.36
9999	Putty, sand paper etc	L.S.	4.16	1.73	7.20
9999	Sundries	L.S.	6.24	1.73	10.80
9999	Wire brushes for cleaning	L.S.	4.42	1.73	7.65
9999	Extra for delays	L.S.	26.91	1.73	46.55
	TOTAL				336.19
	Add 1 % Water charges				3.36
	TOTAL				339.55
	Add 15 % Contractor's profit and overheads				50.93
	Cost of 30.00 metres				390.48
	Cost of 1.00 metre				13.01
	Say				13.00

14.49.2 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres Area = 22/7x106.4 mmx30 m = 10.032 sqm				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.57	100.00	57.00
9977	Carriage	L.S.	0.52	1.73	0.90

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0131	LABOUR Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Putty, sand paper brushes etc.	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
9999	Wire brushes for cleaning	L.S.	5.33	1.73	9.22
9999	Extra for delay	L.S.	34.06	1.73	58.92
	TOTAL				442.96
	Add 1 % Water charges				4.43
	TOTAL				447.39
	Add 15 % Contractor's profit and overheads				67.11
	Cost of 30.00 metres				514.50
	Cost of 1.00 metre				17.15
	Say				17.15

14.49.3 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres Area = 22/7x157.2 mmx30 m = 14.82 sqm				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.85	100.00	85.00
9977	Carriage	L.S.	0.65	1.73	1.12
	LABOUR				
0131	Painter	day	0.53	448.00	237.44
0115	Coolie	day	0.53	368.00	195.04
9999	Putty, sand paper brushes etc.	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	11.96	1.73	20.69
9999	Wire brushes for cleaning	L.S.	7.14	1.73	12.35
9999	Extra for delay	L.S.	40.30	1.73	69.72
	TOTAL				635.30
	Add 1 % Water charges				6.35
	TOTAL				641.65
	Add 15 % Contractor's profit and overheads				96.25
	Cost of 30.00 metres				737.90
	Cost of 1.00 metre				24.59
	Say				24.60

14.50 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with aluminium paint of approved brand and manufacture over a priming coat of ready mixed zinc chromate yellow primer on new work :

14.50.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 metres Area=22/7 x0.0814m x30m =7.67 sqm				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.41	65.00	26.65
9977	Carriage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.18	448.00	80.64
0115	Coolie	day	0.18	368.00	66.24
9999	Sundries	L.S.	8.19	1.73	14.17

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MATERIAL				
0826	Aluminium paint	litre	0.61	130.00	79.30
9977	Carriage	L.S.	1.04	1.73	1.80
9999	Putty, sand paper etc	L.S.	4.16	1.73	7.20
	LABOUR				
0131	Painter	day	0.41	448.00	183.68
0115	Coolie	day	0.41	368.00	150.88
9999	Sundries	L.S.	5.20	1.73	9.00
9999	Wire brushes for cleaning	L.S.	9.10	1.73	15.74
9999	Extra for delays	L.S.	44.85	1.73	77.59
	TOTAL				713.56
	Add 1 % Water charges				7.14
	TOTAL				720.70
	Add 15 % Contractor's profit and overheads				108.11
	Cost of 30.00 metres				828.81
	Cost of 1.00 metre				27.62
	Say				27.60

14.50.2 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 metres Area=22/7 x106.4x30m =10.032sqm				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.54	65.00	35.10
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.24	448.00	107.52
	0.18 x 10.032 / 7.67 = 0.24				
0115	Coolie	day	0.24	368.00	88.32
9999	Sundries	L.S.	10.79	1.73	18.67
	MATERIAL				
0826	Aluminium paint	litre	1.16	130.00	150.80
	0.61 x 10.032 / 7.67 = 0.80				
9977	Carriage	L.S.	1.43	1.73	2.47
9999	Putty, sand paper etc	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
	0.41 x 10.032 / 7.67 = 0.54				
0115	Coolie	day	0.54	368.00	198.72
9999	Sundries	L.S.	6.76	1.73	11.69
9999	Wire brushes for cleaning	L.S.	11.96	1.73	20.69
9999	Extra for delays	L.S.	66.43	1.73	114.92
	TOTAL				1000.94
	Add 1 % Water charges				10.01
	TOTAL				1010.95
	Add 15 % Contractor's profit and overheads				151.64
	Cost of 30.00 metres				1162.59
	Cost of 1.00 metre				38.75
	Say				38.75

14.50.3 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 metres Area=22/7 x157.12x30m =14.82 sqm				
	MATERIAL				
4202	Red oxide Zinc chromate primer	litre	0.80	65.00	52.00
9977	Carriage	L.S.	0.65	1.73	1.12
	LABOUR				
0131	Painter 0.18 x 14.82 / 7.67 = 0.36	Day	0.36	448.00	161.28
0115	Coolie	Day	0.36	368.00	132.48
9999	Sundries	L.S.	15.99	1.73	27.66
	MATERIAL				
0826	Aluminium paint 0.61 x 14.82 / 7.67 = 1.72	litre	1.72	130.00	223.60
9977	Carriage	L.S.	2.08	1.73	3.60
9999	Putty, sand paper etc	L.S.	7.93	1.73	13.72
	LABOUR				
0131	Painter 0.41 x 14.82 / 7.67 = 0.80	day	0.80	448.00	358.40
0115	Coolie	day	0.80	368.00	294.40
9999	Sundries	L.S.	10.01	1.73	17.32
9999	Wire brushes for cleaning	L.S.	17.81	1.73	30.81
9999	Extra for delays	L.S.	101.4	1.73	175.42
	TOTAL				1491.81
	Add 1 % Water charges				14.92
	TOTAL				1506.73
	Add 15 % Contractor's profit and overheads				226.01
	Cost of 30.00 metres				1732.74
	Cost of 1.00 metre				57.75
	Say				57.75

14.51 Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :
14.51.1 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres Area = 22/7x0.0814 mmx30 m = 7.67 sqm				
	MATERIAL				
0826	Aluminium paint	litre	0.35	130.00	45.50
9999	Putty, sand paper etc.	L.S.	0.39	1.73	0.67
9977	Carriage	L.S.	2.08	1.73	3.60
	LABOUR				
0131	Painter	day	0.28	448.00	125.44
0115	Coolie	day	0.28	368.00	103.04
9999	Putty, sand paper brushes etc.	L.S.	4.16	1.73	7.20
9999	Sundries	L.S.	6.24	1.73	10.80
9999	Wire brushes for cleaning	L.S.	4.42	1.73	7.65

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Extra for delay	L.S.	26.91	1.73	46.55
	TOTAL				350.45
	Add 1 % Water charges				3.50
	TOTAL				353.95
	Add 15 % Contractor's profit and overheads				53.09
	Cost of 30.00 metres				407.04
	Cost of 1.00 metre				13.56
	Say				13.55

14.51.2 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres Area = 22/7x106.4 mmx30 m = 10.032 sqm				
	MATERIAL				
0826	Aluminium paint	litre	0.46	130.00	59.80
9999	Putty, sand paper etc.	L.S.	0.52	1.73	0.90
9977	Carriage	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Putty, sand paper brushes etc.	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
9999	Wire brushes for cleaning	L.S.	5.33	1.73	9.22
9999	Extra for delay	L.S.	34.06	1.73	58.92
	TOTAL				450.48
	Add 1 % Water charges				4.50
	TOTAL				454.98
	Add 15 % Contractor's profit and overheads				68.25
	Cost of 30.00 metres				523.23
	Cost of 1.00 metre				17.44
	Say				17.45

14.51.3 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres Area = 22/7x157.2 mmx30 m = 14.82 sqm				
	MATERIAL				
0826	Aluminium paint	litre	0.68	130.00	88.40
9999	Putty, sand paper etc.	L.S.	0.65	1.73	1.12
9977	Carriage	L.S.	3.90	1.73	6.75
	LABOUR				
0131	Painter	day	0.53	448.00	237.44
0115	Coolie	day	0.53	368.00	195.04
9999	Putty, sand paper brushes etc.	L.S.	7.93	1.73	13.72
9999	Sundries	L.S.	11.96	1.73	20.69
9999	Wire brushes for cleaning	L.S.	7.15	1.73	12.37

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Extra for delay	L.S.	40.30	1.73	69.72
	TOTAL				645.25
	Add 1 % Water charges				6.45
	TOTAL				651.70
	Add 15 % Contractor's profit and overheads				97.76
	Cost of 30.00 metres				749.46
	Cost of 1.00 metre				24.98
	Say				25.00

14.52 Painting with oil type wood preservative of approved brand and manufacture:

14.52.1 Old work (one or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0859	Oil type wood preservative	litre	0.81	140.00	113.40
9977	Carriage of material	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.11	448.00	49.28
0115	Coolie	day	0.11	368.00	40.48
9999	Brushes etc	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				213.50
	Add 1 % Water charges				2.14
	TOTAL				215.64
	Add 15 % Contractor's profit and overheads				32.35
	Cost of 10.00 sqm				247.99
	Cost of 1.00 sqm				24.79
	Say				24.80

14.53 Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:

14.53.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0835	Plastic emulsion paint	litre	0.73	200.00	146.00
9999	Material for filling holes and cracks (putty etc.)	L.S.	0.52	1.73	0.90
9977	Carriage of material	L.S.	5.33	1.73	9.22
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc	L.S.	8.06	1.73	13.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				475.51
	Add 1 % Water charges				4.76
	TOTAL				480.27
	Add 15 % Contractor's profit and overheads				72.04
	Cost of 10.00 sqm				552.31
	Cost of 1.00 sqm				55.23
	Say				55.25

14.54 Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :

14.54.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0833	Synthetic enamel paint in black or chocolate shade	litre	0.70	170.00	119.00
9977	Carriage of paint and materials	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Putty	L.S.	2.73	1.73	4.72
9999	Brushes sand paper etc.	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				441.54
	Add 1 % Water charges				4.42
	TOTAL				445.96
	Add 15 % Contractor's profit and overheads				66.89
	Cost of 10.00 sqm				512.85
	Cost of 1.00 sqm				51.28
	Say				51.30

14.55 Painting with aluminium paint of approved brand and manufacture to give an even shade:

14.55.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0826	Aluminium paint	litre	0.46	130.00	59.80
9977	Carriage of paint and material	L.S.	0.52	1.73	0.90
9999	Putty etc	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				382.34
	Add 1 % Water charges				3.82
	TOTAL				386.16
	Add 15 % Contractor's profit and overheads				57.92
	Cost of 10.00 sqm				444.08
	Cost of 1.00 sqm				44.40
	Say				44.40

14.56 Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :

14.56.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0827	Acid proof paint (chocolate or black)	litre	0.70	225.00	157.50
9977	Carriage of paint	L.S.	0.52	1.73	0.90
9999	Putty etc	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				480.04
	Add 1 % Water charges				4.80
	TOTAL				484.84
	Add 15 % Contractor's profit and overheads				72.73
	Cost of 10.00 sqm				557.57
	Cost of 1.00 sqm				55.75
	Say				55.75

14.57 Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :

14.57.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.57	100.00	57.00
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Putty, brushes, sand paper etc	L.S.	5.33	1.73	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				374.82
	Add 1 % Water charges				3.75
	TOTAL				378.57
	Add 15 % Contractor's profit and overheads				56.79
	Cost of 10.00 sqm				435.36
	Cost of 1.00 sqm				43.53
	Say				43.55

14.58 French spirit polishing :

14.58.1 One or more coats on old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
1000	Spirit	litre	0.98	50.00	49.00
0999	Shellac	kilogram	0.13	300.00	39.00
9977	Carriage of materials	L.S.	0.91	1.73	1.57
9999	Turpentine oil sand paper cotton/woolen cloth putty etc.	L.S.	10.79	1.73	18.67
9999	Linseed oil	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	1.76	448.00	788.48
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				911.56
	Add 1 % Water charges				9.12
	TOTAL				920.68
	Add 15 % Contractor's profit and overheads				138.10
	Cost of 10.00 sqm				1058.78
	Cost of 1.00 sqm				105.87
	Say				105.85

14.59 Polishing on wood work with ready made wax polish of approved brand and manufacture :

14.59.1 Old work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0855	Wax polish (ready made)	kilogram	0.25	250.00	62.50
9977	Caariage	L.S.	0.39	1.73	0.67
	LABOUR				
0131	Painter	day	0.40	448.00	179.20
0115	Coolie	day	0.40	368.00	147.20
9999	Soap, brushes, cloth etc	L.S.	4.16	1.73	7.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				404.42
	Add 1 % Water charges				4.04
	TOTAL				408.46
	Add 15 % Contractor's profit and overheads				61.27
	Cost of 10.00 sqm				469.73
	Cost of 1.00 sqm				46.97
	Say				46.95

14.60 Re-lettering with black Japan paint of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 100 letters of 15 cm height				
	MATERIAL				
0829	Black Japan paint	litre	0.37	90.00	33.30
9977	Carriage	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	4.00	448.00	1792.00
0115	Coolie	day	1.00	368.00	368.00
9999	Painting brushes, turpentine, stencil etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				2220.51
	Add 1 % Water charges				22.21
	TOTAL				2242.72
	Add 15 % Contractor's profit and overheads				336.41
	Cost of 100 letters of 15 cm height				2579.13
	Cost per letter per cm height				1.71
	Say				1.70

14.61 Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0829	Black Japan paint	litre	0.70	90.00	63.00
9977	Carriage	L.S.	0.52	1.73	0.90
9999	Putty etc.	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc.	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				385.54
	Add 1 % Water charges				3.86
	TOTAL				389.40
	Add 15 % Contractor's profit and overheads				58.41
	Cost of 10.00 sqm				447.81
	Cost of 1sqm				44.78
	Say				44.80

14.62 Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin:**14.62.1 32 mm dia**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 no. MATERIAL				
1314	C.P.brass chain with 32 mm dia rubber plug	each	1.00	40.00	40.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				53.94
	Add 1 % Water charges				0.54
	TOTAL				54.48
	Add 15 % Contractor's profit and overheads				8.17
	Cost of each				62.65
	Say				62.65

14.62.2 40 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 no. MATERIAL				
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	40.00	40.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				53.94
	Add 1 % Water charges				0.54
	TOTAL				54.48
	Add 15 % Contractor's profit and overheads				8.17
	Cost of each				62.65
	Say				62.65

14.63 Distemping with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.**14.63.1 One or more coats on old work**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm MATERIAL				
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	1.00	45.00	45.00
9999	Brushes, putty etc	L.S.	0.52	1.73	0.90
9988	Sundries including carriage of material	L.S.	10.76	1.73	18.61
	LABOUR				
0131	Painter	day	0.22	448.00	98.56
0114	Beldar	day	0.22	368.00	80.96
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				256.40
	Add 1 % Water charges				2.56
	TOTAL				258.96
	Add 15 % Contractor's profit and overheads				38.84
	Cost of 10.00 sqm				297.80
	Cost of 1.00 sqm				29.78
	Say				29.80

14.64 Finishing walls with water proofing cement paint of required shade :**14.64.1 Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litres/10 sqm complete including cost of Priming coat.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0851	Water proofing cement paint	kilogram	2.20	38.00	83.60
8508	Primer for cement paint	litre	0.80	70.00	56.00
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.46	448.00	206.08
0115	Coolie	day	0.23	368.00	84.64
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				479.68
	Add 1 % Water charges				4.80
	TOTAL				484.48
	Add 15 % Contractor's profit and overheads				72.67
	Cost of 10.00 sqm				557.15
	Cost of 1.00 sqm				55.71
	Say				55.70

14.64.2 Old work (one or more coats @ 2.20 kg/10 sqm) complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0851	Water proofing cement paint	kilogram	2.20	38.00	83.60
9977	Carriage of material	L.S.	1.10	1.73	1.90
	LABOUR				
0131	Painter	day	0.35	448.00	156.80
0115	Coolie	day	0.12	368.00	44.16
0101	Bhisti	day	0.05	407.00	20.35
9999	Brushes, sand paper etc	L.S.	3.15	1.73	5.45
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				326.20
	Add 1 % Water charges				3.26
	TOTAL				329.46
	Add 15 % Contractor's profit and overheads				49.42
	Cost of 10.00 sqm				378.88
	Cost of 1.00 sqm				37.88
	Say				37.90

14.65 Finishing walls with textured exterior paint of required shade :**14.65.1 Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8507	Textured exterior paint	litre	3.28	230.00	754.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of material	L.S.	1.56	1.73	2.70
	LABOUR				
0131	Painter	day	0.46	448.00	206.08
0115	Coolie	day	0.23	368.00	84.64
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				1074.13
	Add 1 % Water charges				10.74
	TOTAL				1084.87
	Add 15 % Contractor's profit and overheads				162.73
	Cost of 10.00 sqm				1247.60
	Cost of 1.00 sqm				124.76
	Say				124.75

14.65.2 Old work (One or more coats) applied @ 1.82 ltr/10 sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8507	Textured exterior paint	litre	1.82	230.00	418.60
9977	Carriage of material	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.33	448.00	147.84
0115	Coolie	day	0.17	368.00	62.56
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				656.21
	Add 1 % Water charges				6.56
	TOTAL				662.77
	Add 15 % Contractor's profit and overheads				99.42
	Cost of 10.00 sqm				762.19
	Cost of 1.00 sqm				76.21
	Say				76.20

14.66 Finishing walls with Acrylic Smooth exterior paint of required shade :

14.66.1 Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8505	Acrylic exterior paint	litre	1.67	170.00	283.90
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0131	Painter	day	0.46	448.00	206.08
0115	Coolie	day	0.23	368.00	84.64
9999	Brushes, sand paper etc	L.S.	4.81	1.73	8.32

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				593.73
	Add 1 % Water charges				5.94
	TOTAL				599.67
	Add 15 % Contractor's profit and overheads				89.95
	Cost of 10.00 sqm				689.62
	Cost of 1.00 sqm				68.96
	Say				68.95

14.66.2 Old work (One or more coat applied @ 0.90 ltr/10 sqm).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8505	Acrylic exterior paint	litre	0.90	170.00	153.00
9977	Carriage of material	L.S.	0.52	1.73	0.90
	LABOUR				
0131	Painter	day	0.33	448.00	147.84
0115	Coolie	day	0.17	368.00	62.56
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				390.61
	Add 1 % Water charges				3.91
	TOTAL				394.52
	Add 15 % Contractor's profit and overheads				59.18
	Cost of 10.00 sqm				453.70
	Cost of 1.00 sqm				45.37
	Say				45.35

14.67 Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade

14.67.1 Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8506	Premium Acrylic exterior paint	litre	1.43	203.00	290.29
9977	Carriage of material	L.S.	1.04	1.73	1.80
	LABOUR				
0131	Painter	day	0.46	448.00	206.08
0115	Coolie	day	0.23	368.00	84.64
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				609.12
	Add 1 % Water charges				6.09
	TOTAL				615.21
	Add 15 % Contractor's profit and overheads				92.28
	Cost of 10.00 sqm				707.49
	Cost of 1.00 sqm				70.74
	Say				70.75

14.67.2 Old work (one or more coats applied @ 0.83 ltr/10 sqm).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
8506	Premium Acrylic exterior paint	litre	0.83	203.00	168.49
9977	Carriage of material	L.S.	0.91	1.73	1.57
	LABOUR				
0131	Painter	day	0.33	448.00	147.84
0115	Coolie	day	0.17	368.00	62.56
9999	Brushes, sand paper etc	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				406.77
	Add 1 % Water charges				4.07
	TOTAL				410.84
	Add 15 % Contractor's profit and overheads				61.63
	Cost of 10.00 sqm				472.47
	Cost of 1.00 sqm				47.24
	Say				47.25

14.69 Varnishing with varnish of approved brand and manufacture:**14.69.1 One or more coats with copal varnish**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0857	Superior copal varnish	litre	0.70	130.00	91.00
9977	Carriage	L.S.	0.52	1.73	0.90
9999	Repair to the surface	L.S.	2.73	1.73	4.72
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				404.32
	Add 1 % Water charges				4.04
	TOTAL				408.36
	Add 15 % Contractor's profit and overheads				61.25
	Cost of 10.00 sqm				469.61
	Cost of 1.00 sqm				46.96
	Say				46.95

14.69.2 One or more coats with spar varnish

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0858	Superior spar varnish	litre	0.75	130.00	97.50
9977	Carriage	L.S.	0.52	1.73	0.90
9999	Repair etc	L.S.	2.73	1.73	4.72

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0115	Coolie	day	0.36	368.00	132.48
9999	Brushes, sand paper etc	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	4.16	1.73	7.20
	TOTAL				408.80
	Add 1 % Water charges				4.09
	TOTAL				412.89
	Add 15 % Contractor's profit and overheads				61.93
	Cost of 10.00 sqm				474.82
	Cost of 1.00 sqm				47.48
	Say				47.50

14.70 Melamine polishing on wood work (one or more coat).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
7241	Melamine polish	litre	0.65	290.00	188.50
0006	Hire charges of Spraying machine including electric charges	day	0.78	250.00	195.00
9988	Carriage charge of Machine & Material	L.S.	4.42	1.73	7.65
	LABOUR				
0131	Painter	day	0.35	448.00	156.80
0114	Beldar	day	0.35	368.00	128.80
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				684.40
	Add 1 % Water charges				6.84
	TOTAL				691.24
	Add 15 % Contractor's profit and overheads				103.69
	Cost of 10.00 sqm				794.93
	Cost of 1.00 sqm				79.49
	Say				79.50

14.71 Varnishing with flattening varnish of approved brand and manufacture one or more coats on old work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
0856	Ordinary varnish	litre	0.70	90.00	63.00
9999	Glue, putty etc	L.S.	2.73	1.73	4.72
9977	Carriage	L.S.	1.82	1.73	3.15
9999	Painting brushes, turpentine, stencil etc	L.S.	24.18	1.73	41.83
	LABOUR				
0131	Painter	day	0.36	448.00	161.28

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.36	368.00	132.48
	TOTAL				406.46
	Add 1 % Water charges				4.06
	TOTAL				410.52
	Add 15 % Contractor's profit and overheads				61.58
	Cost of 10.00 sqm				472.10
	Cost of 1.00 sqm				47.21
	Say				47.20

14.72 Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding. Note: - This item to be used for maintenance work judicially, necessary deduction for scaffolding in the existing item to be done.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.72X	Details of cost for area 22.5m x 9.0m = 202.5 sqm				
	Rate as per Item No.14.72X of SH:Repairs to Buildings	each	1.00	6613.30	6613.30
2205	Carriage of Steel	tonne	6.054	92.24	558.41
	40mm dia MS pipe = 3765.42 kg				
	25mm spigot = 123.98 kg				
	Nuts & bolts = 37.80 kg				
	Clamp = 120 nos @ 1.00kg each = 120.00 kg				
	Challies = 90 nos @ 15.00kg each = 1350.00 kg				
	Cup locks = 1314 nos @ 0.50kg each = 657.00 kg				
	Total = 6054.20 kg = 6.054 tonne				
	LABOUR				
0116	Fitter (grade 1)	day	15.50	487.00	7548.50
0114	Beldar	day	31.00	368.00	11408.00
9999	Sundries	L.S.	1035	1.73	1790.55
	TOTAL				27918.76
	Add 1 % Water charges				279.19
	TOTAL				28197.95
	Add 15 % Contractor's profit and overheads				4229.69
	Cost of 202.50 sqm.				32427.64
	Cost of 1 sqm.				160.13
	Say				160.15

14.72X Scaffolding

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for area 22.5 x 9.0 = 202.50 sqm MATERIAL Assuming shuttering material will become unserviceable after use of 40 times				
7397	Base jack 7x2=14 nos	each	14.00	150.00	2100.00
4009	Mild steel tubes hot finished welded type 40mm dia M.S. Tube Vertical standard 2.5m length = 7x2x9x2.5 = 315.00 m Bracing ladder 1.5m length = 7x2x9x4.0873 = 513.00 m Side support 6.00m length = 3x2x6.00 = 36.00 m Horizontal support 3.00m length = 18x3x3.00 = 162.00 m Total = 1026.00m @ 3.67 kg/m = 3765.42 kg	kilogram	3765.42	42.00	158147.64
7387	Spigot for standard jointing 7x2x9 = 126 nos x 0.40m length = 50.40m 50.40m @ 2.46kg/m = 123.98kg	kg	123.98	45.00	5579.10
1034	Bolts and nuts upto 300 mm in length 2x7x2x9 = 252 nos @ 0.15 kg each = 37.80 kg = 0.378 q	quintal	0.378	5100.00	1927.80
7346	Double coupler 2x3x2 + 2x18x3 = 120 nos	each	120.00	48.00	5760.00
7398	Challies 3 nos x 18 lines = 54 nos Two level plate challies = 2x 18 lines = 36 nos, Total = 90 nos	each	90.00	800.00	72000.00
7399	Cup lock Vertical standards 5x7x2x9 = 630.00 Nos. 2x18x19 = 684 Nos. Total =1314 Nos.	each	1314.00	50.00	65700.00
	TOTAL				311214.54(P)
	Add 10% for maintenance on P				31121.45(Q)
	Less 25% salvage value on P				-77803.64(R)
	TOTAL (P+Q+R)				264532.35
	Considering that scaffolding shall be unserviceable after using 40 times, cost of using once				6613.30
	Say				6613.30

14.73 Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos (10 x 0.20 = 2.00 kg) MATERIAL				
0423	Brass casement window fastener	each	10.00	50.00	500.00
9999	Fixing charges including welding and materials etc.	L.S.	125.58	1.73	217.25
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	TOTAL				723.55
	Add 1 % Water charges				7.24
	TOTAL				730.79
	Add 15 % Contractor's profit and overheads				109.62
	Cost of 2.00kg window fasteners				840.41
	Cost of 1 kg window fastener				420.20
	Say				420.20

14.74 Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos MATERIAL				
0428	Brass fanlight catch	10 Nos	1.00	200.00	200.00
9999	Fixing charges including welding and materials etc.	L.S.	125.58	1.73	217.25
9977	Carriage of materials	L.S.	3.64	1.73	6.30
	TOTAL				423.55
	Add 1 % Water charges				4.24
	TOTAL				427.79
	Add 15 % Contractor's profit and overheads				64.17
	Cost of 10 window fasteners				491.96
	Cost of each				49.19
	Say				49.20

14.75 Repair to plaster of thickness 12mm to 20 mm in patches of area 2.5 sqm and under, including cutting the patch in proper shape, raking out joints and preparing plastering the wall surface with white cement based polymer modified self curing mortar, including disposal of rubbish, all complete as per the direction of Engineer-In-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL				
0772	White cement based polymer modified self curing compound in powder form i/c 2% wastage	kg	125.00	15.00	1875.00
9977	Carriage of white cement based polymer modified self curing compound in powder form	L.S.	21.10	1.73	36.50
	LABOUR				
0155	Mason (average)	day	1.21	467.00	565.07
0114	Beldar	day	0.54	368.00	198.72
0115	Coolie	day	1.29	368.00	474.72

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding and sunderies	L.S.	15.21	1.73	26.31
	TOTAL				3176.32
	Add 1 % Water charges				31.76
	TOTAL				3208.08
	Add 15 % Contractor's profit and overheads				481.21
	Cost of 10 sqm				3689.29
	Cost of 1 sqm				368.92
	Say				368.90

14.75A **Cleaning of terrace/loft water storage tank (inside surface area) upto 2000 litre capacity at all heights with coconut brushes, duster etc., removal of silt, rubbish from the tank and cleaning the tank with fresh water disinfecting with bleaching powder @ 0.5gm per litre capacity of tank including marking the date of cleaning on the side of tank body with the help of stencil and paint and disposing of malba all complete as per direction of Engineer-in-Charge. (The old date already written on tank should be removed with paint remover or black paint and if date is not written with the stencil or old date is not removed deduction will be made @ Rs. 0.10 per litre) (if during cleaning any GI fittings or ball cock is damaged that is to be repaired by contractor at his own cost and nothing extra will be paid on this account)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 tanks 1 tank is of 500 litres capacity i.e. 5000 litres				
	MATERIAL				
1301	Bleaching powder	quintal	0.025	1750.00	43.75
2264	Carriage of Rubbish (assuming 0.040m depth of silt)	cum	0.25	103.77	25.94
9999	Marking with paint i/c removal of existing markings	L.S.	30.00	1.73	51.90
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter for opening ball cock wheel valve and other fittings	day	1.00	448.00	448.00
0114	Beldar for cleaning disinfecting etc	day	1.00	368.00	368.00
	TOTAL				937.59
	Add 1 % Water charges				9.38
	TOTAL				946.97
	Add 15 % Contractor's profit and overheads				142.05
	Cost of 5000 litres				1089.02
	Cost of 1 litre				0.21
	Say				0.20

14.76 Cleaning and desilting of gully trap chamber, including removal of rubbish mixed with earth etc. and disposal of same, all as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 Nos.				
	LABOUR				
0129	Sewerman	day	1.00	390.00	390.00
9999	T & P Bamboo, bucket, wheel barrow etc.	L.S.	11.20	1.73	19.38
	TOTAL				409.38
	Add 1 % Water charges				4.09
	TOTAL				413.47
	Add 15 % Contractor's profit and overheads				62.02
	Cost of 10 nos				475.49
	Cost of each				47.54
	Say				47.55

14.77 Cleaning of choked sewer line by diesel running vehicle mounting hydraulic operated high pressure suction cum jetting sewer cleaning machine fitted with pump having 4000 litres suction capacity and 6000 litres water jetting tank capacity including skilled operator, supervising engineer etc. for cleaning and partial desilting of manholes and dechocking of sewer lines. Dechocking and flushing of sewer line from one manhole to another by high pressure jetting system of 2200 PSI for sewer line from 150mm dia upto 300mm dia for all depth.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of Cost for 208 metres				
	MATERIAL				
9999	Soap, brush, cloths & sundries	L.S.	345.00	1.73	596.85
8500	Water for jetting / blowback	1000 litre	0.002	1500.00	3.00
	Machineries				
0087	Hire Charges of Suction Jetting machine 2200 PSI machine i/c POL and operator	day	1.00	36000.00	36000.00
	LABOUR				
0139	Skilled Beldar (for floor rubbing etc.)	day	4.00	407.00	1628.00
0160	Technician	day	1.00	775.00	775.00
	TOTAL				39000.15
	Add 1 % Water charges				390.00
	TOTAL				39390.15
	Add 15 % Contractor's profit and overheads				5908.52
	Cost of 208 metres				45298.67
	Cost of 1.00 metre				217.78
	Say				217.80

14.78 Cleaning of under ground sump, Over Head R.C.C. Tank (independent staging) including disposal of slit and rubbish, all as per direction of Engineer-in-Charge. The cleaning shall consist following operations:-

(i) Tank shall be emptied of water by pumping & bottom shall be cleaned of slit and other deposits.

(ii) Entire surface area of the sump shall then scrubbed thoroughly with wire brush etc. and pressure washed with water.

(iii) Chlorination of RCC internal surface by liquid chlorine.

(iv) The treated surface shall be dried using air jetting and all loose particles shall be removal from the surface.

(v) Finally the surface shall be treated with ultraviolet radiation etc. as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Let a underground tank of capacity 272000 litre or 272 KL and area of tank is 570sqm (a) Dewater and slit cleaning Considering through pumping 20% of water to be lifted, water discharge =(272 x 20/ 100=54.40KL) Cost of pumping water with pump of capacity 4000 litres per hours , = (54.4/4 = 13.6 hours = @ 8 hours/ day = 1.7 day) Hire charges of Pump set of capacity 4000 litres/hour	day	1.70	650.00	1105.00
0011					
0114	Beldar	day	10.88	368.00	4003.84
	(b) Scrabing the internal surface of tank				
0114	Beldar	day	5.13	368.00	1887.84
0115	Coolie	day	2.28	368.00	839.04
0101	Bhisti	day	2.28	407.00	927.96
9999	Sundries	L.S.	142.50	1.73	246.53
	(c) Bleaching				
1301	Bleaching powder	quintal	0.57	1750.00	997.50
0006	Hire charges of Spraying machine including electric charges	day	14.25	250.00	3562.50
0138	Sprayer (for bitumen, tar etc.)	day	14.25	407.00	5799.75
	(d) Air jetting				
0058	Air compressor	hour	2.00	200.00	400.00
0114	Beldar	day	0.25	368.00	92.00
	(e) Ultra Violet Radiation				
0085	Using cost of Ultra Violet Radiation tube	hour	0.50	189.00	94.50
0114	Beldar	day	0.0625	368.00	23.00
	TOTAL				19979.46
	Add 1 % Water charges				199.79
	TOTAL				20179.25
	Add 15 % Contractor's profit and overheads				3026.89
	Cost of 570 sqm				23206.14
	Cost of 1 sqm				40.71
	Say				40.70

14.79 Disconnecting damaged overhead/terrace PVC water storage tank of any size from water supply line and removing from the terrace including shifting at ground level as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No LABOUR For disconnecting & dismantling of existing W/s line of water storage tanks on terrace of Qtrs.				
0117	Assistant Fitter or 2nd class Fitter	day	0.10	448.00	44.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.10	368.00	36.80
	For Bringing the tank at Ground Level				
0114	Beldar	day	0.20	368.00	73.60
9999	Sundries	L.S.	1.10	1.73	1.90
	TOTAL				157.10
	Add 1 % Water charges				1.57
	TOTAL				158.67
	Add 15 % Contractor's profit and overheads				23.80
	Cost for each				182.47
	Say				182.45

14.80 Providing & fixing White vitreous china water closet squatting pan (Indian type) along with "S" or "P" trap including dismantling of old WC seat and "S" or "P" trap at site complete with all operations including all necessary materials, labour and disposal of dismantled material i/c malba, all complete as per the direction of Engineer-in charge.

14.80.1 Long pattern W.C Pan of size 580x440 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
1953	Vitreous china Indian type W.C. pan size 580 mm	each	1.00	450.00	450.00
1970	Vitreous china foot rests 250x125x25 mm	pair	1.00	100.00	100.00
1890	Centrifugally sand cast (spun) S&S "P" or "S" trap	each	1.00	300.00	300.00
9999	Cement sand & grit etc.	L.S.	13.36	1.73	23.11
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	Less for				
1880	Dismantled "P" or "S" trap scrap (app. Wt 2 kg.)	kg	-2.00	22.00	-44.00
	LABOUR				
	(a) For dismantling WC seat and P or S trap				
0129	Sewerman	day	0.05	390.00	19.50
0114	Beldar	day	0.20	368.00	73.60
	(b) For Fixing WC seat and "P" or "S" trap				
0126	Mason 1st class	day	0.80	487.00	389.60
0114	Beldar	day	0.80	368.00	294.40
	TOTAL				1629.60
	Add 1 % Water charges				16.30
	TOTAL				1645.90
	Add 15 % Contractor's profit and overheads				246.89
	Cost of each				1892.79
	Say				1892.80

14.80.2 Orissa pattern W.C Pan of size 580x440 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
1954	Vitreous china orrisa type W.C. pan size 580 mm	each	1.00	780.00	780.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1890	Centrifugally sand cast (spun) S&S "P" or "S" trap	each	1.00	300.00	300.00
9999	Cement sand & grit etc.	L.S.	13.36	1.73	23.11
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	Less for				
1880	Dismantled "P" or "S" trap scrap (app. Wt 2 kg.)	kg	-2.00	22.00	-44.00
	LABOUR				
	(a) For dismantling WC seat and P or S trap				
0129	Sewerman	day	0.05	390.00	19.50
0114	Beldar	day	0.125	368.00	46.00
	(b) For Fixing WC seat and "P" or "S" trap				
0126	Mason 1st class	day	0.80	487.00	389.60
0114	Beldar	day	0.80	368.00	294.40
	TOTAL				1832.00
	Add 1 % Water charges				18.32
	TOTAL				1850.32
	Add 15 % Contractor's profit and overheads				277.55
	Cost of each				2127.87
	Say				2127.85

14.81 Cutting holes of required size in brick masonry wall for fixing of exhaust fan including providing and fixing 300 mm dia PVC pipe conforming BIS-12818 and making good the same etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of Cost for 10 holes Size 0.30x0.30x0.23 m wall				
	MATERIAL				
	12 mm plaster 1:4 (1 Cement: 4 Coarse sand)				
	Actual Area (10x4x0.3x0.23) = 0.296 + 0.24				
	L.S. For corners/sides = 3.00 Sqm				
13.4.1 7752	Rate as per Item No.13.4.1 of SH:FINISHING	sqm	3.00	180.85	542.55
	PVC slotted pipe 200 mm dia as per				
	IS: 12818	metre	0.25	700.00	175.00
9999	Sundries	L.S.	8.06	1.73	13.94
	LABOUR				
	Proportionate labour taken as actually required at site				
0123	Mason (brick layer) 1st class (0.16/0.0306)= 0.11 Nos.	day	0.11	487.00	53.57
0124	Mason (brick layer) 2nd class (0.16/0.030)x0.207 = 0.11 Nos.	day	0.11	448.00	49.28
0114	Beldar (1.25x0.207)/0.0306 =1.10 Nos.	day	1.10	368.00	404.80
9999	Add L.S. For Delay	L.S.	16.12	1.73	27.89
	TOTAL				1267.03
	Add 1 % Water charges on all except (A) i.e. on (1267.03 - 542.55) = 724.48				7.24
	TOTAL				1274.27
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1274.27 - 542.55) = 731.72				109.76
	Cost of 10 nos				1384.03
	Cost of each				138.40
	Say				138.40

14.82 Dismantling W.C. Pan of all sizes including disposal of dismantled materials i/c malba all complete as per directions of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	LABOUR				
0114	Beldar	day	0.125	368.00	46.00
9999	Sundries	L.S.	1.00	1.73	1.73
	TOTAL				47.73
	Add 1 % Water charges				0.48
	TOTAL				48.21
	Add 15 % Contractor's profit and overheads				7.23
	Cost of each				55.44
	Say				55.45

14.83 Hacking of CC flooring including cleaning for surface etc. complete as per direction of the Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	LABOUR				
0114	Beldar	day	0.03	368.00	11.04
9999	Sundries	L.S.	1.00	1.73	1.73
	TOTAL				12.77
	Add 1 % Water charges				0.13
	TOTAL				12.90
	Add 15 % Contractor's profit and overheads				1.94
	Cost of 10 sqm				14.84
	Cost of 1 sqm				1.48
	Say				1.50

14.84 Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes (within 50 metres lead) as per direction of Engineer-in-Charge.

(a) Internal Work- Exposed on wall

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
9999	Dismantling of G.I. Pipe and stacking etc.	L.S.	10.00	1.73	17.30
	TOTAL				17.30
	Add 1 % Water charges				0.17
	TOTAL				17.47
	Add 15 % Contractor's profit and overheads				2.62
	Cost of 10 metres				20.09
	Cost of 1 metre				2.00
	Say				2.00

14.85 Taking out existing wooden door shutter, repair by cutting, painting etc. and refixing of repaired door shutters to existing door frames, including replacement of hinges with screws, etc. as required, all complete as per the direction of the Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one shutter (2.2 sqm) Normal exiting size of shutter 1.00x2.02m =2.02sqm MATERIAL				
0637	Bright finished or black enameled mild steel screws 40 mm Assuming old hinges fixed in Tee iron frames Half qty = 48/2=24 needs replacement	100 Nos	0.24	63.00	15.12
	LABOUR				
0156	Carpenter (average)	day	0.18	467.00	84.06
0114	Beldar	day	0.18	368.00	66.24
	TOTAL				165.42
	Add 1 % Water charges				1.65
	TOTAL				167.07
	Add 15 % Contractor's profit and overheads				25.06
	Cost for 2.2 sqm or each shutter				192.13
	Cost for 2.02 sqm or each shutter				176.42
	Say				176.40

SUB HEAD : 15.0
DISMANTLING
AND
DEMOLISHING

15.1 Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineer- in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	0.44	368.00	161.92
0115	Coolie	day	0.37	368.00	136.16
9999	Sundries	L.S.	1.04	1.73	1.80
	TOTAL				299.88
	Add 1 % Water charges				3.00
	TOTAL				302.88
	Add 15 % Contractor's profit and overheads				45.43
	Cost of 1.00 cum				348.31
	Say				348.30

15.2 Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.

15.2.1 Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	1.59	368.00	585.12
0115	Coolie	day	0.72	368.00	264.96
9999	Sundries	L.S.	4.81	1.73	8.32
	TOTAL				858.40
	Add 1 % Water charges				8.58
	TOTAL				866.98
	Add 15 % Contractor's profit and overheads				130.05
	Cost of 1.00 cum				997.03
	Say				997.05

15.2.2 Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	0.88	368.00	323.84
0115	Coolie	day	0.55	368.00	202.40
9999	Sundries	L.S.	1.95	1.73	3.37
	TOTAL				529.61
	Add 1 % Water charges				5.30
	TOTAL				534.91
	Add 15 % Contractor's profit and overheads				80.24
	Cost of 1.00 cum				615.15
	Say				615.15

15.3 Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	2.65	368.00	975.20
0115	Coolie	day	0.72	368.00	264.96
9999	Sundries	L.S.	7.02	1.73	12.14
	TOTAL				1252.30
	Add 1 % Water charges				12.52
	TOTAL				1264.82
	Add 15 % Contractor's profit and overheads				189.72
	Cost of 1.00 cum				1454.54
	Say				1454.55

15.4 Demolishing R.B. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in- charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	2.12	368.00	780.16
0115	Coolie	day	0.90	368.00	331.20
9999	Sundries	L.S.	4.68	1.73	8.10
	TOTAL				1119.46
	Add 1 % Water charges				11.19
	TOTAL				1130.65
	Add 15 % Contractor's profit and overheads				169.60
	Cost of 1.00 cum				1300.25
	Say				1300.25

15.5 Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	R.C.C. or R.B. work Reinforced area				
	considering 1% reinforcement = 0.01sqm				
	LABOUR				
	For cutting 0.01 sqm reinforcement				
0103	Blacksmith 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				431.16
	Add 1 % Water charges				4.31
	TOTAL				435.47
	Add 15 % Contractor's profit and overheads				65.32
	Cost of 1.00 sqm				500.79
	Say				500.80

15.6 Extra for scrapping, cleaning and straightening reinforcement from R.C.C. or R.B. work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 Nos 6 metres long 16 mm dia bars @ 1.58 kg/metre Total weight = 94.80 kg = 0.948 quintal				
0103	LABOUR Blacksmith 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				319.16
	Add 1 % Water charges				3.19
	TOTAL				322.35
	Add 15 % Contractor's profit and overheads				48.35
	Cost of 94.80 kg				370.70
	Cost of 1.00 kg				3.91
	Say				3.90

15.7 Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.

15.7.1 In mud mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	0.30	368.00	110.40
0115	Coolie	day	0.37	368.00	136.16
9999	Sundries	L.S.	1.04	1.73	1.80
	TOTAL				248.36
	Add 1 % Water charges				2.48
	TOTAL				250.84
	Add 15 % Contractor's profit and overheads				37.63
	Cost of 1.00 cum				288.47
	Say				288.45

15.7.2 In lime mortar with old mughal bricks

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	1.24	368.00	456.32
0115	Coolie	day	0.46	368.00	169.28
9999	Sundries	L.S.	1.04	1.73	1.80
	TOTAL				627.40
	Add 1 % Water charges				6.27
	TOTAL				633.67
	Add 15 % Contractor's profit and overheads				95.05
	Cost of 1.00 cum				728.72
	Say				728.70

15.7.3 In lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	0.44	368.00	161.92
0115	Coolie	day	0.37	368.00	136.16
9999	Sundries	L.S.	1.04	1.73	1.80
	TOTAL				299.88
	Add 1 % Water charges				3.00
	TOTAL				302.88
	Add 15 % Contractor's profit and overheads				45.43
	Cost of 1.00 cum				348.31
	Say				348.30

15.7.4 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	1.06	368.00	390.08
0115	Coolie	day	0.90	368.00	331.20
9999	Sundries	L.S.	2.47	1.73	4.27
	TOTAL				725.55
	Add 1 % Water charges				7.26
	TOTAL				732.81
	Add 15 % Contractor's profit and overheads				109.92
	Cost of 1.00 cum				842.73
	Say				842.75

15.8 Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured):**15.8.1 From brick work in mud mortar**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1000 Nos				
	LABOUR				
0114	Beldar	day	2.40	368.00	883.20
0115	Coolie	day	1.60	368.00	588.80
0124	Mason (brick layer) 2nd class	day	0.40	448.00	179.20
9999	Sundries	L.S.	1.82	1.73	3.15
	TOTAL				1654.35
	Add 1 % Water charges				16.54
	TOTAL				1670.89
	Add 15 % Contractor's profit and overheads				250.63
	Cost of 1000 Nos				1921.52
	Say				1921.50

15.8.2 From brick work in lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1000 Nos LABOUR				
0114	Beldar	day	2.80	368.00	1030.40
0115	Coolie	day	1.40	368.00	515.20
0124	Mason (brick layer) 2nd class	day	0.80	448.00	358.40
9999	Sundries	L.S.	8.97	1.73	15.52
	TOTAL				1919.52
	Add 1 % Water charges				19.20
	TOTAL				1938.72
	Add 15 % Contractor's profit and overheads				290.81
	Cost of 1000 Nos				2229.53
	Say				2229.55

15.8.3 From brick work in cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1000 Nos LABOUR				
0114	Beldar	day	3.50	368.00	1288.00
0115	Coolie	day	1.50	368.00	552.00
0124	Mason (brick layer) 2nd class	day	1.24	448.00	555.52
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				2409.46
	Add 1 % Water charges				24.09
	TOTAL				2433.55
	Add 15 % Contractor's profit and overheads				365.03
	Cost of 1000 Nos				2798.58
	Say				2798.60

15.9 Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :**15.9.1 In lime mortar**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum LABOUR				
0114	Beldar	day	0.61	368.00	224.48
0115	Coolie	day	0.49	368.00	180.32
9999	Sundries	L.S.	1.95	1.73	3.37
	TOTAL				408.17
	Add 1 % Water charges				4.08
	TOTAL				412.25
	Add 15 % Contractor's profit and overheads				61.84
	Cost of 1.00 cum				474.09
	Say				474.10

15.9.2 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum LABOUR				
0114	Beldar	day	1.30	368.00	478.40
0115	Coolie	day	1.04	368.00	382.72
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				865.84
	Add 1 % Water charges				8.66
	TOTAL				874.50
	Add 15 % Contractor's profit and overheads				131.18
	Cost of 1.00 cum				1005.68
	Say				1005.70

15.10 Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/ by mechanical means including stacking of serviceable and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :**15.10.1 In lime mortar**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum LABOUR				
0114	Beldar	day	0.78	368.00	287.04
0115	Coolie	day	0.61	368.00	224.48
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				516.24
	Add 1 % Water charges				5.16
	TOTAL				521.40
	Add 15 % Contractor's profit and overheads				78.21
	Cost of 1.00 cum				599.61
	Say				599.60

15.10.2 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum LABOUR				
0114	Beldar	day	1.55	368.00	570.40
0115	Coolie	day	1.19	368.00	437.92
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				1013.04
	Add 1 % Water charges				10.13
	TOTAL				1023.17
	Add 15 % Contractor's profit and overheads				153.48
	Cost of 1.00 cum				1176.65
	Say				1176.65

15.11 Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned materials will be measured):

15.11.1 In lime mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum LABOUR				
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0114	Beldar	day	0.20	368.00	73.60
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	0.52	1.73	0.90
	TOTAL				170.50
	Add 1 % Water charges				1.71
	TOTAL				172.21
	Add 15 % Contractor's profit and overheads				25.83
	Cost of 1.00 cum				198.04
	Say				198.05

15.11.2 In cement mortar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum LABOUR				
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0114	Beldar	day	0.40	368.00	147.20
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	0.91	1.73	1.57
	TOTAL				244.77
	Add 1 % Water charges				2.45
	TOTAL				247.22
	Add 15 % Contractor's profit and overheads				37.08
	Cost of 1.00 cum				284.30
	Say				284.30

15.12 Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :

15.12.1 Of area 3 sq. metres and below

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each LABOUR				
0124	Mason (brick layer) 2nd class	day	0.10	448.00	44.80
0114	Beldar	day	0.18	368.00	66.24
0103	Blacksmith 2nd class	day	0.05	448.00	22.40
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				135.91
	Add 1 % Water charges				1.36
	TOTAL				137.27
	Add 15 % Contractor's profit and overheads				20.59
	Cost of each				157.86
	Say				157.85

15.12.2 Of area beyond 3 sq. metres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each LABOUR				
0124	Mason (brick layer) 2nd class	day	0.13	448.00	58.24
0114	Beldar	day	0.25	368.00	92.00
0103	Blacksmith 2nd class	day	0.07	448.00	31.36
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				186.32
	Add 1 % Water charges				1.86
	TOTAL				188.18
	Add 15 % Contractor's profit and overheads				28.23
	Cost of each				216.41
	Say				216.40

15.13 Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead :**15.13.1 Of area 3 sq. metres and below**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each LABOUR				
0112	Carpenter 2nd class	day	0.05	448.00	22.40
0114	Beldar	day	0.08	368.00	29.44
9999	Sundries	L.S.	0.52	1.73	0.90
	TOTAL				52.74
	Add 1 % Water charges				0.53
	TOTAL				53.27
	Add 15 % Contractor's profit and overheads				7.99
	Cost of each				61.26
	Say				61.25

15.13.2 Of area beyond 3 sq. metres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each LABOUR				
0112	Carpenter 2nd class	day	0.07	448.00	31.36
0114	Beldar	day	0.10	368.00	36.80
9999	Sundries	L.S.	0.91	1.73	1.57
	TOTAL				69.73
	Add 1 % Water charges				0.70
	TOTAL				70.43
	Add 15 % Contractor's profit and overheads				10.56
	Cost of each				80.99
	Say				81.00

15.14 Dismantling wood work in frames, trusses, purlins and rafters up to 10 metres span and 5 metres height including stacking the material within 50 metres lead :

15.14.1 Of sectional area 40 square centimetres and above

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0112	Carpenter 2nd class	day	2.00	448.00	896.00
0114	Beldar	day	2.00	368.00	736.00
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				1655.16
	Add 1 % Water charges				16.55
	TOTAL				1671.71
	Add 15 % Contractor's profit and overheads				250.76
	Cost of 1.00 cum				1922.47
	Say				1922.45

15.14.2 Of sectional area below 40 square centimetres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre				
	LABOUR				
0112	Carpenter 2nd class	day	0.08	448.00	35.84
0114	Beldar	day	0.08	368.00	29.44
9999	Sundries	L.S.	0.52	1.73	0.90
	TOTAL				66.18
	Add 1 % Water charges				0.66
	TOTAL				66.84
	Add 15 % Contractor's profit and overheads				10.03
	Cost of 10.00 metre				76.87
	Cost of 1.00 metre				7.68
	Say				7.70

15.15 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional span of one metre or part thereof beyond 10 metres :

15.15.1 Of sectional area 40 square centimetres and above

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1cum for every additional span of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				223.16
	Add 1 % Water charges				2.23
	TOTAL				225.39
	Add 15 % Contractor's profit and overheads				33.81
	Cost of 1.00 cum per metre span				259.20
	Say				259.20

15.15.2 Of sectional area below 40 square centimetres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre for every additional span of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	day	0.006	448.00	2.69
0114	Beldar	day	0.006	368.00	2.94
9999	Sundries	L.S.	0.39	1.73	0.67
	TOTAL				6.30
	Add 1 % Water charges				0.06
	TOTAL				6.36
	Add 15 % Contractor's profit and overheads				0.95
	Cost of 10.00 metre per metre span				7.31
	Cost of 1.00 metre per metre span				0.73
	Say				0.75

15.16 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional height of one metre or part thereof beyond 5 metres :**15.16.1 Of sectional area 40 square centimetres and above**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum for every additional height of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				319.16
	Add 1 % Water charges				3.19
	TOTAL				322.35
	Add 15 % Contractor's profit and overheads				48.35
	Cost of 1.00 cum per metre height				370.70
	Say				370.70

15.16.2 Of sectional area below 40 square centimetres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre for every additional height of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	day	0.01	448.00	4.48
0114	Beldar	day	0.02	368.00	7.36
9999	Sundries	L.S.	0.39	1.73	0.67
	TOTAL				12.51
	Add 1 % Water charges				0.13
	TOTAL				12.64
	Add 15 % Contractor's profit and overheads				1.90
	Cost of 10.00 metre per metre height				14.54
	Cost of 1.00 metre per metre height				1.45
	Say				1.45

15.17 Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:

15.17.1 R.S. Joists

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal				
	LABOUR				
0103	Blacksmith 2nd class	day	0.05	448.00	22.40
0100	Bandhani	day	0.10	407.00	40.70
0114	Beldar	day	0.15	368.00	55.20
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				123.02
	Add 1 % Water charges				1.23
	TOTAL				124.25
	Add 15 % Contractor's profit and overheads				18.64
	Cost of 1.00 quintal				142.89
	Cost of 1.00 kg				1.42
	Say				1.40

15.17.2 Channels, angles, tees and flats

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal				
	LABOUR				
0103	Blacksmith 2nd class	day	0.05	448.00	22.40
0100	Bandhani	day	0.05	407.00	20.35
0114	Beldar	day	0.10	368.00	36.80
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				84.27
	Add 1 % Water charges				0.84
	TOTAL				85.11
	Add 15 % Contractor's profit and overheads				12.77
	Cost of 1.00 quintal				97.88
	Cost of 1.00 kg				0.97
	Say				0.95

15.18 Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal				
	LABOUR				
0103	Blacksmith 2nd class	day	0.15	448.00	67.20
0100	Bandhani	day	0.10	407.00	40.70
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	4.16	1.73	7.20
	TOTAL				207.10
	Add 1 % Water charges				2.07
	TOTAL				209.17
	Add 15 % Contractor's profit and overheads				31.38
	Cost of 1.00 quintal				240.55
	Cost of 1.00 kg				2.40
	Say				2.40

15.19 Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal				
	LABOUR				
0100	Bandhani	day	0.10	407.00	40.70
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				137.42
	Add 1 % Water charges				1.37
	TOTAL				138.79
	Add 15 % Contractor's profit and overheads				20.82
	Cost of 1.00 quintal				159.61
	Cost of 1.00 kg				1.59
	Say				1.60

15.20 Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal for every additional span of 1 metre beyond 10 metre				
	LABOUR				
0100	Bandhani	day	0.02	407.00	8.14
0114	Beldar	day	0.06	368.00	22.08
9999	Sundries	L.S.	0.39	1.73	0.67
	TOTAL				30.89
	Add 1 % Water charges				0.31
	TOTAL				31.20
	Add 15 % Contractor's profit and overheads				4.68
	Cost of 1.00 quintal per metre span				35.88
	Cost of 1.00 kg per metre span				0.35
	Say				0.35

15.21 Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional height of one metre or part thereof beyond 5 metres.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal for every additional height of 1 metre beyond 5 metre				
	LABOUR				
0100	Bandhani	day	0.02	407.00	8.14
0114	Beldar	day	0.06	368.00	22.08
9999	Sundries	L.S.	0.39	1.73	0.67
	TOTAL				30.89
	Add 1 % Water charges				0.31
	TOTAL				31.20
	Add 15 % Contractor's profit and overheads				4.68
	Cost of 1.00 quintal per metre height				35.88
	Cost of 1.00 kg per metre height				0.35
	Say				0.35

15.22 Extra for marking of structural steel work required to be re-erected.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal LABOUR				
0130	Mistry	day	0.20	487.00	97.40
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				171.00
	Add 1 % Water charges				1.71
	TOTAL				172.71
	Add 15 % Contractor's profit and overheads				25.91
	Cost of 1.00 quintal				198.62
	Cost of 1.00 kg				1.98
	Say				2.00

15.23 Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.**15.23.1 For thickness of tiles 10 mm to 25 mm**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0124	Mason (brick layer) 2nd class	day	0.30	448.00	134.40
0114	Beldar	day	0.12	368.00	44.16
0115	Coolie	day	0.24	368.00	88.32
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				271.60
	Add 1 % Water charges				2.72
	TOTAL				274.32
	Add 15 % Contractor's profit and overheads				41.15
	Cost of 10.00 sqm				315.47
	Cost of 1.00 sqm				31.54
	Say				31.55

15.23.2 For thickness of tiles above 25 mm and up to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0124	Mason (brick layer) 2nd class	day	0.59	448.00	264.32
0114	Beldar	day	0.18	368.00	66.24
0115	Coolie	day	0.24	368.00	88.32
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				423.60
	Add 1 % Water charges				4.24
	TOTAL				427.84
	Add 15 % Contractor's profit and overheads				64.18
	Cost of 10.00 sqm				492.02
	Cost of 1.00 sqm				49.20
	Say				49.20

15.24 Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	1.00	368.00	368.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				464.72
	Add 1 % Water charges				4.65
	TOTAL				469.37
	Add 15 % Contractor's profit and overheads				70.41
	Cost of 1.00 cum				539.78
	Say				539.80

15.25 Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	day	1.77	368.00	651.36
0115	Coolie	day	0.75	368.00	276.00
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				941.30
	Add 1 % Water charges				9.41
	TOTAL				950.71
	Add 15 % Contractor's profit and overheads				142.61
	Cost of 10.00 sqm				1093.32
	Cost of 1.00 sqm				109.33
	Say				109.35

15.26 Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason (brick layer) 2nd class	day	0.54	448.00	241.92
0114	Beldar	day	0.16	368.00	58.88
0115	Coolie	day	0.24	368.00	88.32
9999	Sundries	L.S.	2.47	1.73	4.27
	TOTAL				393.39
	Add 1 % Water charges				3.93
	TOTAL				397.32
	Add 15 % Contractor's profit and overheads				59.60
	Cost of 10.00 sqm				456.92
	Cost of 1.00 sqm				45.69
	Say				45.70

15.27 Demolishing mud phaska in terracing and disposal of material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	0.62	368.00	228.16
9999	Sundries	L.S.	1.04	1.73	1.80
	TOTAL				321.96
	Add 1 % Water charges				3.22
	TOTAL				325.18
	Add 15 % Contractor's profit and overheads				48.78
	Cost of 1.00 cum				373.96
	Say				373.95

15.28 Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of:

15.28.1 G.S. Sheet

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.00	368.00	368.00
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				603.69
	Add 1 % Water charges				6.04
	TOTAL				609.73
	Add 15 % Contractor's profit and overheads				91.46
	Cost of 10.00 sqm				701.19
	Cost of 1.00 sqm				70.11
	Say				70.10

15.28.2 Asbestos sheet

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				282.82
	Add 1 % Water charges				2.83
	TOTAL				285.65
	Add 15 % Contractor's profit and overheads				42.85
	Cost of 10.00 sqm				328.50
	Cost of 1.00 sqm				32.85
	Say				32.85

15.29 Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately), including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	day	1.77	368.00	651.36
0115	Coolie	day	0.75	368.00	276.00
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				941.30
	Add 1 % Water charges				9.41
	TOTAL				950.71
	Add 15 % Contractor's profit and overheads				142.61
	Cost of 1.00 cum				1093.32
	Say				1093.30

15.30 Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	day	1.19	368.00	437.92
0115	Coolie	day	1.21	368.00	445.28
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				897.14
	Add 1 % Water charges				8.97
	TOTAL				906.11
	Add 15 % Contractor's profit and overheads				135.92
	Cost of 10.00 sqm				1042.03
	Cost of 1.00 sqm				104.20
	Say				104.20

15.31 Dismantling tiled roofing with battens, boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	day	1.73	368.00	636.64
0115	Coolie	day	0.25	368.00	92.00
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				742.58
	Add 1 % Water charges				7.43
	TOTAL				750.01
	Add 15 % Contractor's profit and overheads				112.50
	Cost of 10.00 sqm				862.51
	Cost of 1.00 sqm				86.25
	Say				86.25

15.32 Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	day	0.54	368.00	198.72
9999	Sundries	L.S.	3.64	1.73	6.30
	TOTAL				205.02
	Add 1 % Water charges				2.05
	TOTAL				207.07
	Add 15 % Contractor's profit and overheads				31.06
	Cost of 10.00 sqm				238.13
	Cost of 1.00 sqm				23.81
	Say				23.80

15.33 Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 50 metre				
	LABOUR				
0114	Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries	L.S.	0.52	1.73	0.90
	TOTAL				368.90
	Add 1 % Water charges				3.69
	TOTAL				372.59
	Add 15 % Contractor's profit and overheads				55.89
	Cost of 50.00 metre				428.48
	Cost of 1.00 metre				8.56
	Say				8.55

15.34 Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:

15.34.1 T' or 'L' iron or pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each				
	LABOUR				
0114	Beldar	day	0.11	368.00	39.38
0115	Coolie	day	0.07	368.00	24.66
9999	Excavation, transporting and stacking the posts to the required place within 50 metre s lead, refilling the pit and dressing the same	L.S.	0.26	1.73	0.45
9999	Extra for lifting of R.C.C. posts being heavier than L iron and cleaning the posts of stacking concrete	L.S.	13.39	1.73	23.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				90.12
	Add 1 % Water charges				0.90
	TOTAL				91.02
	Add 15 % Contractor's profit and overheads				13.65
	Cost of each				104.67
	Say				104.65

15.34.2 R.C.C.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each				
	LABOUR				
0114	Beldar	day	0.10	368.00	35.70
0115	Coolie	day	0.06	368.00	22.08
9999	Sundries	L.S.	0.26	1.73	0.45
9999	Excavation, transporting and stacking the posts to the required place within 50 metre s lead, refilling the pit and dressing the same	L.S.	13.39	1.73	23.16
9999	Extra for lifting of R.C.C. posts being heavier than L iron and cleaning the posts of stacking concrete	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				100.05
	Add 1 % Water charges				1.00
	TOTAL				101.05
	Add 15 % Contractor's profit and overheads				15.16
	Cost of each				116.21
	Say				116.20

15.35 Cutting ballies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 ballie (post)				
9999	Cutting	L.S.	2.73	1.73	4.72
9999	Transporting and stacking	L.S.	1.43	1.73	2.47
	TOTAL				7.19
	Add 1 % Water charges				0.07
	TOTAL				7.26
	Add 15 % Contractor's profit and overheads				1.09
	Cost of each				8.35
	Say				8.35

15.36 Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal				
	LABOUR				
0114	Beldar	day	3.50	368.00	1288.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				1297.22
	Add 1 % Water charges				12.97
	TOTAL				1310.19
	Add 15 % Contractor's profit and overheads				196.53
	Cost of 1.00 quintal				1506.72
	Cost of 1.00 kg				15.06
	Say				15.05

15.37 Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 quintal LABOUR				
0124	Mason (brick layer) 2nd class	day	0.10	448.00	44.80
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	0.25	368.00	92.00
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				233.52
	Add 1 % Water charges				2.34
	TOTAL				235.86
	Add 15 % Contractor's profit and overheads				35.38
	Cost of 10.00 sqm				271.24
	Cost of 1.00 sqm				27.12
	Say				27.10

15.38 Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0112	Carpenter 2nd class	day	0.10	448.00	44.80
0114	Beldar	day	0.40	368.00	147.20
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	4.16	1.73	7.20
	TOTAL				272.80
	Add 1 % Water charges				2.73
	TOTAL				275.53
	Add 15 % Contractor's profit and overheads				41.33
	Cost of 10.00 sqm				316.86
	Cost of 1.00 sqm				31.68
	Say				31.70

15.39 Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :

15.39.1 Up to 10 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	day	0.15	448.00	67.20
0114	Beldar	day	0.20	368.00	73.60
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				223.62
	Add 1 % Water charges				2.24
	TOTAL				225.86
	Add 15 % Contractor's profit and overheads				33.88
	Cost of 10.00 sqm				259.74
	Cost of 1.00 sqm				25.97
	Say				25.95

15.39.2 Thickness above 10 mm up to 25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	0.25	368.00	92.00
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				285.29
	Add 1 % Water charges				2.85
	TOTAL				288.14
	Add 15 % Contractor's profit and overheads				43.22
	Cost of 10.00 sqm				331.36
	Cost of 1.00 sqm				33.13
	Say				33.15

15.39.3 Thickness above 25 mm up to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.30	368.00	110.40
0115	Coolie	day	0.30	368.00	110.40
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				333.56
	Add 1 % Water charges				3.34
	TOTAL				336.90
	Add 15 % Contractor's profit and overheads				50.54
	Cost of 10.00 sqm				387.44
	Cost of 1.00 sqm				38.74
	Say				38.75

15.40 Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead :

15.40.1 Thickness up to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason (brick layer) 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	2.00	368.00	736.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries	L.S.	13.39	1.73	23.16
	TOTAL				1032.76
	Add 1 % Water charges				10.33
	TOTAL				1043.09
	Add 15 % Contractor's profit and overheads				156.46
	Cost of 10.00 sqm				1199.55
	Cost of 1.00 sqm				119.95
	Say				119.95

15.40.2 Thickness above 40 mm up to 75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason (brick layer) 2nd class	day	0.30	448.00	134.40
0114	Beldar	day	3.00	368.00	1104.00
0115	Coolie	day	0.75	368.00	276.00
9999	Sundries	L.S.	18.85	1.73	32.61
	TOTAL				1547.01
	Add 1 % Water charges				15.47
	TOTAL				1562.48
	Add 15 % Contractor's profit and overheads				234.37
	Cost of 10.00 sqm				1796.85
	Cost of 1.00 sqm				179.68
	Say				179.70

15.41 Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm.				
	LABOUR				
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				209.22
	Add 1 % Water charges				2.09
	TOTAL				211.31
	Add 15 % Contractor's profit and overheads				31.70
	Cost of 10.00 sqm.				243.01
	Cost of 1.00 sqm.				24.30
	Say				24.30

15.42 Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :

15.42.1 75 to 80 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.36	368.00	132.48
0115	Coolie	day	0.36	368.00	132.48
9999	Sundries	L.S.	0.91	1.73	1.57
	TOTAL				266.53
	Add 1 % Water charges				2.67
	TOTAL				269.20
	Add 15 % Contractor's profit and overheads				40.38
	Cost of 10.00 metre				309.58
	Cost of 1.00 metre				30.95
	Say				30.95

15.42.2 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.36	368.00	132.48
0115	Coolie	day	0.38	368.00	139.84
9999	Sundries	L.S.	1.56	1.73	2.70
	TOTAL				275.02
	Add 1 % Water charges				2.75
	TOTAL				277.77
	Add 15 % Contractor's profit and overheads				41.67
	Cost of 10.00 metre				319.44
	Cost of 1.00 metre				31.94
	Say				31.95

15.42.3 150 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.36	368.00	132.48
0115	Coolie	day	0.40	368.00	147.20
9999	Sundries	L.S.	2.08	1.73	3.60
	TOTAL				283.28
	Add 1 % Water charges				2.83
	TOTAL				286.11
	Add 15 % Contractor's profit and overheads				42.92
	Cost of 10.00 metre				329.03
	Cost of 1.00 metre				32.90
	Say				32.90

15.43 Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :

15.43.1 Water bound macadam road

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 36 sqm				
	Consider a road 6 metres wide and 6 metres length wise 25 cm average depth = 9.00 cubic metre				
	LABOUR				
	For cutting road taking out soiling and metalling including sorting and screening				
0114	Beldar	day	4.80	368.00	1766.40
0115	Coolie	day	2.40	368.00	883.20
9999	Labour for stacking of serviceable material and disposal of unserviceable material within 50 metres lead	L.S.	89.70	1.73	155.18
	TOTAL				2804.78
	Add 1 % Water charges				28.05
	TOTAL				2832.83
	Add 15 % Contractor's profit and overheads				424.92
	Cost of 36.00 sqm				3257.75
	Cost of 1.00 sqm				90.49
	Say				90.50

15.43.2 bituminous road

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 36 sqm				
	Consider a road 6 metres wide and 6 metres length wise 30 cm average depth = 10.80 cubic metre				
	LABOUR				
	For cutting road taking out soiling and metalling including sorting and screening				
0114	Beldar	day	9.60	368.00	3532.80
0115	Coolie	day	4.80	368.00	1766.40
9999	Labour for stacking of serviceable material and disposal of unserviceable material within 50 metres lead	L.S.	107.64	1.73	186.22
	TOTAL				5485.42
	Add 1 % Water charges				54.85
	TOTAL				5540.27
	Add 15 % Contractor's profit and overheads				831.04
	Cost of 36.00 sqm				6371.31
	Cost of 1.00 sqm				176.98
	Say				177.00

15.44 Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :

15.44.1 15 mm to 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre LABOUR Trenching and refilling etc				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
9999	Dismantling G.I. pipe and stacking etc	L.S.	35.88	1.73	62.07
	TOTAL				547.83
	Add 1 % Water charges				5.48
	TOTAL				553.31
	Add 15 % Contractor's profit and overheads				83.00
	Cost of 10.00 metre				636.31
	Cost of 1.00 metre				63.63
	Say				63.65

15.44.2 Above 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre LABOUR Trenching and refilling etc				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
9999	Dismantling G.I. pipe and stacking etc	L.S.	71.76	1.73	124.14
	TOTAL				609.90
	Add 1 % Water charges				6.10
	TOTAL				616.00
	Add 15 % Contractor's profit and overheads				92.40
	Cost of 10.00 metre				708.40
	Cost of 1.00 metre				70.84
	Say				70.85

15.45 Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-in-charge:

15.45.1 Up to 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.55x0.75 m =16.61cum Deduct for pipes of average 100 mm dia =1x40.26x(22/7)/4x(0.118)x(0.118) =0.44cum Total =16.17cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.8.1	LABOUR Rate as per Item No.2.8.1 of SH: EARTH WORK	cum	16.17	166.40	2690.69(A)
2.25	Rate as per Item No.2.25 of SH: EARTH WORK	cum	16.17	125.75	2033.38A)
0761	Fuel wood	quintal	0.46	500.00	230.00
0771	Kerosene oil	litre	0.38	45.00	17.10
0117	Assistant Fitter or 2nd class Fitter	day	0.63	448.00	282.24
0114	Beldar	day	4.50	368.00	1656.00
9977	Carriage	L.S.	53.82	1.73	93.11
	TOTAL				7002.52
	Add 1 % Water charges on all except (A) i.e. on (7002.52 - 4724.07) = 2278.45				22.78
	TOTAL				7025.30
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (7025.30 - 4724.07) = 2301.23				345.18
	Cost of 40.26 metre				7370.48
	Cost of 1.00 metre				183.07
	Say				183.05

15.45.2 Above 150 mm dia up to 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.65x0.75 m =19.63cum Deduct for pipes of average 250 mm dia =1x40.26x(22/7)/4x(0.274)x(0.274) =2.37cum Total =17.26cum				
2.8.1	LABOUR Rate as per Item No.2.8.1 of SH: EARTH WORK	cum	17.26	166.40	2872.06(A)
2.25	Rate as per Item No.2.25 of SH: EARTH WORK	cum	17.26	125.75	2170.45(A)
0761	Fuel wood	quintal	1.03	500.00	515.00
0771	Kerosene oil	litre	1.14	45.00	51.30
0117	Assistant Fitter or 2nd class Fitter	day	1.30	448.00	582.40
0114	Beldar	day	7.50	368.00	2760.00
9977	Carriage	L.S.	80.73	1.73	139.66
	TOTAL				9090.87
	Add 1 % Water charges on all except (A) i.e. on (9090.87 - 5042.51) = 4048.36				40.48
	TOTAL				9131.35
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9131.35 - 5042.51) = 4088.84				613.33
	Cost of 40.26 metre				9744.68
	Cost of 1.00 metre				242.04
	Say				242.05

15.45.3 Above 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth $1 \times 40.26 \times 0.85 \times 0.75 \text{ m} = 25.67 \text{ cum}$ Deduct for pipes of average 450 mm dia $= 1 \times 40.26 \times (22/7) / 4 \times (0.48) \times (0.48) = 7.29 \text{ cum}$ Total = 18.38 cum LABOUR				
2.8.1	Rate as per Item No.2.8.1 of SH: EARTH WORK	cum	18.38	166.40	3058.43(A)
2.25	Rate as per Item No.2.25 of SH: EARTH WORK	cum	18.38	125.75	2311.29(A)
0761	Fuel wood	quintal	1.40	500.00	700.00
0771	Kerosene oil	litre	2.27	45.00	102.15
0117	Assistant Fitter or 2nd class Fitter	day	2.25	448.00	1008.00
0114	Beldar	day	11.50	368.00	4232.00
9988	Carriage and sundries	L.S.	134.55	1.73	232.77
	TOTAL				11644.64
	Add 1 % Water charges on all except (A) i.e. on (11644.64 - 5369.72) = 6274.92				62.75
	TOTAL				11707.39
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11707.39 - 5369.72) = 6337.67				950.65
	Cost of 40.26 metre				12658.04
	Cost of 1.00 metre				314.40
	Say				314.40

15.46 Dismantling steel cylinder R.C. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metres lead as per direction of Engineer-in-charge :

15.46.1 Up to 600 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth $1 \times 40.26 \times 1.30 \times 1.65 \text{ m} = 86.36 \text{ cum}$ Deduct for pipes of average 450 mm dia $= 1 \times 40.26 \times (22/7) / 4 \times (0.48) \times (0.48) = 7.29 \text{ cum}$ Total = 79.07 cum LABOUR				
0114	Beldar	day	5.32	368.00	1957.76
0115	Coolie	day	5.46	368.00	2009.28
0101	Bhisti	day	0.31	407.00	126.17
0761	Fuel wood	quintal	1.40	500.00	700.00
0771	Kerosene oil	litre	2.27	45.00	102.15
0117	Assistant Fitter or 2nd class Fitter	day	2.25	448.00	1008.00
0114	Beldar	day	11.50	368.00	4232.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage and sundries	L.S.	134.55	1.73	232.77
	TOTAL				10368.13
	Add 1 % Water charges				103.68
	TOTAL				10471.81
	Add 15 % Contractor's profit and overheads				1570.77
	Cost of 40.26 metre				12042.58
	Cost of 1.00 metre				299.12
	Say				299.10

15.46.2 Above 600 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x1.30x1.65 m =86.36cum Deduct for pipes of average 450 mm dia =1x40.26x(22/7)/4x(1.00)x(1.00) =31.63cum Total=54.73cum LABOUR				
0114	Beldar	day	15.82	368.00	5821.76
0115	Coolie	day	16.25	368.00	5980.00
0101	Bhisti	day	0.93	407.00	378.51
0761	Fuel wood	quintal	3.08	500.00	1540.00
0771	Kerosene oil	litre	5.00	45.00	225.00
0117	Assistant Fitter or 2nd class Fitter	day	10.00	448.00	4480.00
0114	Beldar	day	20.00	368.00	7360.00
9988	Carriage and sundries	L.S.	179.40	1.73	310.36
	TOTAL				26095.63
	Add 1 % Water charges				260.96
	TOTAL				26356.59
	Add 15 % Contractor's profit and overheads				3953.49
	Cost of 40.26 metre				30310.08
	Cost of 1.00 metre				752.85
	Say				752.85

15.47 Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-charge :

15.47.1 Up to 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 10.00x0.55x0.75 m =4.125cum Deduct for pipes of average 100 mm dia =1x10x(22/7)/4x(0.118)x(0.118) =0.109cum Total=4.016cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0114	Beldar	day	1.16	368.00	426.88
0115	Coolie	day	1.19	368.00	437.92
0101	Bhisti	day	0.07	407.00	28.49
0114	Beldar	day	0.36	368.00	132.48
0115	Coolie	day	0.38	368.00	139.84
9988	Carriage and sundries	L.S.	1.56	1.73	2.70
	TOTAL				1168.31
	Add 1 % Water charges				11.68
	TOTAL				1179.99
	Add 15 % Contractor's profit and overheads				177.00
	Cost of 10.00 metre				1356.99
	Cost of 1.00 metre				135.69
	Say				135.70

15.47.2 Above 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 10.00x0.65x0.75 m =4.88cum Deduct for pipes of average 250 mm dia =1x10x(22/7)/4x(0.274)x(0.274) =0.590cum Total=4.29cum				
	LABOUR				
0114	Beldar	day	1.24	368.00	456.32
0115	Coolie	day	1.28	368.00	471.04
0101	Bhisti	day	0.07	407.00	28.49
0114	Beldar	day	0.36	368.00	132.48
0115	Coolie	day	0.88	368.00	323.84
9988	Carriage and sundries	L.S.	3.77	1.73	6.52
	TOTAL				1418.69
	Add 1 % Water charges				14.19
	TOTAL				1432.88
	Add 15 % Contractor's profit and overheads				214.93
	Cost of 10.00 metre				1647.81
	Cost of 1.00 metre				164.78
	Say				164.80

15.48 Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 man hole Demolition of R.C.C. slab 1.3x1.2x0.15 m =0.234cum Less cover 0.61x0.455x0.15 m =0.042cum =0.192cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	LABOUR Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.14	368.00	51.52
9999	Removal of C.I. Cover with frame including stacking	L.S.	1.30	1.73	2.25
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				250.14
	Add 1 % Water charges				2.50
	TOTAL				252.64
	Add 15 % Contractor's profit and overheads				37.90
	Cost of each				290.54
	Say				290.55

15.49 Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 man hole Demolition of R.C.C. slab 1.1x0.9x0.15 m =0.148cum Less cover 0.61x0.455x0.15 m =0.042cum =0.106cum Say 0.11cum LABOUR				
0114	Beldar	day	0.29	368.00	106.72
0115	Coolie	day	0.08	368.00	29.44
9999	Removal of C.I. Cover with frame including stacking	L.S.	0.65	1.73	1.12
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				146.50
	Add 1 % Water charges				1.47
	TOTAL				147.97
	Add 15 % Contractor's profit and overheads				22.20
	Cost of each				170.17
	Say				170.15

15.50 Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each Dismantling cement concrete 1:4:8 0.90x0.90x1.35m =1.094cum Less shaft 1/4x22/7x(0.450)x(0.450)x 1.10 m =0.175cum =0.919cum Say 0.92cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Dismantling cement concrete 1:2:4 0.90x0.90x0.15m =0.122cum Less shaft 1/4x22/7x0.15x0.45 m =0.024cum =0.098cum Say 0.10cum LABOUR				
0114	Beldar	day	0.81	368.00	298.08
0115	Coolie	day	0.51	368.00	187.68
9999	Sundries	L.S.	1.82	1.73	3.15
0114	Beldar	day	0.16	368.00	58.88
0115	Coolie	day	0.07	368.00	25.76
9999	Sundries	L.S.	0.52	1.73	0.90
0130	Mistry	day	0.25	487.00	121.75
0123	Mason (brick layer) 1st class	day	0.12	487.00	58.44
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0100	Bandhani	day	1.00	407.00	407.00
0114	Beldar	day	1.00	368.00	368.00
9999	Sundries for scaffolding etc	L.S.	53.82	1.73	93.11
	TOTAL				1676.51
	Add 1 % Water charges				16.77
	TOTAL				1693.28
	Add 15 % Contractor's profit and overheads				253.99
	Cost of each				1947.27
	Say				1947.25

15.51 Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead including refilling the excavated gap.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one chamber Dismantling cement concrete a) 1:5:10 1.05x1.00x0.15m =0.16cum Dismantling brick work in cement mortar 2.70x0.20x0.45m =0.24cum Dismantling cement concrete b) 1:2:4 2.70x0.20x0.15m =0.08cum LABOUR				
0114	Beldar	day	0.14	368.00	51.52
0115	Coolie	day	0.09	368.00	33.12
9999	Sundries	L.S.	0.26	1.73	0.45
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	0.22	368.00	80.96
9999	Sundries	L.S.	0.52	1.73	0.90
0114	Beldar	day	0.13	368.00	47.84
0115	Coolie	day	0.06	368.00	22.08
9999	Sundries for scaffolding etc	L.S.	0.39	1.73	0.67
9999	Dismantling C.I. Grating	L.S.	7.15	1.73	12.37
	TOTAL				341.91
	Add 1 % Water charges				3.42
	TOTAL				345.33
	Add 15 % Contractor's profit and overheads				51.80
	Cost of each				397.13
	Say				397.15

15.52 Dismantling of flushing cistern of all types (C.I./PVC/Vitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for each				
	LABOUR				
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	17.94	1.73	31.04
	TOTAL				336.79
	Add 1 % Water charges				3.37
	TOTAL				340.16
	Add 15 % Contractor's profit and overheads				51.02
	Cost of each				391.18
	Say				391.20

15.53 Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres

15.53.1 Up to 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for dismantling 10 sluice valves (ace.) 100mm				
	LABOUR				
0116	Fitter (grade 1)	day	0.60	487.00	292.20
0117	Assistant Fitter or 2nd class Fitter	day	0.40	448.00	179.20
0114	Beldar	day	1.60	368.00	588.80
9999	Sundries for removing the R.C.C. cover etc for dismantling sluice valve	L.S.	89.70	1.73	155.18
	TOTAL				1215.38
	Add 1 % Water charges				12.15
	TOTAL				1227.53
	Add 15 % Contractor's profit and overheads				184.13
	Cost of 10 Nos				1411.66
	Cost of each				141.16
	Say				141.15

15.53.2 Above 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for dismantling 10 sluice valves (ace.) 100mm				
	LABOUR				
0116	Fitter (grade 1)	day	2.40	487.00	1168.80
0117	Assistant Fitter or 2nd class Fitter	day	1.54	448.00	689.92
0114	Beldar	day	6.40	368.00	2355.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries for removing the R.C.C. cover etc for dismantling sluice valve	L.S.	89.70	1.73	155.18
	TOTAL				4369.10
	Add 1 % Water charges				43.69
	TOTAL				4412.79
	Add 15 % Contractor's profit and overheads				661.92
	Cost of 10 Nos				5074.71
	Cost of each				507.47
	Say				507.45

15.54 Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 Nos				
	LABOUR				
0116	Fitter (grade 1)	day	1.50	487.00	730.50
0117	Assistant Fitter or 2nd class Fitter	day	1.00	448.00	448.00
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				2650.50
	Add 1 % Water charges				26.51
	TOTAL				2677.01
	Add 15 % Contractor's profit and overheads				401.55
	Cost of 10 Nos				3078.56
	Cost of each				307.85
	Say				307.85

15.55 Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead :

15.55.1 120 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one platform				
	Dismantling cement concrete 1:5:10				
	4.00x0.35x0.12m =0.168cum				
	0.80x0.80x0.075m =0.048cum				
	=0.216cum Say 0.22cum				
	Dismantling brick work in cement mortar				
	4.00x0.20x0.30m =0.24cum				
	4.00x0.10x0.20m =0.088cum				
	=0.328cum Say 0.33cum				
	Dismantling 40 mm C.C. flooring 1:2:4				
	1.00x1.00x0.04m =0.04cum				
	LABOUR				
0114	Beldar	day	0.19	368.00	69.92
0115	Coolie	day	0.12	368.00	44.16
9999	Sundries	L.S.	0.39	1.73	0.67
0114	Beldar	day	0.35	368.00	128.80
0115	Coolie	day	0.30	368.00	110.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	0.91	1.73	1.57
0114	Beldar	day	0.06	368.00	22.08
0115	Coolie	day	0.03	368.00	11.04
9999	Sundries for scaffolding etc	L.S.	0.13	1.73	0.22
	TOTAL				388.86
	Add 1 % Water charges				3.89
	TOTAL				392.75
	Add 15 % Contractor's profit and overheads				58.91
	Cost of each				451.66
	Say				451.65

15.55.2 210 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one platform Dismantling cement concrete 1:5:10 5.80x0.35x0.12m =0.243cum 0.80x1.70x0.075m =0.102cum =0.345cum Say 0.35cum Dismantling brick work in cement mortar 5.80x0.20x0.30m =0.348cum 6.20x0.10x0.20m =0.124cum =0.472cum Say 0.47cum Dismantling 40 mm C.C. flooring 1:2:4 1.90x1.00x0.04m =0.08cum LABOUR				
0114	Beldar	day	0.31	368.00	114.08
0115	Coolie	day	0.19	368.00	69.92
9999	Sundries	L.S.	0.65	1.73	1.12
0114	Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.42	368.00	154.56
9999	Sundries	L.S.	1.30	1.73	2.25
0114	Beldar	day	0.13	368.00	47.84
0115	Coolie	day	0.06	368.00	22.08
9999	Sundries for scaffolding etc	L.S.	0.39	1.73	0.67
	TOTAL				596.52
	Add 1 % Water charges				5.97
	TOTAL				602.49
	Add 15 % Contractor's profit and overheads				90.37
	Cost of each				692.86
	Say				692.85

15.55.3 320 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one platform Dismantling cement concrete 1:5:10 8.00x0.35x0.12m =0.336cum 2.80x0.80x0.075m =0.168cum =0.504cum Say 0.50cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Dismantling brick work in cement mortar 8.00x0.20x0.30m =0.48cum 8.40x0.10x0.20m =0.168cum =0.648cum Say 0.65cum Dismantling 40 mm C.C. flooring 1:2:4 3.00x1.00x0.04m =0.12cum LABOUR				
0114	Beldar	day	0.44	368.00	161.92
0115	Coolie	day	0.28	368.00	103.04
9999	Sundries	L.S.	0.91	1.73	1.57
0114	Beldar	day	0.69	368.00	253.92
0115	Coolie	day	0.59	368.00	217.12
9999	Sundries	L.S.	1.56	1.73	2.70
0114	Beldar	day	0.19	368.00	69.92
0115	Coolie	day	0.09	368.00	33.12
9999	Sundries for scaffolding etc	L.S.	0.52	1.73	0.90
	TOTAL				844.21
	Add 1 % Water charges				8.44
	TOTAL				852.65
	Add 15 % Contractor's profit and overheads				127.90
	Cost of each				980.55
	Say				980.55

15.56 Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0114	Beldar	day	0.36	368.00	132.48
0115	Coolie	day	0.08	368.00	29.44
0101	Bhisti	day	0.07	407.00	28.49
9999	Sundries for scaffolding etc	L.S.	1.43	1.73	2.47
	TOTAL				192.88
	Add 1 % Water charges				1.93
	TOTAL				194.81
	Add 15 % Contractor's profit and overheads				29.22
	Cost of 10.00 sqm				224.03
	Cost of 1.00 sqm				22.40
	Say				22.40

15.57 Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0112	Carpenter 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.30	368.00	110.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	5.38	1.73	9.31
	TOTAL				209.31
	Add 1 % Water charges				2.09
	TOTAL				211.40
	Add 15 % Contractor's profit and overheads				31.71
	Cost of 10.00 sqm				243.11
	Cost of 1.00 sqm				24.31
	Say				24.30

15.58 Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR				
0128	Mate	day	0.03	407.00	12.21
	Labour for operating pneumatic tools				
0139	Skilled Beldar (for floor rubbing etc.)	day	0.50	407.00	203.50
0114	Beldar	day	0.50	368.00	184.00
	Labour for cutting reinforcement bars.				
0103	Blacksmith 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	0.50	368.00	184.00
	MACHINERY				
0040	Air compressor 250 cfm with two leads for pneumatic cutters/ hammers.	day	0.13	1500.00	187.50
0039	Tractor with trolley .	day	0.05	1250.00	62.50
0041	Joint cutting machine with 2-3 blades	day	0.13	750.00	93.75
	TOTAL				1151.46
	Add 1 % Water charges				11.51
	TOTAL				1162.97
	Add 15 % Contractor's profit and overheads				174.45
	Cost of 1 cum				1337.42
	Say				1337.40

15.59 Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	LABOUR				
0128	Mate	day	0.01	407.00	4.07
0114	Beldar	day	0.30	368.00	110.40
	MACHINERY				
0039	Tractor with trolley .	day	0.05	1250.00	59.38

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0038	Tractor with ripper attachment.	day	0.00	1100.00	2.20
	TOTAL				176.05
	Add 1 % Water charges				1.76
	TOTAL				177.81
	Add 15 % Contractor's profit and overheads				26.67
	Cost of 1 cum				204.48
	Say				204.50

15.60 Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2264	Details of cost for 1 cum				
	Carriage of Rubbish	cum	1.00	103.77	103.77
	TOTAL				103.77
	Add 1 % Water charges				1.04
	TOTAL				104.81
	Add 15 % Contractor's profit and overheads				15.72
	Cost of 1 cum				120.53
	Say				120.55

SUB HEAD : 16.0
ROAD WORK

16.1 Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm. (A) preparation of subgrade. Earth work in excavation including dressing etc. 100sqm.x22.5cm (average depth) = 22.5cum. LABOUR				
0128	Mate	day	1.80	407.00	732.60
0115	Coolie	day	18.00	368.00	6624.00
0114	Beldar	day	0.27	368.00	99.36
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	2200.00	118.80
0113	Chowkidar	day	0.054	368.00	19.87
9999	Sundries	L.S.	6.76	1.73	11.69
	(B) Consolidation of subgrade Roller charges (one roller does 1860 sqm. of consolidation of sub - grade with road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and re-rolling the subgrade				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	2200.00	118.80
0113	Chowkidar	day	0.054	368.00	19.87
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				7756.68
	Add 1 % Water charges				77.57
	TOTAL				7834.25
	Add 15 % Contractor's profit and overheads				1175.14
	Cost for 100 sqm.				9009.39
	Cost per sqm.				90.09
	Say				90.10

16.2 Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	LABOUR (Extra to item No.2.3 in Earth work) Bhisti	day	0.17	407.00	69.19
0003	Roller charges (one roller does 1860sqm. of consolidation per day of 8 hours and uses 18 litres diesel)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.008	2200.00	17.60
0113	Chowkidar	day	0.008	368.00	2.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				92.20
	Add 1 % Water charges				0.92
	TOTAL				93.12
	Add 15 % Contractor's profit and overheads				13.97
	Cost of 10 cum.				107.09
	Cost per cum.				10.70
	Say				10.70

16.3 Supplying and stacking at site.

16.3.1 90 mm to 45 mm size stone aggregate

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	MATERIAL				
2901	Stone Aggregate (Single size) : 100 mm nominal size	cum	0.10	1000.00	100.00
2902	Stone Aggregate (Single size) : 80 mm nominal size	cum	0.65	1000.00	650.00
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	0.25	1150.00	287.50
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	1.00	112.79	112.79
	Total				1150.29
	Add 1 % Water charges				11.50
	Total				1161.79
	Add 15 % Contractor's profit and overheads				174.27
	Cost for 1 cum				1336.06
	Say				1336.05

16.3.2 63 mm to 45 mm size stone aggregate

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	MATERIAL				
2902	Stone Aggregate (Single size) : 80 mm nominal size	cum	0.10	1000.00	100.00
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	0.65	1150.00	747.50
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	0.25	1150.00	287.50
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	1.00	112.79	112.79
	Total				1247.79
	Add 1 % Water charges				12.48
	Total				1260.27
	Add 15 % Contractor's profit and overheads				189.04
	Cost for 1 cum				1449.31
	Say				1449.30

16.3.3 53 mm to 22.4 mm size stone aggregate

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum. MATERIAL				
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	0.05	1150.00	57.50
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	0.30	1150.00	345.00
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.65	1250.00	812.50
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	1.00	112.79	112.79
	Total				1327.79
	Add 1 % Water charges				13.28
	Total				1341.07
	Add 15 % Contractor's profit and overheads				201.16
	Cost for 1 cum				1542.23
	Say				1542.25

16.3.4 Over burnt (Jhama) brick aggregate 120 mm to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum. MATERIAL				
2908	Over burnt (Jhama) Brick Aggregate: 120 mm to 40 mm size	cum	1.00	450.00	450.00
2260	Carriage of Brick aggregate	cum	1.00	112.79	112.79
	Total				562.79
	Add 1 % Water charges				5.63
	Total				568.42
	Add 15 % Contractor's profit and overheads				85.26
	Cost for 1 cum				653.68
	Say				653.70

16.3.5 Over burnt (Jhama) brick aggregate 90 mm to 45 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum. MATERIAL				
2909	Over burnt (Jhama) Brick Aggregate: 90 mm to 40 mm size	cum	1.00	470.00	470.00
2260	Carriage of Brick aggregate	cum	1.00	112.79	112.79
	Total				582.79
	Add 1 % Water charges				5.83
	Total				588.62
	Add 15 % Contractor's profit and overheads				88.29
	Cost for 1 cum				676.91
	Say				676.90

16.3.6 Stone screening 13.2 mm nominal size (Type A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	MATERIAL				
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.05	1200.00	60.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.80	1200.00	960.00
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	0.15	1150.00	172.50
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.00	103.77	103.77
	TOTAL				1296.27
	Add 1 % Water charges				12.96
	TOTAL				1309.23
	Add 15 % Contractor's profit and overheads				196.38
	Cost for one cum.				1505.61
	Say				1505.60

16.3.7 Stone screening 11.2 mm nominal size (Type B)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	MATERIAL				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.10	1200.00	120.00
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	0.75	1150.00	862.50
2904	Stone chippings/ screenings 150 micron nominal size	cum	0.15	1150.00	172.50
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.85	103.77	88.20
2267	Carriage of Stone dust	cum	0.15	103.77	15.57
	TOTAL				1258.77
	Add 1 % Water charges				12.59
	TOTAL				1271.36
	Add 15 % Contractor's profit and overheads				190.70
	Cost for one cum.				1462.06
	Say				1462.05

16.3.8 Red bajri

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	MATERIAL				
0304	Bajri	cum	1.00	1200.00	1200.00
2311	Carriage of Red bajri	cum	1.00	103.77	103.77
	TOTAL				1303.77
	Add 1 % Water charges				13.04
	TOTAL				1316.81
	Add 15 % Contractor's profit and overheads				197.52
	Cost for one cum.				1514.33
	Say				1514.35

16.3.9 Good earth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum. Excavation : LABOUR				
0114	Beldar	day	0.177	368.00	65.14
0115	Coolie	day	0.167	368.00	61.46
0979	Royalty for good earth	cum	1.00	30.00	30.00
2241	Carriage of Good earth by mechanical transport upto 5 km lead	cum	1.00	129.71	129.71
	TOTAL				286.31
	Add 1 % Water charges				2.86
	TOTAL				289.17
	Add 15 % Contractor's profit and overheads				43.38
	Cost per cum.				332.55
	Say				332.55

16.3.10 Moorum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum. MATERIAL				
0810	Moorum	cum	1.00	450.00	450.00
2265	Carriage of Moorum	cum	1.00	103.77	103.77
	TOTAL				553.77
	Add 1 % Water charges				5.54
	TOTAL				559.31
	Add 15 % Contractor's profit and overheads				83.90
	Cost for one cum.				643.21
	Say				643.20

16.4 Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0114	Beldar	day	0.26	368.00	95.68
0115	Coolie	day	0.26	368.00	95.68
0101	Bhisti	day	0.26	407.00	105.82
	Roller charges (one roller does 30 cum consolidation per day of 8 hours and uses 18 litres of diesel oil).				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.033	2200.00	72.60
0113	Chowkidar	day	0.033	368.00	12.14

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				386.64
	Add 1 % Water charges				3.87
	TOTAL				390.51
	Add 15 % Contractor's profit and overheads				58.58
	Cost for 1 cum				449.09
	Say				449.10

16.5 Laying water bound macadam sub-base with brick aggregate and binding material, earth etc. including screening, sorting and spreading to template and consolidation with light power road-roller etc. complete.(payment for brick aggregate and moorum etc. to be made separately)

16.5.1 Over burnt (Jhama) brick aggregate 120 mm to 40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	LABOUR				
0114	Beldar	day	0.35	368.00	128.80
0115	Coolie	day	0.26	368.00	95.68
0101	Bhisti	Day	0.18	407.00	73.26
	Roller charges (one roller does 230cum. consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.004	2200.00	8.80
0113	Chowkidar	day	0.004	368.00	1.47
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				312.73
	Add 1 % Water charges				3.13
	TOTAL				315.86
	Add 15 % Contractor's profit and overheads				47.38
	Cost for one cum.				363.24
	Say				363.25

16.5.2 Over burnt (Jhama) brick aggregate 90 mm to 45 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	LABOUR				
0114	Beldar	day	0.35	368.00	128.80
0115	Coolie	day	0.26	368.00	95.68
0101	Bhisti	day	0.18	407.00	73.26
	Roller charges (one roller does 230cum. consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.004	2200.00	8.80
0113	Chowkidar	day	0.004	368.00	1.47

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				312.73
	Add 1 % Water charges				3.13
	TOTAL				315.86
	Add 15 % Contractor's profit and overheads				47.38
	Cost for one cum.				363.24
	Say				363.25

16.6 Supplying, stacking and Spreading 6 mm thick red bajri, watering and rolling complete including preparation of the surface and rolling.

16.6.1 With road roller/ hand roller

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6 mm thick and 100 sqm area = 0.60 cum.				
	(A) Supplying and stacking of Red bajri at site.				
	MATERIAL				
0304	Bajri	cum	0.60	1200.00	720.00
2311	Carriage of Red bajri	cum	0.60	103.77	62.26
	(B) Spreading of red bajri				
	LABOUR				
0114	Beldar	day	0.54	368.00	198.72
0101	Bhisti	day	0.54	407.00	219.78
	Roller charges (one roller does 1860sqm. consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	2200.00	118.80
0113	Chowkidar	day	0.054	368.00	19.87
	TOTAL				1339.43
	Add 1 % Water charges				13.39
	TOTAL				1352.82
	Add 15 % Contractor's profit and overheads				202.92
	Cost for 100 sqm.				1555.74
	Cost per sqm.				15.55
	Say				15.55

16.7 Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.

16.7.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m.				
	MATERIAL				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5 including 12% wastage	1000 Nos	0.16	4500.00	720.00
2201	Carriage of Bricks	1000 Nos	0.16	276.72	44.27

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.17	487.00	82.79
0124	Mason (brick layer) 2nd class	day	0.17	448.00	76.16
0115	Coolie	day	0.35	368.00	128.80
9999	Removal of rubbish	L.S.	17.94	1.73	31.04
9999	Sundries	L.S.	8.97	1.73	15.52
	TOTAL				1098.58
	Add 1 % Water charges				10.99
	TOTAL				1109.57
	Add 15 % Contractor's profit and overheads				166.44
	Cost for 10m.				1276.01
	Cost per m.				127.60
	Say				127.60

16.8 Brick edging laid lengthwise with half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres :

16.8.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m.				
	MATERIAL				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5 including 12% wastage	1000 Nos	0.049	4500.00	220.50
2201	Carriage of Bricks	1000 Nos	0.049	276.72	13.56
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.04	487.00	19.48
0124	Mason (brick layer) 2nd class	day	0.04	448.00	17.92
0115	Coolie	day	0.09	368.00	33.12
9999	Removal of rubbish	L.S.	4.16	1.73	7.20
	TOTAL				311.78
	Add 1 % Water charges				3.12
	TOTAL				314.90
	Add 15 % Contractor's profit and overheads				47.24
	Cost for 10m.				362.14
	Cost per m.				36.21
	Say				36.20

16.9 Scarifying metalled (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm.				
	LABOUR				
0114	Beldar	day	1.35	368.00	496.80
0115	Coolie	day	1.08	368.00	397.44
	Consolidation of scarified material 100sqm.x50mm = 5cum + Less 20% wastage = 1 cum. = 4 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.132	2200.00	290.40
0113	Chowkidar	day	0.132	368.00	48.58
9999	Sundries	L.S.	5.46	1.73	9.45
	TOTAL				1242.67
	Add 1 % Water charges				12.43
	TOTAL				1255.10
	Add 15 % Contractor's profit and overheads				188.27
	Cost for 100 sqm.				1443.37
	Cost per sqm.				14.43
	Say				14.45

16.10 Making bajri path including preparation of subgrade, supplying and laying brick aggregate of 50 mm nominal size 7.5 cm deep with blinding material consisting of 12 mm moorum and 12 mm red bajri consolidated with road roller.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.6.1	Details of cost for 100sqm. Earth work in excavation including dressing etc. 100x0.075=7.5cum. (Rate as per item no.2.6.1 of S.H. Earth work)	cum	7.50	125.95	944.63(A)
0286	Collection and stacking of brick aggregate 53mm nominal size 100x0.075 =7.50cum. Brick Aggregate (Single size) : 50 mm nominal size	cum	7.50	750.00	5625.00
2260	Carriage of Brick aggregate Supply staking Red Bajri 100x0.012= 1.2 cum	cum	7.50	112.79	845.94
16.3.8	Rate as per Item Number 16.3.8 of SH: Road Work Collection and stacking of moorum at site 100x0.012 = 1.20cum.	cum	1.20	1514.35	1817.22(A)
16.3.10	Rate as per Item Number 16.3.10 of SH: Road Work Spreading and consolidation of brick aggregate and blinding material etc. LABOUR	cum	1.20	643.20	771.84(A)
0114	Beldar	day	1.95	368.00	717.60
0115	Coolie	day	2.63	368.00	967.84
0101	Bhisti	day	1.35	407.00	549.45
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.135	2200.00	297.00
0113	Chowkidar	day	0.135	368.00	49.68
9999	Sundries	L.S.	20.15	1.73	34.86
0003	Spreading of red bajri, watering and rolling Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.054	2200.00	118.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0113	Chowkidar	day	0.054	368.00	19.87
	TOTAL				12759.73
	Add 1 % Water charges on all except (A) i.e. on (12759.73 - 3533.69) = 9226.04				92.26
	TOTAL				12851.99
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (12851.99 - 3533.69) = 9318.30				1397.75
	Cost for 100 sqm.				14249.74
	Cost per sqm.				142.49
	Say				142.50

16.11 Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
1158	Stone for pitching 15 cm x 22.5 cm	cum	2.25	636.00	1431.00
2216	Carriage of Stone blocks white & red sand stone & kota stone slab 2.25x2245/1000 = 5.05 t	tonne	5.05	92.24	465.81
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.08	487.00	525.96
0124	Mason (brick layer) 2nd class	day	1.08	448.00	483.84
0114	Beldar	day	2.15	368.00	791.20
0115	Coolie	day	1.61	368.00	592.48
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				4301.98
	Add 1 % Water charges				43.02
	TOTAL				4345.00
	Add 15 % Contractor's profit and overheads				651.75
	Cost for 10 sqm.				4996.75
	Cost per sqm.				499.67
	Say				499.65

16.12 Dry brick pitching half brick thick in drains including supply of bricks and preparing the surface complete :

16.12.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	0.645	4500.00	2902.50
2201	Carriage of Bricks	1000 Nos	0.645	276.72	178.48
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.40	487.00	194.80
0124	Mason (brick layer) 2nd class	day	0.40	448.00	179.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.08	368.00	397.44
	TOTAL				3852.42
	Add 1 % Water charges				38.52
	TOTAL				3890.94
	Add 15 % Contractor's profit and overheads				583.64
	Cost for 10 sqm.				4474.58
	Cost per sqm.				447.45
	Say				447.45

16.13 Cutting road and making good the same including supply of extra quantities of materials i.e. aggregate, moorum screening, red bajri and labour required.

16.13.1 bituminous portion

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.08cum. (road 6 metres wide, 0.6 metre length wise and 0.30m (average depth) volume = 1.08 cum). MATERIAL				
16.3.3	Supplying and stacking stone aggregate 53mm to 24 mm nominal size at site. Rate as per Item Number 16.3.3 of SH: Road Work	cum	0.09	1542.25	138.80(A)
16.3.8	Supplying and stacking red bajri at site Rate as per Item Number 16.3.8 of SH: Road Work	cum	0.023	1514.35	34.83(A)
16.3.10	Supplying and stacking moorum at site Rate as per Item Number 16.3.10 of SH: Road Work	cum	0.022	643.20	14.15(A)
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.092	1200.00	110.40
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.092	103.77	9.55
0309	Paving bitumen VG-10 of approved quality	tonne	0.011	29600.00	325.60
2211	Carriage of Tar bitumen	tonne	0.011	103.77	1.14
	LABOUR				
	For cutting road and taking out soling and metalling including sorting and screening.				
0114	Beldar	day	0.96	368.00	353.28
0115	Coolie	day	0.48	368.00	176.64
	Relaying soling stone 3.6x0.15=0.54cum.				
0114	Beldar	day	0.24	368.00	88.32
0115	Coolie	day	0.24	368.00	88.32
	Relaying road metal with extra quantity and consolidation to 0.10m, thickness 3.6x0.10=0.36cum.				
0114	Beldar	day	0.71	368.00	261.28
0115	Coolie	day	0.48	368.00	176.64
0101	Bhisti	day	0.10	407.00	40.70
	Painting two coats, 3.6sqm. including labour for spreading grit				
0114	Beldar	day	0.48	368.00	176.64
0115	Coolie	day	0.48	368.00	176.64

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Barrier, chowkidar, sprayman, mate, etc.	L.S.	40.43	1.73	69.94
	TOTAL				2242.87
	Add 1 % Water charges on all except (A) i.e. on (2242.87 - 187.78) = 2055.09				20.55
	TOTAL				2263.42
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2263.42 - 187.78) = 2075.64				311.35
	Cost for 1.08 cum.				2574.77
	Cost per cum.				2384.04
	Say				2384.05

16.13.2 Water bound macadam

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 0.90cum. Consider a road 6 metres wide and 0.6m. lengthwise and 0.25m cm average depth =0.90cum.				
	MATERIAL				
16.3.3	Supplying and stacking stone aggregate 53mm to 24mm nominal size at site. Rate as per Item Number 16.3.3 of SH: Road Work	cum	0.09	1542.25	138.80(A)
16.3.8	Supplying and stacking red bajri at site Rate as per Item Number 16.3.8 of SH: Road Work	cum	0.023	1514.35	34.83(A)
16.3.10	Supplying and stacking moorum at site. Rate as per Item Number 16.3.10 of SH: Road Work	cum	0.022	643.20	14.15(A)
	LABOUR				
	For cutting road and taking out soling and metalling including sorting and screening.				
0114	Beldar	day	0.48	368.00	176.64
0115	Coolie	day	0.24	368.00	88.32
	For relaying soling stone 3.6x0.15=0.54cum.				
0114	Beldar	day	0.24	368.00	88.32
0115	Coolie	day	0.24	368.00	88.32
	For relaying road metal with extra quantity and consolidation to 0.10m thickness - 3.6x0.10=0.36cum.				
0114	Beldar	day	0.48	368.00	176.64
0115	Coolie	day	0.48	368.00	176.64
0101	Bhisti	day	0.10	407.00	40.70
9999	Barrier and chowkidar etc.	L.S.	53.82	1.73	93.11
	TOTAL				1116.47
	Add 1 % Water charges on all except (A) i.e. on (1116.47 - 187.78) = 928.69				9.29
	TOTAL				1125.76
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1125.76 - 187.78) = 937.98				140.70
	Cost for 0.90 cum.				1266.46
	Cost per cum.				1407.17
	Say				1407.15

16.14 Cutting bajri paths and making good the same including supply of extra quantities of brick aggregate, moorum and red bajri required.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm. 10x0.075=0.75cum. MATERIAL				
0286	Supplying and stacking 50mm brick aggregate at site(extra quantity)				
	Brick Aggregate (Single size) : 50 mm nominal size	cum	0.19	750.00	142.50
2260	Carriage of Brick aggregate	cum	0.19	112.79	21.43
16.3.8	Supplying and stacking red bajri at site Rate as per Item Number 16.3.8 of SH: Road	cum	0.06	1514.35	90.86(A)
16.3.10	Supplying and stacking moorum at site Rate as per Item Number 16.3.10 of SH: Road	cum	0.06	643.20	38.59(A)
	LABOUR				
	For cutting, sorting out, spreading and consolidation of aggregate				
0114	Beldar	day	1.60	368.00	588.80
0115	Coolie	day	0.80	368.00	294.40
	TOTAL				1176.58
	Add 1 % Water charges on all except (A) i.e. on (1176.58 - 129.45) = 1047.13				10.47
	TOTAL				1187.05
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1187.05 - 129.45) = 1057.60				158.64
	Cost for 10 sqm.				1345.69
	Cost per sqm.				134.56
	Say				134.55

16.15 Supplying at site :

16.15.1 R.C.C. Standards post/ struts/rails/ pales of mix 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size) with wooden plugs or 6mm bar nibs wherever required as per direction of Engineer-in-charge (cost of earth works in excavation, concrete works in foundation to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 posts = 0.336cum Cubical contents of one post Area bottom A1 = $(15+12.5)/2 \times 8.75 + \frac{1}{2} \times 3.14 \times (6.25)^2$ = 120.31+61.38=181.69sqcm. Area bottom A2 = $(10+7.5)/2 \times 6.25 + \frac{1}{2} \times 3.14 \times (3.75)^2$ sqm = 54.68+22.08 = 76.76 sqcm. $(A1A2)^{\frac{1}{2}} = 118.10$ sqcm $A1+A2+(A1A2)^{\frac{1}{2}} = 0.03766$ sqm Volume = $(1.05)/3 \times 0.03766 = 0.01316$ cum =0.0132cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.2	Volume of lower and square portion (16.5x16.5x75) / 100 ³ = 0.0204cum. Total volume = 0.0132+0.0204 cum = 0.0336 cum. Qty. for 10 post = 0.0336x10 = 0.336cum. Cement concrete 1:1.5:3 (1 Cement : 1.5 Coarse sand : 3 graded stone aggregate 12.5mm nominal size) Rate as per item no 4.1.2 of S.H. Concrete Work.	cum	0.336	5924.65	1990.68(A)
	Extra labour for laying cement concrete in RCC work				
0114	Beldar	day	0.034	368.00	12.51
0101	Bhisti	day	0.067	407.00	27.27
0123	Mason (brick layer) 1st class	day	0.013	487.00	6.33
0124	Mason (brick layer) 2nd class	day	0.013	448.00	5.82
0128	Mate	day	0.013	407.00	5.29
	M.S. Reinforcement 6mm dia. bars 10x4x1.88m = 75.20m+ 10x9x0.50m =45.00m = 120.20m 120.20m@0.22kg/m =26.44kg.				
5.22.2	Rate as per Item No.5.22.2 of SH: Reinforced cement concrete work Centering and shuttering	kg	26.44	66.70	1763.55(A)
5.9.1	Rate as per item No.5.9.1 of SH : Reinforced cement concrete work 6mm C.Plaster 1:2 (1 Cement : 2 fine sand) Details of cost for 9.88 sqm. (0.072)/10x9.88 = 0.071	sqm	6.99	193.95	1355.71(A)
0367	Portland Cement (OPC-43 grade)	tonne	0.05	5700.00	285.00
2209	Carriage of Cement	tonne	0.05	92.24	4.61
0983	Fine sand (zone IV)	cum	0.07	760.00	53.20
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.07	103.77	7.26
	LABOUR				
0114	Beldar	day	0.05	368.00	18.40
0101	Bhisti	day	0.02	407.00	8.14
0155	Mason (average)	day	0.64	467.00	298.88
0115	Coolie	day	0.80	368.00	294.40
0101	Bhisti	day	0.27	407.00	109.89
9999	Hire and running charges of mixer	L.S.	1.95	1.73	3.37
9999	Extra for removing burr, cleaning with wire brushes, pock making with pointed tool etc. complete	L.S.	13.26	1.73	22.94
9999	Scaffolding and sundries	L.S.	11.57	1.73	20.02
9977	Carriage of RCC posts	L.S.	53.82	1.73	93.11
9999	Wooden plugs or 6mm bar nibs	L.S.	12.22	1.73	21.14

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				6430.91
	Add 1 % Water charges on all except (A) i.e. on (6430.91 - 5109.94) = 1320.97				13.21
	TOTAL				6444.12
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6444.12 - 5109.94) = 1334.18				200.13
	Cost for 0.336 cum				6644.25
	Cost for one cum				19774.55
	Say				19774.55

16.15.2 Welded steel wire fabric of required width having rectangular mesh painted with two or more coats of enamel paint of approved shade over a coat of primer (Priming & Painting to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 27 sqm (209.25 kg). MATERIAL				
	Steel wire fabric 0.9m wide rectangular mesh 75x25mm size weight not less than 7.75kg/sqm. 30x0.9 = 27sqm	sqm	27.00	400.00	10800.00
1021	Hard drawn steel wire fabric	tonne	0.209	92.24	19.28
2314	Carriage of Barbed wire 7.75x27=209.25kg=0.209tonne				
	TOTAL				10819.28
	Add 1 % Water charges				108.19
	TOTAL				10927.47
	Add 15 % Contractor's profit and overheads				1639.12
	Cost for 209.25 kg				12566.59
	Cost per kg.				60.05
	Say				60.05

16.16 Supplying and fixing turn buckles and straining bolts for barbed wire fencing.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one set MATERIAL				
1030	Galvanised steel turn buckles	each	1.00	15.00	15.00
1028	Straining bolts	each	1.00	65.00	65.00
9977	Carriage of turn buckles and straining bolts Labour for fixing straining bolts and turn buckles	L.S.	2.73	1.73	4.72
0103	Blacksmith 2nd class	day	0.10	448.00	44.80
	TOTAL				129.52
	Add 1 % Water charges				1.30
	TOTAL				130.82
	Add 15 % Contractor's profit and overheads				19.62
	Cost per set				150.44
	Say				150.45

- 16.17 Fencing with R.C.C. post placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar ribs fixed while casting the post (cost of R.C.C. posts, struts, earth work and concrete to be paid for separately) :- Payment to be made per metre cost of total length of barbed wire used.**

16.17.1 With G.I. barbed wire

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30m MATERIAL G.I. barbed wire 30x9 = 270m + 10x6.32 = 63m Total = 333m 333m @9.38kg/100m =31.24kg = 0.31q				
1029	Galvanised steel barbed wire	quintal	0.31	4800.00	1488.00
2314	Carriage of Barbed wire	tonne	0.03	92.24	2.77
9999	G.I. staples or binding wire LABOUR Labour for fixing costs in line, fixing and stretching wire	L.S.	49.40	1.73	85.46
0123	Mason (brick layer) 1st class	day	0.12	487.00	58.44
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.50	368.00	184.00
0102	Blacksmith 1st class	day	0.50	487.00	243.50
0103	Blacksmith 2nd class	day	0.50	448.00	224.00
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				2363.32
	Add 1 % Water charges				23.63
	TOTAL				2386.95
	Add 15 % Contractor's profit and overheads				358.04
	Cost for 333m				2744.99
	Cost per m				8.24
	Say				8.25

- 16.18 Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used.**

16.18.1 With G.I. barbed wire

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30m MATERIAL G.I. barbed wire				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	30x9 = 270.00m 2x10x(12+32)1/2 = 63.24 = 333.24m 333.24m @ 9.38kg/100m =31.26 kg say 0.31 q				
1029	Galvanised steel barbed wire	quintal	0.31	4800.00	1488.00
2314	Carriage of Barbed wire	tonne	0.031	92.24	2.86
16.16	Supplying and fixing Turn buckle & staple Rate as per Item Number 16.16 of SH: Road Work	each set	10.00	150.45	1504.50(A)
9999	G.I. staples Labour for fixing posts in line and fixing and stretching wire:	L.S.	49.40	1.73	85.46
0123	Mason (brick layer) 1st class	day	0.12	487.00	58.44
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.50	368.00	184.00
0102	Blacksmith 1st class	day	0.50	487.00	243.50
0103	Blacksmith 2nd class	day	0.50	448.00	224.00
	TOTAL				3844.52
	Add 1 % Water charges on all except (A) i.e. on (3844.52 - 1504.50) = 2340.02				23.40
	TOTAL				3867.92
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3867.92 - 1504.50) = 2363.42				354.51
	Cost for 333.24m				4222.43
	Cost per m				12.67
	Say				12.65

16.19 Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal MATERIAL M.S. angle = 1.00 qtl. Add 5% wastage = 0.05 qtl. Total = =1.05 qtl				
1007	Structurals such as tees,angles channels and R.S. joists	quintal	1.05	3775.00	3963.75
2205	Carriage of Steel	tonne	0.105	92.24	9.69
	LABOUR				
0103	Blacksmith 2nd class	day	0.75	448.00	336.00
0114	Beldar	day	0.50	368.00	184.00
	For spotting, bending of angle and drilling holes etc. :				
0103	Blacksmith 2nd class	day	1.00	448.00	448.00
0114	Beldar	day	1.00	368.00	368.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries such as drilling bit etc.	L.S.	19.76	1.73	34.18
	TOTAL				5343.62
	Add 1 % Water charges				53.44
	TOTAL				5397.06
	Add 15 % Contractor's profit and overheads				809.56
	Cost for 1 qunital				6206.62
	Cost of one kg				62.06
	Say				62.05

16.20 Welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x 60 cm of mix 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size), every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and struts embedded in cement concrete blocks 70x45x50 cm of the same mix, provided with welded steel wire fabric fixed between the posts fitted and fixed with G.I. staples on wooden plugs or tied to 6 mm bar nibs with G.I. binding wire (cost of posts, welded steel wire fabric, painting, earth work in excavation and concrete to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metres i.e.30x1.20 =36.00sqm				
	Labour for fixing posts in line fixing and stretching - welded wire fabric :				
0123	Mason (brick layer) 1st class	day	0.12	487.00	58.44
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.50	368.00	184.00
0102	Blacksmith 1st class	day	0.50	487.00	243.50
0103	Blacksmith 2nd class	day	0.50	448.00	224.00
9999	G.I. staple or binding wire	L.S.	53.82	1.73	93.11
9999	Sundries	L.S.	53.82	1.73	93.11
	TOTAL				949.92
	Add 1 % Water charges				9.50
	TOTAL				959.42
	Add 15 % Contractor's profit and overheads				143.91
	Cost for 36 sqm				1103.33
	Cost per sqm				30.64
	Say				30.65

16.21 Engraving letters in hard stone

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6 letters 8 cm height				
	LABOUR				
	For Engraving stone-				
0126	Mason (for ornamental stone work) 1st class	day	0.38	487.00	185.06

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				196.75
	Add 1 % Water charges				1.97
	TOTAL				198.72
	Add 15 % Contractor's profit and overheads				29.81
	Cost of 6 letters of 8cm heights				228.53
	Cost per cm. height per letter				4.76
	Say				4.75

16.22 Providing and fixing 15x15x90 cm boundary stone of hard stone with top 30 cm chisel dressed on all four sides including top (cost of excavation, refilling and concrete etc. to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1151	Details of cost for one stone Boundary stone top chisel dressed 15x15x90 cm	each	1.00	70.00	70.00
	Labour for fixing				
0114	Beldar	day	0.12	368.00	44.16
9977	Carriage to site	L.S.	4.16	1.73	7.20
	TOTAL				121.36
	Add 1 % Water charges				1.21
	TOTAL				122.57
	Add 15 % Contractor's profit and overheads				18.39
	Cost of each.				140.96
	Say				140.95

16.23 Providing and fixing 15 cm dia at top, 20 cm at bottom and 90 cm high precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) boundary stone as per standard design, including finishing smooth with cement mortar 1:3 (1 cement : 3 fine sand) (cost of excavation, refilling and concreting to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.2	Details of cost for one stone (i) Cement concrete 1:1½:3 (1 cement : 1½ Coarse sand : 3 graded stone aggregate 20mm nominal size) Volume of frustum of cone: $L/3 \times [A1+A2+\sqrt{A1A2}] = 0.825/3 \times$ $[0.095^2 +$ $0.075^2 + \sqrt{0.095 \times 0.075^2}] \times 3.142$ $= 0.01882$ (A) Volume of hemi sphere: $\frac{1}{2} \times 4/3 \times \pi \times r^3 =$ $\frac{1}{2} \times (4/3) \times (22/7) \times 0.075^3 = 0.00100$ (B) Total volume = A+B = 0.01982 Say 0.02cum Rate as per item no 4.1.2 of S.H. Concrete Work. (ii) Extra for laying cement concrete in RCC work	cum	0.02	5924.65	118.49(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0114	Beldar	day	0.002	368.00	0.74
0101	Bhisti	day	0.004	407.00	1.63
0123	Mason (brick layer) 1st class	day	0.0008	487.00	0.39
0124	Mason (brick layer) 2nd class	day	0.0008	448.00	0.36
0128	Mate	day	0.0008	407.00	0.33
	(iii) M.S. reinforcement- 6mm dia. bar 5.99 metre =5.99x0.22 =1.32kg. Rate as per item no. 5.22.1 of SH : RCC work	kg	1.32	55.30	73.00
5.22.1	(iv) Centering and shuttering- $1/2 \times 3.142 (0.19+0.15) \times 0.825 = 0.441 +$ $3.142/4(0.19)^2 = 0.028 +$ $1/2 \times 4 \times 3.142(0.075)^2 = 0.035$ = 0.504 Say 0.50sqm.				
5.9.1	Rate as per item No.5.9.1 of SH : Reinforced cement concrete work (v) 6mm cement plaster 1:3 (1 Cement : 3 fine sand)- $1/2 \times 3.142 (0.19+0.15) \times 0.825 = 0.44 +$ $3.142/4(0.19)^2 = 0.028 +$ $1/2 \times 4 \times 3.142(0.075)^2 = 0.035$ = 0.504 Say 0.50sqm.	sqm	0.50	193.95	96.98
	MATERIAL				
0367	Portland Cement (OPC-43 grade)	tonne	0.0018	5700.00	10.26
2209	Carriage of Cement	tonne	0.0018	92.24	0.17
0983	Fine sand (zone IV)	cum	0.0385	760.00	29.26
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.0385	103.77	4.00
	Labour for mortar				
0114	Beldar	day	0.0027	368.00	0.99
0101	Bhisti	day	0.0002	407.00	0.08
9999	Hire and running charges of mixer	L.S.	0.10	1.73	0.17
9999	Sundries	L.S.	0.05	1.73	0.09
	Labour for plaster				
0155	Mason (average)	day	0.026	467.00	12.14
0115	Coolie	day	0.038	368.00	13.98
0101	Bhisti	day	0.046	407.00	18.72
9999	Extra for removing burr	L.S.	0.68	1.73	1.18
9999	Scaffolding, sundries etc.	L.S.	0.60	1.73	1.04
	(vi) Labour for fixing				
0114	Beldar	day	0.12	368.00	44.16
9977	Carriage to site	L.S.	4.16	1.73	7.20
	TOTAL				435.36
	Add 1 % Water charges on all except (A) i.e. on (435.36 - 288.47) = 146.89				1.47
	TOTAL				436.83
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (436.83 - 288.47) = 148.36				22.25
	Cost of each.				459.08
	Say				459.10

16.24 Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) kilometre stone as per standard design, including finishing smooth in 1:3 cement mortar (1 cement : 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately.

16.24.1 35x111x25 cm size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.2	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) in Kilometre stone $0.35 \times 0.25 \times 0.835\text{m} = 0.073$ $0.37 \times 0.27 \times 0.10\text{m} = 0.010$ $1/2 \times 22/7 \times (0.175)^2 \times 0.25\text{m} = 0.012$ $= 0.095\text{cum}$ Say 0.10cum. Rate as per item no 4.1.2 of S.H. Concrete Work.	cum	0.10	5924.65	592.47(A)
0114	Beldar	day	0.01	368.00	3.68
0101	Bhisti	day	0.02	407.00	8.14
0123	Mason (brick layer) 1st class	day	0.004	487.00	1.95
0124	Mason (brick layer) 2nd class	day	0.004	448.00	1.79
0128	Mate	day	0.004	407.00	1.63
5.22.1	(iii) M.S. reinforcement- $0.10\text{cum} @ 48.06\text{kg/cum.} = 4.806\text{kg.}$ Say 4.81kg. Rate as per item no. 5.22.1 of SH : Reinforced cement concrete work	kg	4.81	55.30	265.99(A)
5.9.1	(iv) Centering and shuttering- $(0.35+2 \times 0.25) \times 0.835 = 0.710\text{ sqm}$ $0.35 \times 0.25 = 0.088\text{sqm}$ $(0.37+2 \times 0.27) \times 0.10 = 0.091\text{sqm}$ $2 \times 0.37 \times 0.01 = 0.007\text{ sqm}$ $2 \times 2 \times 0.25 \times 0.1 = 0.010\text{sqm}$ $1/2 \times 3.142/4 \times (0.35)^2 = 0.048\text{sqm}$ $1/2 \times 0.35 \times 0.25 \times 3.142 = 0.138\text{sqm.}$ $= 1.092\text{sqm. Say } 1.09\text{ sqm}$ Rate as per item No.5.9.1 of SH : Reinforced cement concrete work	sqm	1.09	193.95	211.41(A)
	(v) 6mm cement plaster 1:3 (1 Cement : 3 fine sand)- Qty. as per centering and shuttering $= 1.092\text{sqm}$ $0.35 \times 0.835 = 0.292\text{sqm}$ $0.37 \times 0.10 = 0.037\text{sqm}$ $1/2 \times 3.142/4 \times (0.35)^2 = 0.048\text{sqm}$ $2 \times 0.37 \times 0.01 = 0.007\text{ sqm}$ $= 1.476\text{ sqm Say } 1.48\text{ sqm}$				
0367	Portland Cement (OPC-43 grade)	tonne	0.054	5700.00	307.80
2209	Carriage of Cement	tonne	0.054	92.24	4.98
0983	Fine sand (zone IV)	cum	0.011	760.00	8.36

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.011	103.77	1.14
	Labour for mortar				
0114	Beldar	day	0.008	368.00	2.94
0101	Bhisti	day	0.0007	407.00	0.28
9999	Hire and running charges of mixer	L.S.	0.03	1.73	0.05
9999	Sundries	L.S.	0.13	1.73	0.22
	Labour for plaster				
0155	Mason (average)	day	0.075	467.00	35.03
0115	Coolie	day	0.111	368.00	40.85
0101	Bhisti	day	0.136	407.00	55.35
9999	Extra for removing burr	L.S.	1.95	1.73	3.37
9999	Scaffolding, sundries etc.	L.S.	1.82	1.73	3.15
	(vi) Labour for fixing				
0114	Beldar	day	0.20	368.00	73.60
9977	Carriage to site	L.S.	13.52	1.73	23.39
	TOTAL				1647.57
	Add 1 % Water charges on all except (A) i.e. on (1647.57 - 1069.87) = 577.70				5.78
	TOTAL				1653.35
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1653.35 - 1069.87) = 583.48				87.52
	Cost per stone				1740.87
	Say				1740.85

16.24.2 50x152.5x25 cm size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) 0.50x0.25x1.145m = 0.143cum. + 0.52x0.27x0.13m = 0.018cum. + 1/2x22/7x(0.25) ² x0.25m = 0.025cum. = 0.186 cum. Say 0.19cum.				
4.1.2	Rate as per item no 4.1.2 of S.H. Concrete Work.	cum	0.19	5924.65	1125.68(A)
	(ii) Extra for laying cement concrete in RCC work				
0114	Beldar	day	0.019	368.00	6.99
0101	Bhisti	day	0.038	407.00	15.47
0123	Mason (brick layer) 1st class	day	0.008	487.00	3.90
0124	Mason (brick layer) 2nd class	day	0.008	448.00	3.58
0128	Mate	day	0.008	407.00	3.26
	(iii) M.S. reinforcement- 0.19cum @48.06kg/cum. =9.131kg. Say 9.13 kg.				
5.22.1	Rate as per item no. 5.22.1 of SH : Reinforced cement concrete work	kg	9.13	55.30	504.89(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.9.1	(iv) Centering and shuttering- $(0.50+2 \times 0.25) \times 1.145 = 1.145$ sqm $1/2 \times (0.25)^2 \times 3.142 = 0.098$ $3.142(0.25) \times (0.25) = 0.196$ $(0.52+2 \times 0.27) \times 0.13 = 0.138$ $2 \times 0.52 \times 0.01 = 0.10$ $2 \times 2 \times 0.25 \times 0.01 = 0.010$ $1 \times 0.50 \times 0.25 = 0.125$ $= 1.722$ sqm. Say 1.72 sqm Rate as per item No.5.9.1 of SH : Reinforced cement concrete work	sqm	1.72	193.95	333.59(A)
	(v) 6mm cement plaster 1:3 (1 Cement : 3 fine sand)- Qty. as per centering and shuttering $= 1.722$ sqm. + $0.50 \times 1.145 = 0.572$ + $0.52 \times 0.13 = 0.068$ sqm. + $1/2 \times (0.25)^2 \times 3.142 = 0.098$ + $2 \times 0.52 \times 0.01 = 0.010$ $= 2.470$ sqm Sq. 2.47 sqm. MATERIAL				
0367	Portland Cement (OPC-43 grade)	tonne	0.09	5700.00	513.00
2209	Carriage of Cement	tonne	0.09	92.24	8.30
0983	Fine sand (zone IV)	cum	0.20	760.00	152.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.20	103.77	20.75
	Labour for mortar				
0114	Beldar	day	0.013	368.00	4.78
0101	Bhisti	day	0.001	407.00	0.41
9999	Hire and running charges of mixer	L.S.	0.52	1.73	0.90
9999	Sundries	L.S.	0.26	1.73	0.45
	Labour for plaster				
0155	Mason (average)	day	0.126	467.00	58.84
0115	Coolie	day	0.185	368.00	68.08
0101	Bhisti	day	0.227	407.00	92.39
9999	Extra for removing burr	L.S.	3.38	1.73	5.85
9999	Scaffolding, sundries etc.	L.S.	2.86	1.73	4.95
	(vi) Labour for fixing				
0114	Beldar	day	0.20	368.00	73.60
9977	Carriage to site	L.S.	13.52	1.73	23.39
	TOTAL				3025.05
	Add 1 % Water charges on all except (A) i.e. on (3025.05 - 1964.16) = 1060.89				10.61
	TOTAL				3035.66
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3035.66 - 1964.16) = 1071.50				160.73
	Cost per stone				3196.39
	Say				3196.40

16.24.2 50x152.5x25 cm size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.2	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) $0.35 \times 0.18 \times 0.835 \text{m} = 0.0526 \text{ cum.} +$ $0.37 \times 0.20 \times 0.10 \text{m} = 0.0074 \text{ cum.}$ $= 0.060 \text{ cum.}$ Rate as per item no 4.1.2 of S.H. Concrete Work.	cum	0.06	5924.65	355.48(A)
0114	Beldar	day	0.006	368.00	2.21
0101	Bhisti	day	0.012	407.00	4.88
0123	Mason (brick layer) 1st class	day	0.0024	487.00	1.17
0124	Mason (brick layer) 2nd class	day	0.0024	448.00	1.08
0128	Mate	day	0.0024	407.00	0.98
5.22.1	(ii) Extra for laying cement concrete in RCC work (iii) M.S. reinforcement- $0.06 \text{cum} @ 48.06 \text{kg/cum.} = 2.8836 \text{ kg.}$ Say 2.88 kg. Rate as per item no. 5.22.1 of SH : Reinforced cement concrete work	kg	2.88	55.30	159.26(A)
5.9.1	(iv) Centering and shuttering- $(0.35 + 2 \times 0.18) \times 0.835 = 0.593 \text{ sqm}$ $(0.37 + 2 \times 0.20) \times 0.10 = 0.077 \text{ sqm}$ $2 \times 0.35 \times 0.18 = 0.126 \text{ sqm}$ $2 \times 0.37 \times 0.01 = 0.007 \text{ sqm}$ $2 \times 2 \times 0.18 \times 0.01 = 0.007 \text{ sqm}$ $= 0.810 \text{ sqm}$ Rate as per item No.5.9.1 of SH : Reinforced cement concrete work	sqm	0.81	193.95	157.10(A)
	(v) 6mm cement plaster 1:3 (1 Cement : 3 fine sand)- Qty. as per centering and shuttering $= 0.810 \text{ sqm}$ $0.35 \times 0.835 = 0.292 \text{ sqm}$ $0.37 \times 0.10 = 0.037 \text{ sqm}$ $2 \times 0.37 \times 0.01 = 0.007 \text{ sqm}$ $= 1.146 \text{ sqm}$ Say 1.15sqm MATERIAL				
0367	Portland Cement (OPC-43 grade)	tonne	0.042	5700.00	239.40
2209	Carriage of Cement	tonne	0.042	92.24	3.87
0983	Fine sand (zone IV)	cum	0.009	760.00	6.84
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.009	103.77	0.93
	Labour for mortar				
0114	Beldar	day	0.006	368.00	2.21
0101	Bhisti	day	0.0006	407.00	0.24
9999	Hire and running charges of mixer	L.S.	0.26	1.73	0.45
9999	Sundries	L.S.	0.13	1.73	0.22
	Labour for plaster				
0155	Mason (average)	day	0.058	467.00	27.09
0115	Coolie	day	0.086	368.00	31.65
0101	Bhisti	day	0.105	407.00	42.74
9999	Extra for removing burr	L.S.	1.56	1.73	2.70

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Scaffolding, sundries etc. (vi) Labour for fixing	L.S.	1.30	1.73	2.25
0114	Beldar	day	0.10	368.00	36.80
9977	Carriage to site	L.S.	13.52	1.73	23.39
	TOTAL				1102.94
	Add 1 % Water charges on all except (A) i.e. on (1102.94 - 671.84) = 431.10				4.31
	TOTAL				1107.25
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1107.25 - 671.84) = 435.41				65.31
	Cost of each				1172.56
	Say				1172.55

16.25 Surface dressing on new surface with paving bitumen of grade VG - 10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete:

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. MATERIAL				
	Bitumen S-90@2.25kg per sqm. =225 kg = 0.225 tonne.				
0309	Paving bitumen VG-10 of approved quality	tonne	0.225	29600.00	6660.00
2211	Carriage of Tar bitumen	tonne	0.225	103.77	23.35
	Stone aggregate 13.2mm nominal size @ 1.65cum. per 100sqm.				
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.65	1200.00	1980.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.65	103.77	171.22
	Steam coal for heating bitumen @2 quintal per tonne of bitumen = 2x0.225=0.450q				
0370	Coal (steam)	quintal	0.45	400.00	180.00
2200	Carriage of steam coal	tonne	0.045	118.59	5.34
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate (a) For cleaning :				
0128	Mate	day	0.11	407.00	44.77
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating and spraying bitumen :				
0130	Mistry	day	0.08	487.00	38.96
0138	Sprayer (for bitumen, tar etc.)	day	0.11	407.00	44.77
0114	Beldar	day	0.93	368.00	342.24
	(c) For screening and spreading aggregate :				
0128	Mate	day	0.11	407.00	44.77
0114	Beldar	day	0.93	368.00	342.24
0115	Coolie	day	1.55	368.00	570.40
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.12	800.00	96.00
0007	Hire charges of Coaltar Sprayer	day	0.11	250.00	27.50
	(e) Misc:				
0364	Wire brush	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				12019.43
	Add 1 % Water charges				120.19
	TOTAL				12139.62
	Add 15 % Contractor's profit and overheads				1820.94
	Cost for 100 Sqm.				13960.56
	Cost per Sqm.				139.60
	Say				139.60

16.26 Surface dressing on new surface in two coats with bitumen of grade VG -10 of approved quality using 1.8 kg of bitumen per sqm with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface for first coat and 1.1 kg. of bitumen per sqm with 1.00 cu. metre of stone chippings 11.2 mm nominal size per 100 sqm of road surface for second coat, including consolidation of each coat separately with road roller of 6 to 8 tonne capacity etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm.				
	MATERIAL				
	Bitumen S-90/A-90 @ 1.8kg/sqm.=180kg.=0.18 tonne				
0309	Paving bitumen VG-10 of approved quality	tonne	0.18	29600.00	5328.00
2211	Carriage of Tar bitumen	tonne	0.18	103.77	18.68
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.50	1200.00	1800.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.50	103.77	155.65
	Steam coal for heating bitumen @2 quintal per tonne				
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	118.59	4.27
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) For cleaning :				
0128	Mate	day	0.11	407.00	44.77
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating and spraying bitumen :				
0130	Mistry	day	0.08	487.00	38.96
0138	Sprayer (for bitumen, tar etc.)	day	0.11	407.00	44.77
0114	Beldar	day	1.38	368.00	507.84
	(c) For screening and spreading aggregate :				
0128	Mate	day	0.27	407.00	109.89
0114	Beldar	day	0.85	368.00	312.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.85	368.00	312.80
	(d) Consolidation Charges				
0113	Chowkidar	day	0.11	368.00	40.48
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.12	800.00	96.00
0007	Hire charges of Coaltar Sprayer	day	0.11	250.00	27.50
	(e) Misc:				
0364	Wire brush	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	16.38	1.73	28.34
	Second Coat				
	MATERIAL				
	Bitumen S-90/A-90 @ 1.10kg per sqm = 110kg.=0.11 tonne				
0309	Paving bitumen VG-10 of approved quality	tonne	0.11	29600.00	3256.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.00	1200.00	1200.00
2211	Carriage of Tar bitumen	tonne	0.11	103.77	11.41
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.00	103.77	103.77
	Steam coal for heating bitumen @2 quintal per tonne of bitumen				
0370	Coal (steam)	quintal	0.22	400.00	88.00
2200	Carriage of steam coal	tonne	0.022	118.59	2.61
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) For cleaning and brushing loose chips:				
0128	Mate	day	0.06	407.00	24.42
0115	Coolie	day	0.97	368.00	356.96
	(b) For heating and spraying bitumen :				
0130	Mistry	day	0.05	487.00	24.35
0138	Sprayer (for bitumen, tar etc.)	day	0.07	407.00	28.49
0114	Beldar	day	0.75	368.00	276.00
	(c) For screening and spreading aggregate :				
0128	Mate	day	0.07	407.00	28.49
0114	Beldar	day	0.62	368.00	228.16
0115	Coolie	day	0.62	368.00	228.16
	(d) Consolidation Charges				
0113	Chowkidar	day	0.15	368.00	55.20
0101	Bhisti	day	0.06	407.00	24.42
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	2200.00	132.00
0007	Hire charges of Coaltar Sprayer	day	0.07	250.00	17.50
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.06	800.00	48.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.03	20.00	0.60
0365	Soft brush	each	0.09	18.00	1.62

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				16504.15
	Add 1 % Water charges				165.04
	TOTAL				16669.19
	Add 15 % Contractor's profit and overheads				2500.38
	Cost for two coats per 100sqm.				19169.57
	Cost per Sqm.				191.69
	Say				191.70

16.27 Surface dressing on old surface with hot bitumen of grade VG - 10 of approved quality using 1.95 kg of bitumen per sqm with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm.				
	MATERIAL				
0309	Bitumen 1.95kg./sqm.= 195kg. or 0.195t	tonne	0.195	29600.00	5772.00
2911	Paving bitumen VG-10 of approved quality				
	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.50	1200.00	1800.00
	@ 1.50cum. per 100 sqm.				
2211	Carriage of Tar bitumen	tonne	0.195	103.77	20.23
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.50	103.77	155.65
	Steam coal for heating bitumen @2 quintal per tonne of bitumen				
0370	Coal (steam)	quintal	0.39	400.00	156.00
2200	Carriage of steam coal	tonne	0.039	118.59	4.63
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate etc.				
	(a) For cleaning :				
0128	Mate	day	0.06	407.00	24.42
0114	Beldar	day	0.49	368.00	180.32
0115	Coolie	day	0.97	368.00	356.96
	(b) For heating and spraying bitumen :				
0130	Mistry	day	0.05	487.00	24.35
0138	Sprayer (for bitumen, tar etc.)	day	0.06	407.00	24.42
0114	Beldar	day	0.69	368.00	253.92
	(c) For screening and spreading aggregate :				
0128	Mate	day	0.66	407.00	268.62
0114	Beldar	day	0.51	368.00	187.68
0115	Coolie	day	0.51	368.00	187.68
	(d) Consolidation Charges				
0113	Chowkidar	day	0.15	368.00	55.20
0101	Bhisti	day	0.06	407.00	24.42
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	2200.00	132.00
0007	Hire charges of Coaltar Sprayer	day	0.06	250.00	15.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.06	800.00	48.00
	(e) Misc:				
	Brushes etc. for cleaning				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Brooms and gunny bags	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				9708.60
	Add 1 % Water charges				97.09
	TOTAL				9805.69
	Add 15 % Contractor's profit and overheads				1470.85
	Cost for 100 sqm.				11276.54
	Cost per Sqm.				112.76
	Say				112.75

16.28 Surface dressing one coat on new surface with bitumen of specified grade at a rate of 1.95 kg/sqm of surface area with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity , etc. complete :

16.28.1 Using bitumen emulsion (minimum 50% bitumen content- RS grade conforming to IS : 8887)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. MATERIAL				
0310	Bitumen emulsion	tonne	0.195	26395.00	5147.03
2211	Carriage of Tar bitumen	tonne	0.195	103.77	20.23
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.50 cum. per 100 sqm. = 1.50cum	cum	1.50	1200.00	1800.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.50	103.77	155.65
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.11	407.00	44.77
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For Spraying bitumen emulsion :				
0130	Mistry	day	0.07	487.00	34.09
0138	Sprayer (for bitumen, tar etc.)	day	0.10	407.00	40.70
0114	Beldar	day	1.00	368.00	368.00
	(c) For screening and spreading aggregate :				
0128	Mate	day	0.11	407.00	44.77
0114	Beldar	day	0.85	368.00	312.80
0115	Coolie	day	0.85	368.00	312.80
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.27	407.00	109.89
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0007	Hire charges of Coaltar Sprayer	day	0.10	250.00	25.00
	(e) Misc: Brushes etc. for cleaning				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				9823.56
	Add 1 % Water charges				98.24
	TOTAL				9921.80
	Add 15 % Contractor's profit and overheads				1488.27
	Cost for 100 sqm.				11410.07
	Cost per Sqm.				114.10
	Say				114.10

16.29 Surface dressing one coat on old surface with bitumen of specified grade at the rate of 1.22 kg/ sqm of surface area with 1.10 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete :

16.29.1 Using bitumen emulsion (minimum 50% bitumen content- RS grade conforming to IS : 8887)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. MATERIAL				
	Bitumen emulsion @1.22 kg per Sqm. =122 kg. or 0.122 tonne				
0310	Bitumen emulsion	tonne	0.122	26395.00	3220.19
2211	Carriage of Tar bitumen	tonne	0.122	103.77	12.66
	Stone chippings 11.2mm nominal size @ 1.10cum. per 100 sqm				
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.10	1200.00	1320.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.10	103.77	114.15
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.06	407.00	24.42
0114	Beldar	day	0.49	368.00	180.32
0115	Coolie	day	0.97	368.00	356.96
	(b) For Spraying bitumen emulsion :				
0130	Mistry	day	0.05	487.00	24.35
0138	Sprayer (for bitumen, tar etc.)	day	0.06	407.00	24.42
0114	Beldar	day	0.63	368.00	231.84
	(c) For screening and spreading aggregate :				
0128	Mate	day	0.07	407.00	28.49
0114	Beldar	day	0.62	368.00	228.16
0115	Coolie	day	0.62	368.00	228.16
	(d) Consolidation Charges				
0113	Chowkidar	day	0.15	368.00	55.20
0101	Bhisti	day	0.15	407.00	61.05

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	2200.00	132.00
0007	Hire charges of Coaltar Sprayer (e) Misc:	day	0.06	250.00	15.00
	Brushes etc. for cleaning				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	2.73	1.73	4.72
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				6279.27
	Add 1 % Water charges				62.79
	TOTAL				6342.06
	Add 15 % Contractor's profit and overheads				951.31
	Cost for 100 sqm.				7293.37
	Cost per Sqm.				72.93
	Say				72.95

16.30 Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :

16.30.1 On W.B.M. @ 0.75 Kg / sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm.				
	MATERIAL				
2916	Paving Asphalt VG -10 of approved quality	tonne	0.075	29600.00	2220.00
2211	Carriage of Tar bitumen	tonne	0.075	103.77	7.78
0370	Coal (steam)	quintal	0.15	400.00	60.00
2200	Carriage of steam coal	tonne	0.015	118.59	1.78
	MATERIAL				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Gunny bags	L.S.	7.80	1.73	13.49
0007	Hire charges of Coaltar Sprayer	day	0.03	250.00	7.50
9999	Sundries	L.S.	9.10	1.73	15.74
	LABOUR				
	(a) For cleaning :				
0128	Mate	day	0.06	407.00	24.42
0114	Beldar	day	1.46	368.00	537.28
	(b) For heating bitumen:				
0114	Beldar	day	0.19	368.00	69.92
	(c) For applying tack coat:				
0114	Beldar	day	0.47	368.00	172.96
	TOTAL				3134.03
	Add 1 % Water charges				31.34
	TOTAL				3165.37
	Add 15 % Contractor's profit and overheads				474.81
	Cost for 100 sqm.				3640.18
	Cost per Sqm.				36.40
	Say				36.40

16.30.2 On bituminous surface @ 0.50 Kg / sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm.				
	MATERIAL				
2916	Paving Asphalt VG -10 of approved quality	tonne	0.05	29600.00	1480.00
2211	Carriage of Tar bitumen	tonne	0.05	103.77	5.19
0370	Coal (steam)	quintal	0.10	400.00	40.00
2200	Carriage of steam coal	tonne	0.01	118.59	1.19
	MATERIAL				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Gunny bags	L.S.	7.80	1.73	13.49
0007	Hire charges of Coaltar Sprayer	day	0.03	250.00	7.50
9999	Sundries	L.S.	7.80	1.73	13.49
	LABOUR				
	(a) For cleaning :				
0128	Mate	day	0.06	407.00	24.42
0114	Beldar	day	1.46	368.00	537.28
	(b) For heating bitumen:				
0114	Beldar	day	0.19	368.00	69.92
	(c) For applying tack coat:				
0114	Beldar	day	0.47	368.00	172.96
	TOTAL				2368.60
	Add 1 % Water charges				23.69
	TOTAL				2392.29
	Add 15 % Contractor's profit and overheads				358.84
	Cost for 100 sqm.				2751.13
	Cost per Sqm.				27.51
	Say				27.50

16.31 Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.

16.31.1 With rapid setting bitumen emulsion

16.31.1.1 On W.B.M / W.M.M. @ 0.4kg/sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm.				
	MATERIAL				
7382	Bitumen emulsion rapid setting (R.S.) confirming to IS : 8887-1995	tonne	1.40	25425.00	35595.00
2211	Carriage of Tar bitumen	tonne	1.40	103.77	145.28
	MACHINERY				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm. Per hour.	hour	2.80	300.00	840.00
0058	Air compressor	hour	2.80	200.00	560.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1600.00
	LABOUR				
0128	Mate	day	0.08	407.00	32.56

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				39508.84
	Add 1 % Water charges				395.09
	TOTAL				39903.93
	Add 15 % Contractor's profit and overheads				5985.59
	Cost for 3500 sqm.				45889.52
	Cost per Sqm.				13.11
	Say				13.10

16.31.1.2 On bituminous surface @ 0.25kg/sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm.				
	MATERIAL				
7382	Bitumen emulsion rapid setting (R.S.) confirming to IS : 8887-1995	tonne	0.875	25425.00	22246.88
2211	Carriage of Tar bitumen	tonne	0.875	103.77	90.80
	MACHINERY				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm. Per hour.	hour	2.80	300.00	840.00
0058	Air compressor	hour	2.80	200.00	560.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1600.00
	LABOUR				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				26106.24
	Add 1 % Water charges				261.06
	TOTAL				26367.30
	Add 15 % Contractor's profit and overheads				3955.10
	Cost for 3500 sqm.				30322.40
	Cost per Sqm.				8.66
	Say				8.65

16.31.2 With medium setting bitumen emulsion

16.31.2.1 On W.B.M / W.M.M. @ 0.4kg/sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm.				
	MATERIAL				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887-1995	tonne	1.40	25654.00	35915.60
2211	Carriage of Tar bitumen	tonne	1.40	103.77	145.28
	MACHINERY				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm. Per hour.	hour	2.80	300.00	840.00
0058	Air compressor	hour	2.80	200.00	560.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1600.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0128	LABOUR				
	Mate	day	0.08	407.00	32.56
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				39829.44
	Add 1 % Water charges				398.29
	TOTAL				40227.73
	Add 15 % Contractor's profit and overheads				6034.16
	Cost for 3500 sqm.				46261.89
	Cost per Sqm.				13.21
	Say				13.20

16.31.2.2 On bituminous surface @ 0.25kg/sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3500 sqm.				
	MATERIAL				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887-1995	tonne	0.875	25654.00	22447.25
2211	Carriage of Tar bitumen	tonne	0.875	103.77	90.80
	MACHINERY				
0075	Road sweeper (Mechanical Broom) @ 1250 sqm. Per hour.	hour	2.80	300.00	840.00
0058	Air compressor	hour	2.80	200.00	560.00
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	2.00	800.00	1600.00
	LABOUR				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				26306.61
	Add 1 % Water charges				263.07
	TOTAL				26569.68
	Add 15 % Contractor's profit and overheads				3985.45
	Cost for 3500 sqm.				30555.13
	Cost per Sqm.				8.73
	Say				8.75

16.32 2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).

16.32.1 With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm.				
	Asphalt 80/100				
	(i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings. Bitumen :52x1.8+56x0.9=144kg. or 0.144 tonne MATERIAL				
2916	Paving Asphalt VG 10 of approved quality	tonne	0.144	29600.00	4262.40
2211	Carriage of Tar bitumen	tonne	0.144	103.77	14.94
	Solvent 70gms/kg. for 0.144 t = 10.08kg.				
2914	Solvent	kilogram	10.08	25.00	252.00
2342	Carriage of solvent/ Diesel.	quintal	0.10	10.38	1.04
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100 sqm	cum	1.80	1200.00	2160.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100 sqm	cum	0.90	1200.00	1080.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	2.70	103.77	280.18
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.144=0.288q				
0370	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.0288	118.59	3.42
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen:				
0114	Beldar	day	0.57	368.00	209.76
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	5.00	368.00	1840.00
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
	(at barrier for night watch and for road roller)				
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.13	800.00	104.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				12040.63
	Add 1 % Water charges				120.41
	TOTAL				12161.04
	Add 15 % Contractor's profit and overheads				1824.16
	Cost for 100 sqm.				13985.20
	Cost per Sqm.				139.85
	Say				139.85

16.32.2 With paving Asphalt grade VG - 30 with no solvent

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. Asphalt 60/70 (i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings. Bitumen :52x1.8+56x0.9=144kg. or 0.144 tonne MATERIAL				
7309	Paving Asphalt VG-30 of approved quality	tonne	0.144	30516.00	4394.30
2211	Carriage of Tar bitumen	tonne	0.144	103.77	14.94
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100sqm.	cum	1.80	1200.00	2160.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100sqm	cum	0.90	1200.00	1080.00
2202	Carriage of Stone aggregate below 40 mm nominal size Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.144=0.288q	cum	2.70	103.77	280.18
0370	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.0288	118.59	3.42
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen:				
0114	Beldar	day	0.57	368.00	209.76
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	5.00	368.00	1840.00
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.13	800.00	104.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				11919.49
	Add 1 % Water charges				119.19
	TOTAL				12038.68
	Add 15 % Contractor's profit and overheads				1805.80
	Cost for 100 sqm.				13844.48
	Cost per Sqm.				138.44
	Say				138.45

16.32.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings. Modified Bitumen CRMB - 55 (Refinery produced) :52x1.8+56x0.9=144kg. or 0.144 tonne MATERIAL				
7739	Modified Bitumen Refinery produced CRMB - 55	tonne	0.144	33548.00	4830.91
2211	Carriage of Tar bitumen	tonne	0.144	103.77	14.94
	Solvent 70gms/kg. for 0.144 t = 10.08kg				
2914	Solvent	kilogram	10.08	25.00	252.00
2342	Carriage of solvent/ Diesel.	quintal	0.10	10.38	1.04
	Stone chippings 13.2mm nominal size @ 1.80cum. per 100sqm.				
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100sqm.	cum	1.80	1200.00	2160.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100sqm	cum	0.90	1200.00	1080.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	2.70	103.77	280.18
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.144=0.288q				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0370	Coal (steam)	quintal	0.288	400.00	115.20
2200	Carriage of steam coal	tonne	0.0288	118.59	3.42
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen:				
0114	Beldar	day	0.57	368.00	209.76
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	5.00	368.00	1840.00
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.13	800.00	104.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				12609.14
	Add 1 % Water charges				126.09
	TOTAL				12735.23
	Add 15 % Contractor's profit and overheads				1910.28
	Cost for 100 sqm.				14645.51
	Cost per Sqm.				146.45
	Say				146.45

16.33 2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2 mm and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).

16.33.1 With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. Paving Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size chippings.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(ii) Hot bitumen @56kg. per cum. of aggregate @1.12cum. of 11.2mm nominal size. Bitumen :52x2.25+56x1.12= 180kg MATERIAL				
2916	Paving Asphalt VG -10 of approved quality Solvent 0.07x180=12.60kg.	tonne	0.18	29600.00	5328.00
2914	Solvent	kilogram	12.6	25.00	315.00
2211	Carriage of Tar bitumen	tonne	0.18	103.77	18.68
2342	Carriage of solvent/ Diesel.	quintal	0.126	10.38	1.31
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @1.80cum. per 100 sqm.	cum	2.25	1200.00	2700.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @0.90cum. per 100 sqm	cum	1.12	1200.00	1344.00
2202	Carriage of Stone aggregate below 40 mm nominal size 2.25+1.12=3.37 cum Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	cum	3.37	103.77	349.70
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	118.59	4.27
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen:				
0114	Beldar	day	0.71	368.00	261.28
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	6.25	368.00	2300.00
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.15	800.00	120.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				14603.93
	Add 1 % Water charges				146.04
	TOTAL				14749.97
	Add 15 % Contractor's profit and overheads				2212.50
	Cost for 100 sqm.				16962.47
	Cost per Sqm.				169.62
	Say				169.60

16.33.2 With paving Asphalt grade VG - 30 with no solvent

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. Paving Asphalt 60/70 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size (ii) Hot bitumen @56kg. per cum. of stone aggregate@1.12cum. of 11.2mm nominal size size Bitumen :52x2.25+50xl. 12= 180kg MATERIAL				
7309	Paving Asphalt VG-30 of approved quality	tonne	0.18	30516.00	5492.88
2211	Carriage of Tar bitumen	tonne	0.18	103.77	18.68
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @2.25cum. per 100sqm	cum	2.25	1200.00	2700.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @1.12cum. per 100sqm	cum	1.12	1200.00	1344.00
2202	Carriage of Stone aggregate below 40 mm nominal size 2.25+1.12=3.37 cum.	cum	3.37	103.77	349.70
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	118.59	4.27
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen:				
0114	Beldar	day	0.71	368.00	261.28
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar 1.05x0.18)/0.267 = 0.71 Nos.	day	6.25	368.00	2300.00
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.15	800.00	120.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				14452.50
	Add 1 % Water charges				144.53
	TOTAL				14597.03
	Add 15 % Contractor's profit and overheads				2189.55
	Cost for 100 sqm.				16786.58
	Cost per Sqm.				167.86
	Say				167.85

16.33.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. MATERIAL Paving Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of aggregate @1.12cum. of 11.2mm nominal size. 52x2.25+56x1.12=180kg Modified Bitumen Refinery produced CRMB - 55	tonne	0.18	33548.00	6038.64
7739	Solvent 0.07x180=12.60kg				
2914	Solvent	kilogram	12.6	25.00	315.00
2211	Carriage of Tar bitumen	tonne	0.18	103.77	18.68
2342	Carriage of solvent/ Diesel.	quintal	0.126	10.38	1.31
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size @2.25 cum. per 100sqm	cum	2.25	1200.00	2700.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @1.12 cum. per 100sqm	cum	1.12	1200.00	1344.00
2202	Carriage of Stone aggregate below 40 mm nominal size 2.25+1.12=3.37 cum.+ Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	cum	3.37	103.77	349.70
0370	Coal (steam)	quintal	0.36	400.00	144.00
2200	Carriage of steam coal	tonne	0.036	118.59	4.27
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.08	407.00	32.56
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen:				
0114	Beldar	day	0.71	368.00	261.28
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	6.25	368.00	2300.00
	(d) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.15	800.00	120.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.11	20.00	2.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0365	Soft brush	each	0.32	18.00	5.76
9999	Brooms and gunny bags	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				15314.57
	Add 1 % Water charges				153.15
	TOTAL				15467.72
	Add 15 % Contractor's profit and overheads				2320.16
	Cost for 100 sqm.				17787.88
	Cost per Sqm.				177.87
	Say				177.85

16.34 2 cm premix carpet surfacing with 2.4 cum of stone chippings 11.2 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen content) complying with IS : 8887, using 96 kg per cum of chippings, including consolidation with road roller of 6 to 9 tonne capacity etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm.				
	MATERIAL				
	Bitumen emulsion M.S. @ 96kg per cum. of aggregate				
	96x2.4=230kg =0.230t				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887-1995	tonne	0.23	25654.00	5900.42
2211	Carriage of Tar bitumen	tonne	0.23	103.77	23.87
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	2.40	1200.00	2880.00
	@ 2.4cum. per 100 sqm				
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	2.40	103.77	249.04
	LABOUR				
	(a) For mixing and spreading premix aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	3.54	368.00	1302.72
	(b) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.04	3500.00	140.00
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				10991.13
	Add 1 % Water charges				109.91
	TOTAL				11101.04
	Add 15 % Contractor's profit and overheads				1665.16
	Cost for 100 sqm.				12766.20
	Cost per Sqm.				127.66
	Say				127.65

16.35 2.5 cm premix carpet surfacing with 3 cum of stone chippings 10 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen contents) complying with IS : 8887, using 96 kg per cum of chippings of road surface, including consolidation with road roller etc complete .

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm. MATERIAL				
	Bitumen emulsion M.S. @ 96kg per cum. of aggregate 96x3 = 288 kg = 0.288 t				
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887-1995	tonne	0.288	25654.00	7388.35
2211	Carriage of Tar bitumen	tonne	0.288	103.77	29.89
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size @ 3.00 cum. per 100 sqm	cum	3.00	1200.00	3600.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	3.00	103.77	311.31
	LABOUR				
	(a) For mixing and spreading premix aggregate :				
0130	Mistry	day	0.19	487.00	92.53
0114	Beldar	day	4.10	368.00	1508.80
	(b) Consolidation Charges				
0113	Chowkidar	day	0.27	368.00	99.36
0101	Bhisti	day	0.11	407.00	44.77
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.11	2200.00	242.00
9999	Sundries	L.S.	9.49	1.73	16.42
	TOTAL				13333.43
	Add 1 % Water charges				133.33
	TOTAL				13466.76
	Add 15 % Contractor's profit and overheads				2020.01
	Cost for 100 sqm.				15486.77
	Cost per Sqm.				154.86
	Say				154.85

16.36 Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/ tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy :

16.36.1 For 50mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10 sqm. With paving asphalt grade VG - 10 @ 50 kg/ 10 sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 370 sqm. MATERIAL				
	Taking stone aggregate 40mm = 45%				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	20mm = 44%				
	11.2mm = 8%				
	Stone dust = 3%				
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	9.99	1250.00	12487.50
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	9.77	1300.00	12701.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	1.78	1300.00	2314.00
1159	Stone dust	cum	0.6	865.00	519.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	2.33	1300.00	3029.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	2.66	1300.00	3458.00
1159	Stone dust	cum	0.56	865.00	484.40
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	9.99	112.79	1126.79
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	12.1	103.77	1255.60
	i.e. 20mm				
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	4.44	103.77	460.73
2267	Carriage of Stone dust	cum	1.16	103.77	120.37
2916	Paving Asphalt VG -10 of approved quality @ 50kg/10 sqm.	tonne	1.85	29600.00	54760.00
2211	Carriage of Tar bitumen	tonne	1.85	103.77	191.97
	(B) Labour:				
0114	Beldar	day	16.67	368.00	6134.56
	for spreading stone metal				
0114	Beldar	day	5.33	368.00	1961.44
	for hand packing				
0114	Beldar	day	2.67	368.00	982.56
	dry rolling				
0114	Beldar	day	1.33	368.00	489.44
	Bajri spreader				
0138	Sprayer (for bitumen, tar etc.)	day	0.67	407.00	272.69
0114	Beldar	day	1.33	368.00	489.44
	for spreading key aggregate				
0114	Beldar	day	6.67	368.00	2454.56
	for spraying bitumen				
0114	Beldar	day	0.67	368.00	246.56
	of power roller				
0128	Mate	day	1.77	407.00	720.39
	(C) Machinery :				
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.45	800.00	360.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.61	2200.00	1342.00
9999	Misc. items as spray nozzle, joint paper, coconut oil, country soap etc.	L.S.	351	1.73	607.23
	TOTAL				108969.23
	Add 1 % Water charges				1089.69
	TOTAL				110058.92
	Add 15 % Contractor's profit and overheads				16508.84
	Cost for 370 Sqm.				126567.76
	Cost per sqm.				342.07
	Say				342.05

16.36.2 For 75 mm compacted thickness in two layers using stone aggregate of size 63-41 mm graded @ 0.90 cum per 10 sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm. With paving asphalt grade VG - 10 @ 68 kg/10 sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 300 sqm. MATERIAL Taking output as 300 sqm. for single layer. Coarse agg. = $300/10 \times 0.90 = 27$ cum. Key agg = $300/10 \times 0.18 = 5.4$ cum. Bitumen = $300/10 \times 68 = 2.04$ t.				
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	8.10	112.79	913.62
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	8.10	1150.00	9315.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	14.58	1300.00	18954.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	4.32	1300.00	5616.00
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	2.05	1250.00	2562.50
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	2.57	1300.00	3341.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.81	1300.00	1053.00
2916	Paving Asphalt VG -10 of approved quality	tonne	2.04	29600.00	60384.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	24.33	103.77	2524.69
2211	Carriage of Tar bitumen	tonne	2.04	103.77	211.69
	LABOUR				
0114	Beldar for spreading stone metal	day	25.00	368.00	9200.00
0114	Beldar for hand packing	day	8.00	368.00	2944.00
0114	Beldar dry rolling	day	4.00	368.00	1472.00
0114	Beldar /Bajri spreader	day	2.00	368.00	736.00
0138	Sprayer (for bitumen, tar etc.)	day	1.00	407.00	407.00
0114	Beldar for spreading key aggregate	day	2.00	368.00	736.00
0114	Beldar for spraying bitumen	day	10.00	368.00	3680.00
0114	Beldar road roller	day	1.00	368.00	368.00
0128	Mate	day	2.65	407.00	1078.55
	MACHINERY				
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.50	800.00	400.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.75	2200.00	1650.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Misc. items as spray nozzle, joint paper, coconut oil, country soap etc.	L.S.	429	1.73	742.17
	TOTAL				128289.22
	Add 1 % Water charges				1282.89
	TOTAL				129572.11
	Add 15 % Contractor's profit and overheads				19435.82
	Cost for 300 Sqm.				149007.93
	Cost per sqm.				496.69
	Say				496.70

16.37 Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4 mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification).

16.37.1 25 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for surface area of 17.40 sqm for single layer of 25 mm finished thickness. MATERIAL Taking wearing coat as 1 tonne and density as 2.3 gm/c.c Volume of bitumen mastic = $1000/2300 = 0.435$ cum surface area = $0.435/0.025 = 17.4$ sqm. (i) Bitumen of penetration 85/25 @ 10.2% by weight of mix				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.102	34561.00	3525.22
2211	Carriage of Tar bitumen	tonne	0.102	103.77	10.58
	(ii) Weight of coarse aggregate @ 40% $(1000 - 150) \times 40/100 = 340$ kg. Stone aggregate : $340/43.38 \times 0.0283 = 0.222$ cum.				
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.02	1300.00	26.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	0.202	1300.00	262.60
	(iii) Weight of fine aggregate @ 15% $850 \times 15/100 = 127.5$ kg., volume of fine aggregate: $127.5/43.103 \times 0.0283 = 0.083$ cum				
1159	Stone dust	cum	0.083	865.00	71.80
	(iv) Weight of lime stone dust @ 45% ($850 - 340 - 127.5$) = 382.50 kg., Volume of lime stone dust $382.50/2200 = 0.174$ cum.				
0784	Marble dust/ powder	cum	0.174	1000.00	174.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0297	(v) Precoated stone chipping for surface finish: Volume of chips @ 0.005 cum/10 sqm=17.4x0.005/10 = 0.0087 cum say 0.009 cum Stone Aggregate (Single size) : 10 mm nominal size	cum	0.009	1300.00	11.70
0313	Bitumen for precoated stone chipping @ 2% =0.009x1600x2/100= 0.288 say 0.30 kg. Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.0003	34561.00	10.37
2211	Carriage of Tar bitumen	tonne	0.0003	103.77	0.03
2202	Carriage of Stone aggregate below 40 mm nominal size (0.222 + 0.009) =0.231 cum.	cum	0.231	103.77	23.97
2267	Carriage of Stone dust	cum	0.083	103.77	8.61
2208	Carriage of Lime	cum	0.174	103.77	18.06
	LABOUR				
0139	Skilled Beldar (for floor rubbing etc.)	day	1.50	407.00	610.50
0130	Mistry	day	0.50	487.00	243.50
0138	Sprayer (for bitumen, tar etc.)	day	3.50	407.00	1424.50
0139	Skilled Beldar (for floor rubbing etc.)	day	0.25	407.00	101.75
0128	Mate	day	0.50	407.00	203.50
0016	Mastic Cooker	day	0.50	750.00	375.00
9999	sundries (Sealing of joints, placing angles, wastage materials)	L.S.	153.27	1.73	265.16
	Total				7366.85
	Add 1 % Water charges				73.67
	Total				7440.52
	Add 15 % Contractor's profit and overheads				1116.08
	Cost for 17.40 sqm				8556.60
	Cost per sqm				491.75
	Say				491.75

16.37.2 40 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for surface area of 10.875sqm for single layer of 25 mm finished thickness. MATERIAL Taking wearing coat as 1 tonne and density as 2.3 gm/c.c Volume of bitumen mastic = 1000/2300= 0.435 cum surface area = 0.435/0.040 = 10.875 sqm.				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.102	34561.00	3525.22
2211	Carriage of Tar bitumen	tonne	0.102	103.77	10.58
	(ii) Weight of coarse aggregate @ 40% (1000 - 150) x 40/100 = 340 kg. Stone aggregate : 340/43.38x0.0283 = 0.222 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.02	1300.00	26.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	0.202	1300.00	262.60
	(iii) Weight of fine aggregate @ 15% 850 x15/100 = 127.5 kg., volume of fine aggregate: 127.5/43.103x0.0283 =0.083 cum				
1159	Stone dust	cum	0.083	865.00	71.80
	(iv) Weight of lime stone dust @ 45% (850-340-127.5) = 382.50 kg., Volume of lime stone dust 382.50/2200 =0.174 cum.				
0784	Marble dust/ powder	cum	0.174	1000.00	174.00
	(v) Precoated stone chipping for surface finish: Volume of chips @ 0.005 cum/10 sqm=17.4x0.005/10 = 0.0087 cum say 0.009 cum				
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.009	1300.00	11.70
	Bitumen for precoated stone chipping @ 2% =0.009x1600x2/100= 0.288 say 0.30 kg.				
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	0.0003	34561.00	10.37
2211	Carriage of Tar bitumen	tonne	0.0003	103.77	0.03
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.231	103.77	23.97
	(0.222 + 0.009) =0.231 cum				
2267	Carriage of Stone dust	cum	0.083	103.77	8.61
2208	Carriage of Lime	cum	0.174	103.77	18.06
	for mastic cooker (Taking capacity of cooker as one tonne)				
	LABOUR				
0139	Skilled Beldar (for floor rubbing etc.)	day	1.50	407.00	610.50
0130	Mistry	day	0.50	487.00	243.50
0138	Sprayer (for bitumen, tar etc.)	day	3.50	407.00	1424.50
0139	Skilled Beldar (for floor rubbing etc.)	day	0.25	407.00	101.75
0128	Mate	day	0.50	407.00	203.50
0016	Mastic Cooker	day	0.50	750.00	375.00
9999	sundries (Sealing of joints, placing angles, wastage materials)	L.S.	153.27	1.73	265.16
	Total				7366.85
	Add 1 % Water charges				73.67
	Total				7440.52
	Add 15 % Contractor's profit and overheads				1116.08
	Cost for 10.875 sqm				8556.60
	Cost per sqm				786.81
	Say				786.80

16.38 2.5 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand @ 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum of sand over a tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :

16.38.1 With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm. 80/100 bitumen @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x1.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg = 0.211t MATERIAL				
2916	Paving Asphalt VG -10 of approved quality Solvent 0.070 kg. x 303 kg. = 21.21kg	tonne	0.303	29600.00	8968.80
2914	Solvent	kilogram	21.21	25.00	530.25
2211	Carriage of Tar bitumen	tonne	0.303	103.77	31.44
2342	Carriage of solvent/ Diesel.	quintal	0.212	10.38	2.20
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.99	1200.00	1188.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.66	1200.00	792.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.65	103.77	171.22
0370	Coal (steam)	quintal	0.606	400.00	242.40
2200	Carriage of steam coal	tonne	0.0606	118.59	7.19
0982	Coarse sand (zone III)	cum	1.65	1200.00	1980.00
2203	Carriage of Coarse sand	cum	1.65	103.77	171.22
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.16	407.00	65.12
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen :				
0114	Beldar	day	1.19	368.00	437.92
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.24	487.00	116.88
0114	Beldar	day	6.12	368.00	2252.16
	(d) Consolidation charges :				
0113	Chowkidar	day	0.34	368.00	125.12
	(at barriers for night watch and for road roller)				
0101	Bhisti	day	0.13	407.00	52.91
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.13	2200.00	286.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.21	800.00	168.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.05	3500.00	175.00
	(e) Misc :				
	Wire brush (with thick wire)				
0364	Wire brush	each	0.13	20.00	2.60
0365	Soft brush	each	0.40	18.00	7.20
9999	Brooms and gunny bags	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.97	1.73	15.52
	TOTAL				18831.92
	Add 1 % Water charges				188.32
	TOTAL				19020.24
	Add 15 % Contractor's profit and overheads				2853.04
	Cost for 100 sqm.				21873.28
	Cost per sqm.				218.73
	Say				218.75

16.38.2 With paving Asphalt grade VG - 30

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm. 60/70 bitumen @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x1.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg = 0.211t Total= 0.303t MATERIAL				
7309	Paving Asphalt VG-30 of approved quality	tonne	0.303	30516.00	9246.35
2211	Carriage of Tar bitumen	tonne	0.303	103.77	31.44
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.99	1200.00	1188.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.66	1200.00	792.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.65	103.77	171.22
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.303=0.606q				
0370	Coal (steam)	quintal	0.606	400.00	242.40
2200	Carriage of steam coal	tonne	0.0606	118.59	7.19
0982	Coarse sand (zone III)	cum	1.65	1200.00	1980.00
2203	Carriage of Coarse sand	cum	1.65	103.77	171.22
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.16	407.00	65.12
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen :				
0114	Beldar	day	1.19	368.00	437.92
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.24	487.00	116.88
0114	Beldar	day	6.12	368.00	2252.16
	(d) Consolidation charges :				
0113	Chowkidar	day	0.34	368.00	125.12
	(at barriers for night watch and for road roller)				
0101	Bhisti	day	0.13	407.00	52.91
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.13	2200.00	286.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.21	800.00	168.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.05	3500.00	175.00
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.13	20.00	2.60
0365	Soft brush	each	0.40	18.00	7.20
9999	Brooms and gunny bags	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.97	1.73	15.52
	TOTAL				18577.02
	Add 1 % Water charges				185.77
	TOTAL				18762.79
	Add 15 % Contractor's profit and overheads				2814.42
	Cost for 100 sqm.				21577.21
	Cost per sqm.				215.77
	Say				215.75

16.38.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7739	Details of cost for 100sqm. MATERIAL Modified Bitumen Refinery produced CRMB - 55 @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x1.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg = 0.211t Total = 0.303 t	tonne	0.303	33548.00	10165.04
2914	Solvent 0.070 kg. x 303 kg. = 21.21kg	kilogram	21.21	25.00	530.25
2211	Carriage of Tar bitumen	tonne	0.303	103.77	31.44
2342	Carriage of solvent/ Diesel.	quintal	0.212	10.38	2.20
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	0.99	1200.00	1188.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	0.66	1200.00	792.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	1.65	103.77	171.22
0370	Coal (steam)	quintal	0.606	400.00	242.40
2200	Carriage of steam coal	tonne	0.0606	118.59	7.19
0982	Coarse sand (zone III)	cum	1.65	1200.00	1980.00
2203	Carriage of Coarse sand	cum	1.65	103.77	171.22
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.16	407.00	65.12
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen :				
0114	Beldar	day	1.19	368.00	437.92
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.24	487.00	116.88
0114	Beldar	day	6.12	368.00	2252.16
	(d) Consolidation charges :				
0113	Chowkidar	day	0.34	368.00	125.12
0101	Bhisti	day	0.13	407.00	52.91
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.13	2200.00	286.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.21	800.00	168.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.05	3500.00	175.00
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.13	20.00	2.60
0365	Soft brush	each	0.40	18.00	7.20
9999	Brooms and gunny bags	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	8.97	1.73	15.52
	TOTAL				20028.16
	Add 1 % Water charges				200.28
	TOTAL				20228.44
	Add 15 % Contractor's profit and overheads				3034.27
	Cost for 100 sqm.				23262.71
	Cost per sqm.				232.62
	Say				232.60

16.39 4 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 2.60 cum per 100 sqm and coarse sand @ 2.60 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum of sand over a tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :

16.39.1 With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm. MATERIAL				
2916	Paving Asphalt VG -10 of approved quality @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t Total = 0.479 t	tonne	0.479	29600.00	14178.40
2914	Solvent 0.70kg.x479=33.53kg	kilogram	33.53	25.00	838.25
2342	Carriage of solvent/ Diesel.	quintal	0.335	10.38	3.48
2211	Carriage of Tar bitumen	tonne	0.479	103.77	49.71
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.56	1200.00	1872.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.04	1200.00	1248.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	2.60	103.77	269.80
0982	Coarse sand (zone III)	cum	2.60	1200.00	3120.00
2203	Carriage of Coarse sand	cum	2.60	103.77	269.80
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.479=0.958q				
0370	Coal (steam)	quintal	0.958	400.00	383.20
2200	Carriage of steam coal	tonne	0.0958	118.59	11.36
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.16	407.00	65.12
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen :				
0114	Beldar	day	1.88	368.00	691.84
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.31	487.00	150.97
0114	Beldar	day	9.46	368.00	3481.28
	(d) Consolidation charges :				
0113	Chowkidar	day	0.45	368.00	165.60
0101	Bhisti	day	0.18	407.00	73.26
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.18	2200.00	396.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.30	800.00	240.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.03	3500.00	105.00
	(e) Misc :				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0364	Wire brush (with thick wire)	each	0.09	20.00	1.80
0365	Soft brush	each	0.27	18.00	4.86
9999	Brooms and gunny bags	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	16.12	1.73	27.89
	TOTAL				28687.24
	Add 1 % Water charges				286.87
	TOTAL				28974.11
	Add 15 % Contractor's profit and overheads				4346.12
	Cost for 100 sqm.				33320.23
	Cost per sqm.				333.20
	Say				333.20

16.39.2 With paving asphalt grade VG - 30 with no solvent

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7309	Details of cost for 100sqm. MATERIAL Paving Asphalt VG-30 of approved quality @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t Total = 0.479 t	tonne	0.479	30516.00	14617.16
2211	Carriage of Tar bitumen	tonne	0.479	103.77	49.71
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.56	1200.00	1872.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.04	1200.00	1248.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	2.60	103.77	269.80
0982	Coarse sand (zone III)	cum	2.60	1200.00	3120.00
2203	Carriage of Coarse sand	cum	2.60	103.77	269.80
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen =2x0.479=0.958 qtl				
0370	Coal (steam)	quintal	0.958	400.00	383.20
2200	Carriage of steam coal	tonne	0.0958	118.59	11.36
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.16	407.00	65.12
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen :				
0114	Beldar	day	1.88	368.00	691.84
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.31	487.00	150.97
0114	Beldar	day	9.46	368.00	3481.28
	(d) Consolidation charges :				
0113	Chowkidar	day	0.45	368.00	165.60
0101	Bhisti	day	0.18	407.00	73.26

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.18	2200.00	396.00
0001	Hire charges of Coal tar Boiler 900 to 1400 litres	day	0.30	800.00	240.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart (e) Brushes etc. for cleaning :-	day	0.03	3500.00	105.00
0364	Wire brush (with thick wire)	each	0.09	20.00	1.80
0365	Soft brush	each	0.27	18.00	4.86
9999	Brooms and gunny bags	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	16.12	1.73	27.89
	TOTAL				28284.27
	Add 1 % Water charges				282.84
	TOTAL				28567.11
	Add 15 % Contractor's profit and overheads				4285.07
	Cost for 100 sqm.				32852.18
	Cost per sqm.				328.52
	Say				328.50

16.39.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7739	Details of cost for 100sqm. MATERIAL Modified Bitumen Refinery produced CRMB - 55 @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t Total = 0.479 tonne	tonne	0.479	33548.00	16069.49
2914	Solvent 0.70kg.x479=33.53kg.	kilogram	33.53	25.00	838.25
2342	Carriage of solvent/ Diesel.	quintal	0.335	10.38	3.48
2211	Carriage of Tar bitumen	tonne	0.479	103.77	49.71
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1.56	1200.00	1872.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1.04	1200.00	1248.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	2.60	103.77	269.80
0982	Coarse sand (zone III)	cum	2.60	1200.00	3120.00
2203	Carriage of Coarse sand	cum	2.60	103.77	269.80
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.479=0.958q				
0370	Coal (steam)	quintal	0.958	400.00	383.20
2200	Carriage of steam coal	tonne	0.0958	118.59	11.36
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate : (a) For cleaning :				
0128	Mate	day	0.16	407.00	65.12
0114	Beldar	day	1.40	368.00	515.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	1.40	368.00	515.20
	(b) For heating bitumen :				
0114	Beldar	day	1.88	368.00	691.84
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	day	0.31	487.00	150.97
0114	Beldar	day	9.46	368.00	3481.28
	(d) Consolidation charges :				
0113	Chowkidar	day	0.45	368.00	165.60
0101	Bhisti	day	0.18	407.00	73.26
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.18	2200.00	396.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.30	800.00	240.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.03	3500.00	105.00
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.09	20.00	1.80
0365	Soft brush	each	0.27	18.00	4.86
9999	Brooms and gunny bags	L.S.	5.33	1.73	9.22
9999	Sundries	L.S.	16.12	1.73	27.89
	TOTAL				30578.33
	Add 1 % Water charges				305.78
	TOTAL				30884.11
	Add 15 % Contractor's profit and overheads				4632.62
	Cost for 100 sqm.				35516.73
	Cost per sqm.				355.16
	Say				355.15

16.40 Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG - 10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface, including rolling and finishing with road roller all complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm.				
	MATERIAL				
2916	Paving Asphalt VG -10 of approved quality @ 128kg/cum. of sand 128x0.60 = 76.80kg. = 0.0768 m.t	tonne	0.0768	29600.00	2273.28
2211	Carriage of Tar bitumen	tonne	0.0768	103.77	7.97
0982	Coarse sand (zone III)	cum	0.60	1200.00	720.00
2203	Carriage of Coarse sand	cum	0.60	103.77	62.26
	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.768=0.1.536 qtl				
0370	Coal (steam)	quintal	1.536	400.00	614.40
2200	Carriage of steam coal	tonne	0.1536	118.59	18.22
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning :				
0128	Mate	day	0.06	407.00	24.42
0114	Beldar	day	0.49	368.00	180.32

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.97	368.00	356.96
	(b) For heating bitumen :				
0114	Beldar	day	0.30	368.00	110.40
	0.38/96x76.8				
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0114	Beldar	day	1.11	368.00	408.48
	11.39/0.75x0.60				
0130	Mistry	day	0.05	487.00	24.35
	0.06/0.75x0.60				
	(d) Miscellaneous :				
0113	Chowkidar	day	0.15	368.00	55.20
0101	Bhisti	day	0.06	407.00	24.42
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	2200.00	132.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.05	800.00	40.00
0023	Hot Bitumen mixer 0.5 cum i/c hand cart	day	0.01	3500.00	35.00
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Sundries	L.S.	18.20	1.73	31.49
	TOTAL				5122.33
	Add 1 % Water charges				51.22
	TOTAL				5173.55
	Add 15 % Contractor's profit and overheads				776.03
	Cost for 100 sqm.				5949.58
	Cost per sqm.				59.49
	Say				59.50

16.41 Providing and laying seal coat over prepared surface of road with bitumen heated in bitumen boiler fitted with the spray set spraying using 98 kg of bitumen of grade VG - 10 and blinding surface with 0.90 cum of stone aggregate of 6.7 mm size (Passing 11.2 mm sieve and retained on 2.36 mm sieve) per 100 sqm of road surface, including rolling and finishing with power road roller all complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100sqm.				
	MATERIAL				
2916	Paving Asphalt VG -10 of approved quality	tonne	0.098	29600.00	2900.80
2211	Carriage of Tar bitumen	tonne	0.098	103.77	10.17
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	0.90	1300.00	1170.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.90	103.77	93.39
	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen =2x0.098=1.96 qtl				
0370	Coal (steam)	quintal	1.96	400.00	784.00
2200	Carriage of steam coal	tonne	0.196	118.59	23.24
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For heating and spraying bitumen :				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry	day	0.04	487.00	19.48
0138	Sprayer (for bitumen, tar etc.)	day	0.06	407.00	24.42
0114	Beldar	day	0.69	368.00	253.92
	(b) For cleaning :				
0128	Mate	day	0.11	407.00	44.77
0114	Beldar	day	1.40	368.00	515.20
0115	Coolie	day	1.40	368.00	515.20
	(c) For screening and spraying aggregate :				
0128	Mate	day	0.05	407.00	20.35
0114	Beldar	day	0.51	368.00	187.68
	(d) Misc :				
0113	Chowkidar	day	0.15	368.00	55.20
0101	Bhisti	day	0.06	407.00	24.42
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.06	2200.00	132.00
0007	Hire charges of Coaltar Sprayer	day	0.06	250.00	15.00
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	0.06	800.00	48.00
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.05	20.00	1.00
0365	Soft brush	each	0.12	18.00	2.16
9999	Sundries	L.S.	18.20	1.73	31.49
9999	Brooms and gunny bags	L.S.	2.73	1.73	4.72
	TOTAL				6876.61
	Add 1 % Water charges				68.77
	TOTAL				6945.38
	Add 15 % Contractor's profit and overheads				1041.81
	Cost for 100 sqm.				7987.19
	Cost per sqm.				79.87
	Say				79.85

16.42 Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 cum.				
	MATERIAL				
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.52	1250.00	650.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.22	1300.00	286.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.11	1300.00	143.00
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	0.52	112.79	58.65
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.33	103.77	34.24
0982	Coarse sand (zone III)	cum	0.445	1200.00	534.00
2203	Carriage of Coarse sand	cum	0.445	103.77	46.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0367	Portland Cement (OPC-43 grade)	tonne	0.32	5700.00	1824.00
2209	Carriage of Cement	tonne	0.32	92.24	29.52
	LABOUR				
0155	Mason (average)	day	0.10	467.00	46.70
0114	Beldar	day	1.63	368.00	599.84
0101	Bhisti	day	0.70	407.00	284.90
	MACHINERY				
0002	Hire charges of Concrete Mixer 0.25 to 0.40 cum with hooper	day	0.077	800.00	61.60
0012	Vibrator (Needle type 40 mm)	day	0.07	350.00	24.50
9999	Sundries	L.S.	26.00	1.73	44.98
	Side shuttering				
	Taking the slab to be 5cm thick and width to be 6 metre, length of road 27 metre = $9.90/24.30 = 0.407$ sqm				
5.9.1	Rate as per item no 5.9.1 of SH : Reinforced cement concrete work	sqm	0.407	193.95	78.94
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				4749.52
	Add 1 % Water charges on all except (A) i.e. on (4749.52 - 78.94) = 4670.58				46.71
	TOTAL				4796.23
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4796.23 - 78.94) = 4717.29				707.59
	Cost for 1 cum.				5503.82
	Say				5503.80

16.43 Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately).

Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.

16.43.1 Cement concrete prepared with batch mixing machine

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum.				
	MATERIAL				
0367	Portland Cement (OPC-43 grade)	tonne	0.34	5700.00	1938.00
2209	Carriage of Cement	tonne	0.34	92.24	31.36

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.52	1250.00	650.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.22	1300.00	286.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.11	1300.00	143.00
0982	Coarse sand (zone III)	cum	0.445	1200.00	534.00
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	0.52	112.79	58.65
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.33	103.77	34.24
2203	Carriage of Coarse sand	cum	0.445	103.77	46.18
	LABOUR :- FOR MIXING AND LAYING				
0114	Beldar	day	2.00	368.00	736.00
0101	Bhisti	day	0.27	407.00	109.89
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0128	Mate	day	0.04	407.00	16.28
	For compaction by vibrator				
0155	Mason (average)	day	0.07	467.00	32.69
0114	Beldar	day	0.07	368.00	25.76
	MACHINERY				
0004	Production cost of concrete by batch mix plant. (Assuming 25 cum. per day)	cum	1.00	400.00	400.00
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	1.00	200.00	200.00
0021	Pin vibrator (SHP) with 50 cum. output per day	day	0.025	250.00	6.25
0022	Surface Vibrator with 25 cum. output per day	day	0.05	250.00	12.50
16.43B	Add for steel form work Rate as per Item Number 16.43B of SH: Road work	cum	1.00	540.75	540.75
9999	Cutting and making joints	L.S.	50.00	1.73	86.50
	TOTAL				5934.80
	Add 1 % Water charges				59.35
	TOTAL				5994.15
	Add 15 % Contractor's profit and overheads				899.12
	Cost per cum.				6893.27
	Say				6893.25

16.43.2 Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum. MATERIAL				
0367	Portland Cement (OPC-43 grade)	tonne	0.34	5700.00	1938.00
2209	Carriage of Cement	tonne	0.34	92.24	31.36
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	0.52	1250.00	650.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.22	1300.00	286.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.11	1300.00	143.00
0982	Coarse sand (zone III)	cum	0.445	1200.00	534.00
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	0.52	112.79	58.65
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.33	103.77	34.24
2203	Carriage of Coarse sand	cum	0.445	103.77	46.18
	LABOUR :- FOR MIXING AND LAYING				
0114	Beldar	day	2.00	368.00	736.00
0101	Bhisti	day	0.27	407.00	109.89
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0128	Mate	day	0.04	407.00	16.28
	For compaction by vibrator				
0155	Mason (average)	day	0.07	467.00	32.69
0114	Beldar	day	0.07	368.00	25.76
	MACHINERY				
0004	Production cost of concrete by batch mix plant. (Assuming 25 cum. per day)	cum	1.00	400.00	400.00
0029	Carriage of concrete by transit mixer.	km/ cum	10.00	23.00	230.00
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	1.00	200.00	200.00
0021	Pin vibrator (SHP) with 50 cum. output per day	day	0.025	250.00	6.25
0022	Surface Vibrator with 25 cum. output per day	day	0.05	250.00	12.50
16.43B	Add for steel form work Rate as per Item Number 16.43B of SH: Road work	cum	1.00	540.75	540.75
9999	Cutting and making joints	L.S.	50.00	1.73	86.50
	TOTAL				6164.80
	Add 1 % Water charges				61.65
	TOTAL				6226.45
	Add 15 % Contractor's profit and overheads				933.97
	Cost per cum.				7160.42
	Say				7160.40

16.43A Annexure 'A' to Item number 16.43

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 8.5 cum. MATERIAL: (i) Painting with primer (i) Construction joint 6.15m. long 30cm deep $6.15 \times (0.30 + 0.01) = 1.91 \text{sqm.} +$				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0316 9977	(ii) Dummy joints 4.61m long and 10cm deep 10mm wide $4.6 \times (0.10+0.10+0.01) = 0.97 \text{ sqm.}$ $= 2.88 \text{ sqm.}$ $2.88\text{sqm.} @0.26 \text{ lit./sqm.} = 0.75 \text{ lit.} +$ Add 5% wastage = 0.03 Total =0.78 lit	litre	0.78	50.00	39.00
	Bitumen solution primer of approved quality	L.S.	0.91	1.73	1.57
	Carriage				
0314 9977	(ii) Joint sealing compound (GradeA) for construction joint 6.15m long 10mm wide 25mm deep. $6.15 \times 2 \times 2.5\text{cm} = 3075\text{cucm}$ For dummy joints $461 \times 1.0 \times 10\text{cm.} = 4610\text{cucm.}$ $= 7685 \text{ cum}$ Add 5% wastage = 384 cucm Total = 8069 cucm Say 8.07 cudm. @1.2kg/cudm = 9.68 kg	kilogram	9.68	28.00	271.04
	Bitumen hot sealing compound : grade A	L.S.	0.91	1.73	1.57
	Carriage				
0370 9977	Coal (steam)	quintal	0.015	400.00	6.00
	Carriage	L.S.	0.91	1.73	1.57
	LABOUR:				
0123	(ii) For applying primer qty. = 2.88 sqm Mason (brick layer) 1st class	day	3.00	487.00	1461.00
0131	Painter	day	0.10	448.00	44.80
	(iii) Labour for heating and filling sealing compound.				
0124	Mason (brick layer) 2nd class	day	0.25	448.00	112.00
	(iv) Beldar for heating = 0.06 +				
0114	Beldar	day	0.68	368.00	250.24
	TOTAL				2188.79
	Cost for 8.5 cum				2188.79
	Cost per cum.				257.50
	Say				257.50

16.43B Annexure 'B' to Item number 16.43

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	ANALYSIS OF ANNEXTURE 'B' 16.43B (Required in 16.43) STEEL FORM WORK : Part-I Cost of materials : Assuming that pavement 30m long 22.5m wide and 0.30m deep having panel size $6.15 \times 4.61 \times 0.30\text{m}$ or 8.50cu. laid in a day of 8 hrs. Hence form work to be provided for 2 days. MATERIAL $22 \times 30.75 = 676.50$ $2 \times 46.10 = 92.20$ Total = 768.70m. $768.70 @ 83.10 \text{ kg/ m} = 25.44 \text{ M.T.}$				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1007	Assuming that channel will become unserviceable after use for 5000 slab (100 times) and salvage value of steel shall fetch 20% of its basic cost.				
2205	Structurals such as tees,angles channels and R.S. joists Carriage of Steel	quintal tonne	0.0407104 0.00407104	3775.00 92.24	153.68 0.38
0103	Part-II Labour for assembling, erection, dismeritelling and cleaning the shuttering. Assuming that 255 labour for steel shuttering shall be required as compared to timber shuttering. Contact area of 50 slabs of steel shuttering. Long channel = 11x20x0.30 = 66.00 = 2x45.10x0.30 = 27.06 Total= 93.06 LABOUR				
0114	Blacksmith 2nd class	day	2.86	448.00	1281.28
0114	Beldar	day	2.86	368.00	1052.48
0114	Carriage of steel for extra lead of runway Beldar	day	5.73	368.00	2108.64
	TOTAL				4596.46
	Cost for 50 slabs / 8.5 cum				4596.46
	Cost per cum.				540.76
	Say				540.75

16.44 Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7254	Details of cost for 1 litre MATERIAL Hardening compound (including cartage)	litre	1.00	40.00	40.00
	TOTAL				40.00
	Add 1 % Water charges				0.40
	TOTAL				40.40
	Add 15 % Contractor's profit and overheads				6.06
	Cost per litre				46.46
	Say				46.45

16.45 Providing and fixing in position pre-moulded joint filler in expansion joints.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0317	Details of cost for 18mm thick 15cm deep and 300m in length MATERIAL Premoulded joint filler 12 mm thick = 300x0.15 = 45 sqm.	sqm	45.00	303.00	13635.00
2211	Carriage of Tar bitumen 45x0.018 =0.81cum. Weight 256.3kg. per cum. = 256.3x0.81 = 207.6kg. say 0.21 tonne	tonne	0.21	103.77	21.79

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0124	Labour for fixing etc. :				
	Mason (brick layer) 2nd class	day	1.00	448.00	448.00
0114	Beldar	day	3.00	368.00	1104.00
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				15255.34
	Add 1 % Water charges				152.55
	TOTAL				15407.89
	Add 15 % Contractor's profit and overheads				2311.18
	Cost for 300m length, 18mm width and 15cm depth				17719.07
	Cost for one cm. depth one cm. width per metre length.				2.18
	Say				2.20

16.46 Providing and laying in position bitumen hot sealing compound for expansion joints etc.

16.46.1 Using grade 'A' sealing compound.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20mm wide 20mm deep and 300 metres in length. Sealing compound- $300 \times 0.02 \times 0.02 = 0.12 \text{ cum.}$ Weight 256.3kg. per cum. = $256.3 \times 0.12 = 30.76 \text{ kg}$ MATERIAL				
0314	Bitumen hot sealing compound : grade A	kilogram	30.76	28.00	861.28
2211	Carriage of Tar bitumen $30.76 = 0.3076 \text{ Say}$ 0.03 tonne	tonne	0.03	103.77	3.11
	Labour for filling :				
0124	Mason (brick layer) 2nd class	day	1.00	448.00	448.00
0114	Beldar	day	2.50	368.00	920.00
9999	Sundries	L.S.	20.67	1.73	35.76
	TOTAL				2268.15
	Add 1 % Water charges				22.68
	TOTAL				2290.83
	Add 15 % Contractor's profit and overheads				343.62
	Cost for 20mm depth, 20mm width and 300m length				2634.45
	Cost for one cm. depth one cm. width per metre length.				2.19
	Say				2.20

16.47 Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge, i/c cleaning the surface of ail dirt, scales, oil, grease and other foreign mater;al etc. and lining out complete.

16.47.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm. MATERIAL				
	1st Coat - 1.66 +				
	2nd Coat -1.13				
	Total = 2.79				
7256	Superior quality road marking paint (water based)	litre	2.79	140.00	390.60
9977	Carriage of paint	L.S.	5.07	1.73	8.77
	LABOUR				
0131	Painter	day	0.54	448.00	241.92
0114	Beldar	day	0.54	368.00	198.72
9999	Sundries	L.S.	36.40	1.73	62.97
	(including painting brush, wire brush, labour for controlling traffic and other T&P etc.)				
	TOTAL				902.98
	Add 1 % Water charges				9.03
	TOTAL				912.01
	Add 15 % Contractor's profit and overheads				136.80
	Cost for 10 sqm.				1048.81
	Cost per sqm.				104.88
	Say				104.90

16.47.2 Old work (One or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm. MATERIAL				
7256	Superior quality road marking paint (water based)	litre	1.66	140.00	232.40
9977	Carriage of paint	L.S.	1.12	1.73	1.94
	LABOUR				
0131	Painter	day	0.36	448.00	161.28
0114	Beldar	day	0.36	368.00	132.48
9999	Sundries	L.S.	24.44	1.73	42.28
	(including painting brush, wire brush, labour for controlling traffic and other T&P etc.)				
	TOTAL				570.38
	Add 1 % Water charges				5.70
	TOTAL				576.08
	Add 15 % Contractor's profit and overheads				86.41
	Cost for 10 sqm.				662.49
	Cost per sqm.				66.24
	Say				66.25

16.48 Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.

16.48.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm.				
	MATERIAL				
7255	Road marking paint (spirit based) (confirming to IS 164 spirit base)	litre	1.48	120.00	177.60
9977	Carriage of paint (1.48/0.8x0.08x6.9)	L.S.	2.65	1.73	4.58
	LABOUR				
0128	Mate	day	0.10	407.00	40.70
0131	Painter	day	0.54	448.00	241.92
0114	Beldar	day	1.68	368.00	618.24
	for stretching of rope & erecting of barricading				
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	36.40	1.73	62.97
	TOTAL				1146.01
	Add 1 % Water charges				11.46
	TOTAL				1157.47
	Add 15 % Contractor's profit and overheads				173.62
	Cost for 10 sqm.				1331.09
	Cost per sqm.				133.10
	Say				133.10

16.48.2 Old work (One or more coats)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10sqm.				
	MATERIAL				
7255	Road marking paint (spirit based) (confirming to IS 164 spirit base)	litre	0.89	120.00	106.80
9977	Carriage of paint.	L.S.	0.65	1.73	1.12
	LABOUR				
0128	Mate	day	0.06	407.00	24.42
0131	Painter	day	0.36	448.00	161.28
0114	Beldar	day	1.12	368.00	412.16
	(stretching of rope & erecting of barricading etc.)				
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	24.44	1.73	42.28
	TOTAL				748.06
	Add 1 % Water charges				7.48
	TOTAL				755.54
	Add 15 % Contractor's profit and overheads				113.33
	Cost for 10 sqm.				868.87
	Cost per sqm.				86.88
	Say				86.90

16.49 Making bell mouth opening/ entrance of size 100x50x50 cm for drainage pipe under footpath, including providing cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) for shape of bell mouth, including plastering providing and fixing precast R.C.C./ S.F.R.C. slab including plastering with cement mortar 1:3 (1 cement : 3 fine sand) of 6 mm thickness on exposed surface of the slab & bell mouth including centring, shuttering & neat cement punning inside the bell mouth etc. all complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.8.1	Details of cost for 10 Nos. (i) Earth work in excavation Channel :- $10 \times 1 \times 1.00 \times 0.20 \times 0.15 = 0.30 +$ Bell mouth :- $10 \times 1 \times 1.00 \times 0.50 \times$ $(0.18 + 0.075) / 2 = 0.64$ Total = 0.94 MATERIAL (Rate as per item no. 2.8.1 of SH: Earth work)	cum	0.94	166.40	156.42(A)
4.1.8	(ii) Cement concrete 1:4:8 Channel :- $10 \times 1 \times 1.00 \times 0.20 \times 0.075 = 0.15$ cum. Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.15	4478.15	671.72(A)
4.1.5	(iii) Cement concrete 1:3:6 Channel $10 \times 1 \times 1.00 \times 0.20 \times 0.75 = 0.15 +$ Bed of bell mouth : $10 \times 1 \times 1.00 \times 0.50 \times (0.18 + 0.075) / 2 = 0.64 +$ Haunches portion $10 \times 2 \times (0.35 + 0.075) / 2 \times 0.25 \times 0.375 = 0.40 +$ Rect part :- $10 \times 2 \times 0.35 \times 0.25 \times 0.375 = 0.65 +$ Quadrant portion :- $10 \times 1 \times [(0.30 \times 0.30) - 3.142 / 4 (0.30)^2] \times 0.30 = 0.06 +$ Central middle part :- $10 \times 1 \times 0.30 \times 0.25 \times 0.075 = 0.05$ Total = 1.95 cum. (Rate as per item no.4.1.5 S.H. : Cement Concrete)	cum	1.95	4927.00	9607.65(A)
5.3	(iv) RCC in shelves $10 \times 1 \times 1.00 \times 0.50 \times 0.05 = 0.25$ cum. Rate as per item no. 5.3 SH : Reinforced cement concrete work	cum	0.25	7390.80	1847.70(A)
5.22.1	(v) Reinforcement for RCC @100kg/cum. $0.25 \times 100 = 25$ kg. Rate as per item no. 5.22.1 SH : Reinforced cement concrete work	kg	25.00	55.30	1382.50(A)
	(vi) Centering and shuttering For shelves (sides) $10 \times 2 (1.00 + 0.50) \times 0.05 = 1.50 +$ Front side of bell mouth : $10 \times 2 (0.446) \times 0.375 = 3.34 +$ Pipe portion: $10 \times [0.30 \times 0.375 - 3.142 / 4 (0.30)^2] = 0.04 +$ Out side of bell mouth Total = $10 \times (1.00 + 0.50) \times 0.45 = 9.00 +$ Deduct pipe opening Total = $10 \times 0.785 \times 0.30 \times 0.30 = (-) 0.71$ Total = 13.17				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.9.1	Rate as per item No.5.9.1 of SH : RCC (vii) cement plaster on RCC slab 10x1.00x0.50 = 5.00 + 10x2(1.00+0.50)x0.05 = 1.50+ Total = 6.50 sqm.	sqm	13.17	193.95	2554.32(A)
5.23	Rate as per item no.13.16.1 (viii) Neat cement punning: Qty. same as marked (x) at (9vi) = Total =3.34+0.04 = 3.38 sqm. Channel portion: 10x1x(0.85+0.30)/2x0.25 = 1.43 Total = 4.81	sqm	6.50	143.80	934.70(A)
13.18	Rate as per item no.13.18 S.H. Finishing	sqm	4.81	42.60	204.91(A)
0367	Portland Cement (OPC-43 grade)	tonne	0.024	5700.00	136.80
2209	Carriage of Cement	tonne	0.024	92.24	2.21
0983	Fine sand (zone IV)	cum	0.05	760.00	38.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.05	103.77	5.19
	LABOUR				
0114	Beldar	day	0.035	368.00	12.88
0101	Bhisti	day	0.003	407.00	1.22
9999	Hire charges of mixer	L.S.	1.27	1.73	2.20
9999	Sundries	L.S.	1.27	1.73	2.20
	Labour for plaster				
0155	Mason (average)	day	0.33	467.00	154.11
0115	Coolie	day	0.488	368.00	179.58
0101	Bhisti	day	0.60	407.00	244.20
9999	Extra for removing burr	L.S.	8.71	1.73	15.07
9999	Scaffolding	L.S.	7.62	1.73	13.18
	TOTAL				18166.76
	Add 1 % Water charges on all except (A) i.e. on (18166.76 - 17359.92) = 806.84				8.07
	TOTAL				18174.83
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (18174.83 - 17359.92) = 814.91				122.24
	Cost for 10 nos.				18297.07
	Cost for one bell mouth				1829.70
	Say				1829.70

16.50 Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by Engineer in charge. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/-5) degress to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface

using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15 Nos.				
	MATERIAL				
7426	Cat's eye	each	15.00	105.00	1575.00
9977	Carriage of cats eyes	L.S.	2.60	1.73	4.50
	LABOUR				
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	39.00	1.73	67.47
	(including material required for fixing cats eyes and providing barricading to divert traffic)				
	TOTAL				2054.97
	Add 1 % Water charges				20.55
	TOTAL				2075.52
	Add 15 % Contractor's profit and overheads				311.33
	Cost for 15 Nos.				2386.85
	Cost for one cat's eye.				159.12
	Say				159.10

16.51 Preparation of sub-base road pavement with commercial dry lime (slaked), fly ash stabilised soil with a mix of 3% lime, 12% fly ash and 85% local suitable soil by weight, so as to achieve minimum field C.B.R. of 20, including mixing, rolling with road roller curing etc. all complete.

16.51.1 Minimum thickness 15 cm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.67 sqm. or 1 cum.				
	MATERIAL				
0777	Dry hydrated lime (factory made)	quintal	0.41	280.00	114.80
2208	Carriage of Lime	cum	0.068	103.77	7.06
1980	Flyash	cum	0.277	8.00	2.22
2267	Carriage of Stone dust	cum	0.277	103.77	28.74
	LABOUR				
	(i) For earth work :				
0114	Beldar	day	0.116	368.00	42.69
0115	Coolie	day	0.116	368.00	42.69
0979	Royalty for good earth	cum	0.655	30.00	19.65
2241	Carriage of Good earth	cum	0.655	129.71	84.96
	(ii) For mixing :				
0114	Beldar	day	0.025	368.00	9.20
0115	Coolie	day	0.025	368.00	9.20
	(iii) For rolling layers :				
0113	Chowkidar	day	0.0008	368.00	0.29
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	0.0008	2200.00	1.76
9999	Sundries	L.S.	0.18	1.73	0.31
	(iv) Labour for spreading and watering :				
0114	Beldar	day	0.26	368.00	95.68
0115	Coolie	day	0.26	368.00	95.68

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.18	407.00	73.26
	TOTAL				628.19
	Add 1 % Water charges				6.28
	TOTAL				634.47
	Add 15 % Contractor's profit and overheads				95.17
	Cost for 1 cum.				729.64
	Say				729.65

16.52 Providing and fixing precast lime fly ash concrete blocks 1:2:3:6 (1 lime: 2 fly ash : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), including finishing with 10mm thick cement mortar 1:3 (1 cement : 3 coarse sand) in foot paths, including preparation of sub grade with a hand rammer, laying 10 mm thick leveling course of fine sand (jamuna sand) and filling the joints with fine sand.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
16.52Y	Details of cost for a path of area 10sqm. no. of blocks required for 10sqm. = 108 nos. (a) Concrete in blocks (108x0.30x0.30x0.09 = 0.875 cum.) Rate as per sub analysis Item Number 16.52Y of SH:Road Work	cum	0.875	2793.95	2444.71
	(b) Labour for surface excavation :				
0114	Beldar	day	0.72	368.00	264.96
0115	Coolie	day	0.60	368.00	220.80
	(c) For levelling course of fine sand				
6501	Sand zone V (Jamuna)	cum	0.10	600.00	60.00
2335	Carriage of Jamuna sand	cum	0.10	103.77	10.38
	LABOUR				
0114	Beldar	day	0.0089	368.00	3.28
0115	Coolie	day	0.0107	368.00	3.94
0101	Bhisti	day	0.0035	407.00	1.42
	(d) For finishing with 10mm thick cement plaster cement plaster with cement mortar 1:3(1 Cement: 3 Coarse sand) qty. for 9.72sqm. = 0.0972 cum Rate as per Item Number 3.8 of SH: Mortars	cum	0.0972	4723.50	459.12
0155	Mason (average)	day	0.787	467.00	367.53
0115	Coolie	day	0.787	368.00	289.62
0101	Bhisti	day	0.262	407.00	106.63
9999	Scaffolding and sundries	L.S.	12.22	1.73	21.14
	(e) For laying blocks and filling joints with Jamuna sand for filling joints 5mm (av.) thick				
6501	Sand zone V (Jamuna)	cum	0.005	600.00	3.00
2335	Carriage of Jamuna sand	cum	0.005	103.77	0.52
0123	Mason (brick layer) 1st class	day	0.90	487.00	438.30
0115	Coolie	day	1.98	368.00	728.64

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.05	407.00	20.35
	TOTAL				5444.34
	Add 1 % Water charges				54.44
	TOTAL				5498.78
	Add 15 % Contractor's profit and overheads				824.82
	Cost for 10sqm. or 0.9cum.				6323.60
	Rate per cum.				7026.22
	Say				7026.20

16.52X Sub Analysis X for sub analysis item Number 16.52Y

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Sub Analysis 16.52X for use in sub analysis of 16.52Y				
	Details of cost for 1cum of lime Flyash mortar 1:2:3 (lime:2 flyash:3 coarse sand).				
	MATERIAL				
0773	Unslaked lime	quintal	1.52	270.00	410.40
1980	Flyash	cum	0.48	8.00	3.84
0982	Coarse sand (zone III)	cum	0.72	1200.00	864.00
2208	Carriage of Lime	cum	0.24	103.77	24.90
2266	Carriage of Surkhi	cum	0.48	103.77	49.81
2203	Carriage of Coarse sand	cum	0.72	103.77	74.71
	LABOUR				
	Labour for slaking the lime making, lime putty, grinding, measuring, carrying, depositing and mixing.				
0114	Beldar	day	0.90	368.00	331.20
0101	Bhisti	day	0.45	407.00	183.15
9999	Running and upkeep of mortar mill	L.S.	26.91	1.73	46.55
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				2011.95
	Cost of 1.00 cum				2011.95
	Say				2011.95

16.52Y Sub Analysis Y for Item Number 16.52

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Sub Analysis 'Y' (16.52Y) for use in Item No. 16.52				
	Details of cost for 1 cum. of cement concrete				
	MATERIAL				
	Lime Flyash mortar				
16.52X	Rate as per sub analysis of Item No 16.52X	cum	0.40	2011.95	804.78(A)
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.64	1300.00	832.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.21	1300.00	273.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.85	103.77	88.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0114	Beldar	day	0.65	368.00	239.20
0115	Coolie	day	0.60	368.00	220.80
0101	Bhisti	day	0.27	407.00	109.89
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0128	Mate	day	0.04	407.00	16.28
9999	Hire and running charges of mixer	L.S.	26.91	1.73	46.55
9999	Sundries	L.S.	13.52	1.73	23.39
9999	Hire charges of steel moulds, table vibrators, rammers, bolts, nuts and washers etc.	L.S.	53.82	1.73	93.11
	TOTAL				2793.95
	Cost of 1.00 cum				2793.95
	Say				2793.95

16.53 Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30.00 m length				
	MATERIAL				
8691	Punched tape concertina coil 600 mm dia 10 m openable length (Total length 90 m) (Having 50 Nos. of rounds per 6 meter = 1 bundles)	bundle	5.00	675.00	3375.00
	Therefore, Nos. of bundles 30/10=3bundles)				
8692	RBT reinforced barbed wire 9 rounds = 9x30 = 270m	metre	270.00	7.00	1890.00
8693	Turn buckle and strengthening bolt	each set	10.00	40.00	400.00
9999	G.I. staples clips etc.	L.S.	49.40	1.73	85.46
	LABOUR				
	Labour for fixing straightening cutting of tape/ coils & wire				
0114	Beldar 0.50x2 = 1.00 Nos (Taken double due to height)	day	1.00	368.00	368.00
0102	Blacksmith 1st class	day	0.50	487.00	243.50
0103	Blacksmith 2nd class	day	0.50	448.00	224.00
	Total				6585.96
	Add 1 % Water charges				65.86
	Total				6651.82
	Add 15 % Contractor's profit and overheads				997.77
	cost for 30.00 metre				7649.59
	cost per metre				254.98
	Say				255.00

16.54 Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.

16.54.1 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (or 450 M.T.) MATERIAL				
7309	Paving Asphalt VG-30 of approved quality (percentage by weight of total mix)	tonne	22.50	30516.00	686610.00
2211	Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 22.50 tonnes Weight of aggregate = 450 -22.50 = 427.50 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =427.50/1.5 =285cum Grading - II/19 mm (Nominal Size) 25 - 10mm size = 30% of 285 = 85.5 cum 10 - 5mm size = 28% of 285 = 79.8 cum 5mm and below = 40% of 285 = 114 cum	tonne	22.50	103.77	2334.80
0294	Stone Aggregate (Single size) : 25 mm nominal size Qty = 85.5 * 50 /100	cum	42.75	1250.00	53437.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.75	1300.00	55575.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 79.8 * 50 /100	cum	39.90	1300.00	51870.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 79.8 * 50 /100	cum	39.90	1300.00	51870.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 * 40 /100	cum	114.00	1150.00	131100.00
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	103.77	28982.60
0777	Dry hydrated lime (factory made)	quintal	85.50	280.00	23940.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V =8.55/1.29 = 6.63 cum V =8.55/1.29 = 6.63 cum	cum	6.63	103.77	687.99
0062	MACHINERY/ HIRE CHARGES: Hot mix Plant -120 TPH capacity	hour	3.00	15000.00	45000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum	tonne km	4500.00	3.00	13500.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
	LABOUR				
0128	Mate	day	0.84	407.00	341.88
0114	Beldar	day	14.00	368.00	5152.00
	working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction				
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1216786.77
	Add 1 % Water charges				12167.87
	Total				1228954.64
	Add 15 % Contractor's profit and overheads				184343.20
	Cost for 195 cum(450 M.T.)				1413297.84
	Cost per cum.				7247.68
	Say				7247.70

16.54.2 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7309	Details of cost for 195 cum (or 450 M.T.) MATERIAL				
	Paving Asphalt VG-30 of approved quality (percentage by weight of total mix)	tonne	22.50	30516.00	686610.00
2211	Carriage of Tar bitumen	tonne	22.50	103.77	2334.80
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 22.50 tonnes				
	Weight of aggregate = 450 -22.50 = 427.50 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =427.50/1.5 =285cum				
	Grading - II/19 mm (Nominal Size)				
	25 - 10mm size = 30% of 285 = 85.5 cum				
	10 - 5mm size = 28% of 285 = 79.8 cum				
	5mm and below = 40% of 285 = 114 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0294	Stone Aggregate (Single size) : 25 mm nominal size Qty = 85.5 * 50 /100	cum	42.75	1250.00	53437.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.75	1300.00	55575.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 79.8 * 50 /100	cum	39.90	1300.00	51870.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 79.8 * 50 /100	cum	39.90	1300.00	51870.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 * 40 /100	cum	114.00	1150.00	131100.00
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	103.77	28982.60
0777	Dry hydrated lime (factory made)	quintal	85.50	280.00	23940.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V =8.55/1.29 = 6.63 cum V =8.55/1.29 = 6.63 cum	cum	6.63	103.77	687.99
0076	MACHINERY/ HIRE CHARGES: Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1198786.77
	Add 1 % Water charges				11987.87
	Total				1210774.64
	Add 15 % Contractor's profit and overheads				181616.20
	Cost for 195 cum(450 M.T.)				1392390.84
	Cost per cum.				7140.46
	Say				7140.45

16.55 Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.

16.55.1 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 205 cum (or 450 M.T.) MATERIAL				
7309	Paving Asphalt VG-30 of approved quality 3.5% of 450 MT = 15.75 MT	tonne	15.75	30516.00	480627.00
2211	Carriage of Tar bitumen Weight of mix = 205 * 2.5 = 450 tonnes Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 15.75 tonnes Weight of aggregate = 450 -15.75 = 434.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =434.25/1.5 =289.50cum	tonne	15.75	103.77	1634.36
0294	Grading - II/19 mm (Nominal Size) 25 - 10mm size = 40% of 289.50 = 115.8 cum 10 - 5mm size = 40% of 289.50 = 115.8 cum 5mm and below = 20% of 289.50 = 57.9 cum Stone Aggregate (Single size) : 25 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1250.00	72375.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1300.00	75270.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1300.00	75270.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1300.00	75270.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 289.50 * 20 /100	cum	57.90	1150.00	66585.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	289.50	103.77	30041.04
0062	MACHINERY Hot mix Plant -120 TPH capacity @75tonne per hour actual output	hour	3.00	15000.00	45000.00
0063	Hot mix Plant 100 TPH Capacity @75tonne per hour actual output	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum	tonne km	4500.00	3.00	13500.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading $X * 10 / 100 = 13500.00 * 10 / 100$				1350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
	LABOUR				
0128	Mate	day	0.84	407.00	341.88
0114	Beldar	day	14.00	368.00	5152.00
	working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction				
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1007451.28
	Add 1 % Water charges				10074.51
	Total				1017525.79
	Add 15 % Contractor's profit and overheads				152628.87
	Cost for 205 cum(450 M.T.)				1170154.66
	Cost per cum.				5708.07
	Say				5708.05

16.55.2 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7309	Details of cost for 205 cum (or 450 M.T.) MATERIAL Paving Asphalt VG-30 of approved quality	tonne	15.75	30516.00	480627.00
2211	3.5% of 450 MT = 15.75 MT Carriage of Tar bitumen	tonne	15.75	103.77	1634.36
	Weight of mix = 205 * 2.5 = 450 tonnes Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 15.75 tonnes Weight of aggregate = 450 - 15.75 = 434.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate = 434.25/1.5 = 289.50cum Grading - II/19 mm (Nominal Size) 25 - 10mm size = 40% of 289.50 = 115.8 cum 10 - 5mm size = 40% of 289.50 = 115.8 cum 5mm and below = 20% of 289.50 = 57.9 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0294	Stone Aggregate (Single size) : 25 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1250.00	72375.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1300.00	75270.00
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1300.00	75270.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 115.8 * 50 /100	cum	57.90	1300.00	75270.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 289.50 * 20 /100	cum	57.90	1150.00	66585.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	289.50	103.77	30041.04
	MACHINERY				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum	tonne km	4500.00	3.00	13500.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
	LABOUR				
0128	Mate	day	0.84	407.00	341.88
0114	Beldar	day	14.00	368.00	5152.00
	working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction				
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				989451.28
	Add 1 % Water charges				9894.51
	Total				999345.79
	Add 15 % Contractor's profit and overheads				149901.87
	Cost for 205 cum(450 M.T.)				1149247.66
	Cost per cum.				5606.08
	Say				5606.10

16.56 Providing and laying semi- dense Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.

16.56.1 25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (450 tonnes) Area covered for 25 mm thickness=7800 sqm MATERIAL				
7309	Paving Asphalt VG-30 of approved quality 5% of 450 MT = 22.50 MT	tonne	22.50	30516.00	686610.00
2211	Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 22.50 tonnes Weight of aggregate = 450 -22.50 = 427.50 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =427.50/1.5 =285cum Grading - II/19 mm (Nominal Size) 9.5 - 4.75 mm size = 57% of 285 = 162.45 cum 4.75mm and below = 41% of 285 = 116.85 cum	tonne	22.50	103.77	2334.80
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 162.45 * 50 /100	cum	81.225	1300.00	105592.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 162.45 * 50 /100	cum	81.225	1300.00	105592.50
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 * 41 /100	cum	116.85	1150.00	134377.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	103.77	28982.60
0777	Dry hydrated lime (factory made)	quintal	85.50	280.00	23940.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V =8.55/1.29 = 6.63 cum	cum	6.63	103.77	687.99
0062	MACHINERY/ HIRE CHARGES: Hot mix Plant -120 TPH capacity @75tonne per hour actual output	hour	3.00	15000.00	45000.00
0063	Hot mix Plant 100 TPH Capacity @75tonne per hour actual output	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH @75tonne per hour actual output	hour	6.00	1500.00	9000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum	tonne km	4500.00	3.00	13500.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
	LABOUR				
0128	Mate	day	0.84	407.00	341.88
0114	Beldar	day	14.00	368.00	5152.00
	working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction for checking line & levels				
	Total				1216461.77
	Add 1 % Water charges				12164.62
	Total				1228626.39
	Add 15 % Contractor's profit and overheads				184293.96
	Cost for 7800 Sqm				1412920.35
	Cost per sqm				181.14
	Say				181.15

16.56.2 25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 195 cum (450 tonnes) Area covered for 25 mm thickness=7800 sqm MATERIAL				
7309	Paving Asphalt VG-30 of approved quality	tonne	22.50	30516.00	686610.00
	5% of 450 MT = 22.50 MT				
2211	Carriage of Tar bitumen	tonne	22.50	103.77	2334.80
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 22.50 tonnes				
	Weight of aggregate = 450 -22.50 = 427.50 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =427.50/1.5 =285cum				
	Grading - II/19 mm (Nominal Size)				
	9.5 - 4.75 mm size = 57% of 285 = 162.45 cum				
	4.75mm and below = 41% of 285 = 116.85 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	81.225	1300.00	105592.50
	Qty = 162.45 * 50 /100				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 162.45 * 50 /100	cum	81.225	1300.00	105592.50
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 285 * 41 /100	cum	116.85	1150.00	134377.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	279.30	103.77	28982.60
0777	Dry hydrated lime (factory made)	quintal	85.5	280.00	23940.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V =8.55/1.29 = 6.63 cum	cum	6.63	103.77	687.99
0076	MACHINERY/ HIRE CHARGES: @75tonne per hour actual output Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	@75tonne per hour actual output Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	@75tonne per hour actual output Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction for checking line & levels	day	14.00	368.00	5152.00
	Total				1198461.77
	Add 1 % Water charges				11984.62
	Total				1210446.39
	Add 15 % Contractor's profit and overheads				181566.96
	Cost for 7800 Sqm				1392013.35
	Cost per sqm				178.46
	Say				178.45

16.57 Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.

16.57.1 40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7309	Details of cost for 191 cum (450 tonnes) MATERIAL Paving Asphalt VG-30 of approved quality	tonne	24.75	30516.00	755271.00
2211	Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	103.77	2568.28
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (consitering density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MACHINERY/ HIRE CHARGES:				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	15000.00	45000.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum	tonne km	4500.00	3.00	13500.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1350.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
	LABOUR				
0128	Mate	day	0.84	407.00	341.88
0114	Beldar	day	14.00	368.00	5152.00
	working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction				
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1293148.32
	Add 1 % Water charges				12931.48
	Total				1306079.80
	Add 15 % Contractor's profit and overheads				195911.97
	Cost for 191 cum(450 Tonne)				1501991.77
	Cost per cum.				7863.83
	Say				7863.85

16.57.2 40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in Batch Type Hot Mix Plant of 100- 120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes)				
	MATERIAL				
7309	Paving Asphalt VG-30 of approved quality @5.50% (percentage by weight of total mix	tonne	24.75	30516.00	755271.00
2211	Carriage of Tar bitumen	tonne	24.75	103.77	2568.28
	Aggregate				
	Total weight of mix = 450 tonnes				
	Weight of bitumen = 24.75 tonnes				
	Weight of aggregate = 450 -24.75 = 425.25 tonnes				
	Taking density of aggregate = 1.5 tonne/cum				
	Volume of aggregate =425.25/1.5 =283.50cum				
	Grading - II/19 mm (Nominal Size)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum Waste Plastic @ 8% of the weigh of bitumen i.e. 24.75*8%				
7280	Waste plastic additive	tonne	1.98	40000.00	79200.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27
	MACHINERY/ HIRE CHARGES:				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	15000.00	45000.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
	LABOUR				
0128	Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1372348.32
	Add 1 % Water charges				13723.48
	Total				1386071.80
	Add 15 % Contractor's profit and overheads				207910.77
	Cost for 191 cum(450 Tonne)				1593982.57
	Cost per cum.				8345.45
	Say				8345.45

16.57.3 40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0312	Details of cost for 191 cum (450 tonnes) MATERIAL Bitumen grade PMB - 40 @5.50% (percentage by weight of total mix	M.T.	24.75	38550.00	954112.50
2211	Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	103.77	2568.28
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) $V = 12.758/1.29 = 9.89$ cum MACHINERY/ HIRE CHARGES:	cum	9.89	103.77	1026.27
0062	Hot mix Plant -120 TPH capacity	hour	3.00	15000.00	45000.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1491989.82
	Add 1 % Water charges				14919.90
	Total				1506909.72
	Add 15 % Contractor's profit and overheads				226036.46
	Cost for 191 cum(450 Tonne)				1732946.18
	Cost per cum.				9073.01
	Say				9073.00

16.57.4 40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7741	Details of cost for 191 cum (450 tonnes) MATERIAL Modified Bitumen Refinery produced CRMB - 60	tonne	24.75	34006.00	841648.50
2211	@5.50% (percentage by weight of total mix) Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 =	tonne	24.75	103.77	2568.28

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate = 425.25/1.5 = 283.50 cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27
	MACHINERY/ HIRE CHARGES:				
0062	Hot mix Plant -120 TPH capacity	hour	3.00	15000.00	45000.00
0063	Hot mix Plant 100 TPH Capacity	hour	3.00	13000.00	39000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1379525.82
	Add 1 % Water charges				13795.26
	Total				1393321.08
	Add 15 % Contractor's profit and overheads				208998.16
	Cost for 191 cum(450 Tonne)				1602319.24
	Cost per cum.				8389.10
	Say				8389.10

16.57.5 40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7309	Details of cost for 191 cum (450 tonnes) MATERIAL Paving Asphalt VG-30 of approved quality @5.50% (percentage by weight of total mix)	tonne	24.75	30516.00	755271.00
2211	Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	103.77	2568.28
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (considering density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27
0076	MACHINERY/ HIRE CHARGES: Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1275148.32
	Add 1 % Water charges				12751.48
	Total				1287899.80
	Add 15 % Contractor's profit and overheads				193184.97
	Cost for 191 cum(450 Tonne)				1481084.77
	Cost per cum.				7754.37
	Say				7754.35

16.57.6 40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 191 cum (450 tonnes) MATERIAL				
7309	Paving Asphalt VG-30 of approved quality	tonne	24.75	30516.00	755271.00
2211	Carriage of Tar bitumen	tonne	24.75	103.77	2568.28
	Waste Plastic @ 8% of the weigh of bitumen i.e. 24.75*8%				
7280	Waste plastic additive	tonne	1.98	40000.00	79200.00
	Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum				
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	275.00	103.77	28536.39
	Lime Filler @ 2% (percentage by weight of aggregate)				
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (consitering density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27
	MACHINERY/ HIRE CHARGES:				
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1354348.32
	Add 1 % Water charges				13543.48
	Total				1367891.80
	Add 15 % Contractor's profit and overheads				205183.77
	Cost for 191 cum(450 Tonne)				1573075.57
	Cost per cum.				8235.99
	Say				8236.00

16.57.7 40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0312	Details of cost for 191 cum (450 tonnes) MATERIAL Bitumen grade PMB - 40	M.T.	24.75	38550.00	954112.50
2211	@5.50% (percentage by weight of total mix) Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 =283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	103.77	2568.28

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (consitring density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27
0076	MACHINERY/ HIRE CHARGES: Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1473989.82
	Add 1 % Water charges				14739.90
	Total				1488729.72
	Add 15 % Contractor's profit and overheads				223309.46
	Cost for 191 cum(450 Tonne)				1712039.18
	Cost per cum.				8963.55
	Say				8963.55

16.57.8 40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7741	Details of cost for 191 cum (450 tonnes) MATERIAL Modified Bitumen Refinery produced CRMB - 60	tonne	24.75	34006.00	841648.50
2211	@5.50% (percentage by weight of total mix) Carriage of Tar bitumen Aggregate Total weight of mix = 450 tonnes Weight of bitumen = 24.75 tonnes Weight of aggregate = 450 -24.75 = 425.25 tonnes Taking density of aggregate = 1.5 tonne/cum Volume of aggregate =425.25/1.5 = 283.50cum Grading - II/19 mm (Nominal Size) 13.2 - 10mm size = 30% of 283.50 = 85.05 cum 10 - 5mm size = 25% of 283.50 = 70.88 cum 5mm and below = 42% of 283.50 = 119.07 cum	tonne	24.75	103.77	2568.28
0296	Stone Aggregate (Single size) : 12.5 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 85.5 * 50 /100	cum	42.525	1300.00	55282.50
0297	Stone Aggregate (Single size) : 10 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
0298	Stone Aggregate (Single size) : 06 mm nominal size Qty = 70.88 * 50 /100	cum	35.44	1300.00	46072.00
2903	Stone chippings/ screenings 4.75 mm nominal size Qty = 283.5 * 40 /100	cum	119.07	1150.00	136930.50
2202	Carriage of Stone aggregate below 40 mm nominal size Lime Filler @ 2% (percentage by weight of aggregate)	cum	275.00	103.77	28536.39
0777	Dry hydrated lime (factory made)	quintal	127.60	280.00	35728.00
2208	Carriage of Lime (consitering density of lime as 1.29 T per cum) V = 12.758/1.29 = 9.89 cum	cum	9.89	103.77	1026.27
0076	MACHINERY/ HIRE CHARGES: Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	6.00	11000.00	66000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	6.00	1500.00	9000.00
0069	Generator 250 KVA	hour	6.00	400.00	2400.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0053	Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0055	Smooth Wheeled Roller 8 to 10 tonne for initial break down rolling.(6*0.65)	hour	3.90	200.00	780.00
0054	Vibratory roller 8 to 10 tonne for intermediate rolling.(6*0.65)	hour	3.90	650.00	2535.00
0056	Tandem Road Roller Finish rolling with 6-8 tonnes smooth wheeled tandem roller.(6*0.65)	hour	3.90	1150.00	4485.00
0128	LABOUR Mate	day	0.84	407.00	341.88
0114	Beldar working with HMP, mechanical broom, paver, roller, asphalt cutter and assistance for setting out lines, levels and layout of construction	day	14.00	368.00	5152.00
0139	Skilled Beldar (for floor rubbing etc.) for checking line & levels	day	5.00	407.00	2035.00
	Total				1361525.82
	Add 1 % Water charges				13615.26
	Total				1375141.08
	Add 15 % Contractor's profit and overheads				206271.16
	Cost for 191 cum(450 Tonne)				1581412.24
	Cost per cum.				8279.64
	Say				8279.65

16.59 Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours).Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing , specification and direction of Engineer--in-charge.

16.59.1 Mandatory/ Regulatory sign boards of 900 mm diametre with support length of 3750 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2704	Details cost for 1 no. of 0.636 sqm MATERIAL				
2302	Aluminium sheet 2 mm thick $3.14/4 \times (0.9) \times (0.9) = 0.636$ sqm add 10% wastage = 0.064 i.e. 0.700sqm @ 5.60kg/ sqm = 3.92kg	kilogram	3.92	225.00	882.00
	Aluminium Strip 40 mm wide and 2 mm thick	tonne	0.00392	92.24	0.36
	Carriage of G.I. sheet and accessories 3.92kg or 0.00392 MT				
8690	High intensity retro reflective sheet = 0.70 sqm. High intensity sheet for lettering / sign and border etc. Taking 40% Area = 0.28sqm, total = 0.70 + 0.28 = 0.98 sqm	sqm	0.98	1525.00	1494.50(A)
	High intensity retro - reflective sheet				
	Steel work				
	Supporting frame 25x25x3mm for 900mm dia board:- $3.14D = 3.1416 \times 0.90 = 2.83$ metre @ 1.10kg/m = 3.11kg				
	Angle iron 35x35x.5mm for fixing the support frame with vertical Tee-iron support post $2 \times 0.05 = 0.10$ m @ 2.6 kg/m = 0.26kg				
	Vertical post of M.S. tee of section ISNT 50x50x6mm = 3.75 metre @ 4.50kg/m = 16.88 kg				
	Bass plate to be welded at bottom end of tee (As hold fast) $(100 \times 100 \times 5 \text{mm}) \times 7850 / 133 = 0.39$ kg, total = 3.11 + 0.26 + 16.88 + 0.39 = 20.64kg. Add wastage @ 5% = 1.03 Total = 20.64 + 1.03 = 21.67kg.				
10.2	Rate as per item no 10.2 of SH : Steel work	kg	21.67	67.60	1464.89
	LABOUR				
0128	Mate	day	0.01	407.00	4.07
0114	Beldar	day	0.25	368.00	92.00
9999	Cost of material for drilling holes, nut bolts & rivets, fabrication etc.	L.S.	65.00	1.73	112.45
	Painting with synthetic enamel paint on steel work				
	support frame 25x25x3mm $= 2.83 \times 0.10 = 0.283$ sqm				
	Fixing angle 35x35x5mm $= 2 \times 0.50 \times 0.14 = 0.14$ sqm				
	Vertical post Tee 50x50x6mm $= 3.75 \times 0.20 = 0.750$ sqm				
	Base plate 100x100x5mm				
	Surface area = $2 \times [0.10 \times 0.10] = 0.02$ $4 \times 0.10 \times 0.005 = 0.002$				
	Total = 1.069 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.61.1	Rate as per item no 13.61.1 of SH : Finishing Painting with epoxy paint on back side of aluminium sheet.	sqm	1.07	78.40	83.89(A)
13.52.1 9999	Rate as per Item no. 13.52.1 of SH: Finishing Sundries and hold fast etc. Total Add 1 % Water charges on all except (A) i.e. on (4347.01 - 1626.69) = 2720.32 Total Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4374.21 - 1626.69) = 2747.52 Cost of 1 no. Say	sqm L.S.	0.636 78.00	122.50 1.73	77.91(A) 134.94 4347.01 27.20 4374.21 412.13 4786.34 4786.35

16.59.2 Cautionary /warning sign boards of equilateral triangular shape having each side of 900 mm with support length of 3650 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2704 2302	Details cost for 1 board of 0.35 sqm MATERIAL Aluminium sheet 2 mm thick Area $1/2 \times (0.9) \times (0.78) = 0.35$ sqm add 10% wastage = 0.04 i.e. 0.39sqm @ 5.60kg/ sqm = 2.18kg Aluminium Strip 40 mm wide and 2 mm thick Carriage of G.I. sheet and accessories 2.18kg or 0.00218 MT High intensity retro reflective sheet = 0.39 sqm. High intensity sheet for lettering / sign/ symbol/ border etc. Taking 40% Area =0.16sqm, total = 0.39 + 0.16 = 0.55 sqm	kilogram tonne	2.18 0.00218	225.00 92.24	490.50 0.20
8690	High intensity retro - reflective sheet Steel work Angle iron frame $25 \times 25 \times 3 \text{mm}$ $3 \times 0.90 =$ 2.70 metre @ 1.10kg/m =2.97kg Angle iron $35 \times 35 \times 5 \text{mm}$ for fixing the support frame to Tee- iron support post $2 \times 0.05 = 0.10 \text{m}$ @ 2.6 kg/m = 0.26kg Vertical post of M.S. tee of section ISNT $50 \times 50 \times 6 \text{mm} = 1 \times 3.65 = 3.65 \text{m}$ @ 4.50kg/m =16.43kg Bass plate $100 \times 100 \times 5 \text{mm}$ connected to bottom end of vertical tee. $(0.10 \times 0.10 \times 0.005 \times 7850 \text{kg}) = 0.39 \text{kg}$, total = 2.97 + 0.26 + 16.43 + 0.39 = 20.05kg. Add wastage @ 5% = 1.00, total = 20.05 + 1.00 = 21.05kg	sqm	0.55	1525.00	838.75
10.2	Rate as per item no 10.2 of SH : Steel work	kg	21.05	67.60	1422.98(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0128	LABOUR				
	Mate	day	0.01	407.00	4.07
0114	Beldar	day	0.25	368.00	92.00
9999	Cost of material for drilling holes, nut bolts & rivets, fabrication etc.	L.S.	65.00	1.73	112.45
	Painting with synthetic enamel paint on Angle iron .				
	support frame 25x25x3mm =1x2.7x0.10=0.27 sqm.				
	Angle 35x35x5mm = 2x0.50x0.14=0.014 sqm				
	Tee 50x50x6mm =1x3.65x0.20 =0.73sqm				
	Base plate to be welded at bottom end of Tee 100x100x5mm 0.022 sqm				
	Total = 1.036 sqm				
13.61.1	Rate as per item no 13.61.1 of SH : Finishing Painting with epoxy paint on back side of aluminium sheet. 0.35 sqm	sqm	1.036	78.40	81.22(A)
13.52.1	Rate as per Item no. 13.52.1 of SH: Finishing Sundries & hold fast etc.	sqm	0.35	122.50	42.88(A)
9999	Total	L.S.	65.00	1.73	112.45
	Add 1 % Water charges on all except (A) i.e. on (3197.50 - 1547.08) = 1650.42				16.50
	Total				3214.00
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3214.00 - 1547.08) = 1666.92				250.04
	Cost of 1 board.				3464.04
	Say				3464.05

16.60 Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).

16.60.1 Overhead informatory road signage

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2704	Details of cost for boards area 3.00x1.20 =3.60 sqm MATERIAL Aluminium Strip 40 mm wide and 2 mm thick Add 5% wastage = 1.01 kg Total = 20.16 + 1.01 = 21.17 kg.	kilogram	21.17	225.00	4763.25
2302	Carriage of G.I. sheet and accessories high intensity sheet for written matter. Taking 40% 3.60x40% = 1.44 sqm. Total = 3.60 + 1.44 = 5.04 sqm.	tonne	0.02117	92.24	1.95
8690	High intensity retro - reflective sheet	sqm	5.04	1525.00	7686.00
0588	Chromium plated Brass screws 25 mm for peripheries = $2 \times (300+120)/30=28$ nos. For vertical Rows = $2 \times (120/30-2)=4$ nos. Total= 28 + 4 = 32nos. For wastage @ 5% =2 nos. Total = 32 +2 = 34 nos.	100 Nos	0.34	190.00	64.60
9999	Labour charges for drilling holes	L.S.	52.00	1.73	89.96
9999	Hire charges of drill machine and sundries	L.S.	390.00	1.73	674.70
9999	Hoisting board Labour charges for manufacturing of board including .	L.S.	564.20	1.73	976.07
13.52.1	fixing retro reflective sheet Painting with epoxy paint on back side of Aluminium sheet, Rate as per Item no. 13.52.1 of SH: Finishing	sqm	3.60	122.50	441.00(A)
	Total				14697.53
	Add 1 % Water charges on all except (A) i.e. on (14697.53 - 441.00) = 14256.53				142.57
	Total				14840.10
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (14840.10 - 441.00) = 14399.10				2159.87
	Cost of 3.60 sqm				16999.97
	Cost of 1 sqm.				4722.21
	Say				4722.20

16.61 Providing Retro-reflective regulatory sign board of size 900 mm dia meter made out of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated lens type retro -reflective sheeting as approved by Engineer-in-charge . Letter, symbols, borders etc. will be as per IRC - 67 with required colour scheme on the boards and with the high intensity grade A. The aluminium sheet to be riveted to M.S. frame of angle iron of size 40x40x4 mm. The boards will be fixed to 1 No. 50x50 mm square post made of M.S. angle 50x50x4 mm, 4 m long welded to the frame with adequate anti-theft arrangement .Sheet work to be painted with two or more coats of synthetic enamel paint over an under coat (primer) and back side of aluminium sheet to be painted with two or more coats of epoxy paint including appropriate priming coat complete in all respects as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details cost for one board of 0.635 sqm Aluminium sheet 2mm thick = 0.635 sqm.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2704	Add 10% wastage = 0.06 sqm, total = 0.635 + 0.06 = 0.695 sqm. Say 0.70 sqm @ 5.6kg/sqm = 3.98 kg MATERIAL Aluminium Strip 40 mm wide and 2 mm thick High intensity retro reflective sheet = 0.70 sqm high intensity sheet for lettering/ sing and border etc. Taking 40% Area=0.28 sqm, total = 0.70 + 0.28 = 0.98 sqm.	kilogram	3.98	225.00	895.50
8690	High intensity retro - reflective sheet Angle iron 40x40x4mm = 4x0.60=2.40@ 2.4kg/ mtr = 5.76 kg 50x50x5 mm = 2x4m =8m @ 3kg/ mtr =24.00 kg Total = 5.76 + 24.00 = 29.76 kg	sqm	0.98	1525.00	1494.50
10.2	Rate as per item no 10.2 of SH : Steel work LABOUR	kg	29.76	67.60	2011.78(A)
0128	Mate	day	0.01	407.00	4.07
0114	Beldar	day	0.25	368.00	92.00
9999	Cost of material for drilling holes, nut bolts & rivets, facrication etc. @ 2% on (X + Y + A). (e) Painting with synthetic enamel paint 1x2.40.12=0.29 sqm 1x4.00x0.12=0.80 sqm, Total = 0.29 + 0.80 = 1.09 sqm	L.S.	70.23	1.73	121.50
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	1.09	78.40	85.46A)
13.52.1	Painting with epoxy paint on back side of aluminium sheet, Rate as per Item no. 13.52.1 of SH: Finishing	sqm	0.635	122.50	77.79A)
9999	Sundries & hole fast etc, Total	L.S.	31.20	1.73	53.98
	Add 1 % Water charges on all except (A) i.e. on (4836.58 - 2175.03) = 2661.55 Total				4836.58
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4863.20 - 2175.03) = 2688.17				26.62
	Cost for 1 board				4863.20
	Say				403.23
					5266.43
					5266.45

16.62 Providing and applying 2.5 mm thick road marking strips (retro- reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 200 sqm (Area covered on one day):-				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	MATERIAL Thermoplastic paint screeded in paint form for 2.5 mm thick road making stripe including glass beads etc. as per specifications 200 sqm @ 5kg/ sqm = 1000 kg Wastage @ 5% = 50kg Total = 1050 kg				
8687	Thermoplastic paint	kg	1050.00	47.00	49350.00
8688	Glass beads (B-class) to be sprayed over the paint stripe @ 250 gms. Per sqm = 100x0.25=25 kg	kg	50.00	60.00	3000.00
	MACHINERY				
0033	Paint applicator.	day	1.00	800.00	800.00
0083	Hire charges of TATA 407 or equivalent for local shifting.	day	1.00	1400.00	1400.00
1241	Commercial LPG in cylinder.	kg	142.00	65.00	9230.00
	LABOUR				
0157	Operator (Pile/ Special machine)	day	1.00	487.00	487.00
0139	Skilled Beldar (for floor rubbing etc.)	day	4.00	407.00	1628.00
0114	Beldar	day	4.00	368.00	1472.00
	Total				67367.00
	Add 1 % Water charges				673.67
	Total				68040.67
	Add 15 % Contractor's profit and overheads				10206.10
	Cost for 200 sqm				78246.77
	Cost per sqm				391.23
	Say				391.25

16.63 Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:3:6 (1 cement: 3 coarse sand:6 graded stone aggregate 20 mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth etc. complete and as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	1.00	750.00	750.00
2260	Carriage of Brick aggregate	cum	1.00	112.79	112.79
6501	Sand zone V (Jamuna)	cum	0.08	600.00	48.00
2335	Carriage of Jamuna sand	cum	0.08	103.77	8.30
	Labour for spreading, ramming and consolidation.				
0114	Beldar	day	0.35	368.00	128.80
0115	Coolie	day	0.26	368.00	95.68
0101	Bhisti	day	0.18	407.00	73.26
	Cement concrete-1:3:6				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	Rate as per item no 4.1.6 of SH : Concrete Work Total Add 1 % Water charges on all except (A) i.e. on (3624.11 - 2407.28) = 1216.83 Total Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3636.28 - 2407.28) = 1229.00 Cost for 10 sqm. Cost for 1 sqm. Say	cum	0.50	4814.55	2407.28(A) 3624.11 12.17 3636.28 184.35 3820.63 382.06 382.05

16.64 Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm. MATERIAL				
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	1.00	750.00	750.00
2260	Carriage of Brick aggregate	cum	1.00	112.79	112.79
6501	Sand zone V (Jamuna)	cum	0.08	600.00	48.00
2335	Carriage of Jamuna sand	cum	0.08	103.77	8.30
	Labour for spreading, ramming and consolidation.				
0114	Beldar	day	0.35	368.00	128.80
0115	Coolie	day	0.26	368.00	95.68
0101	Bhisti	day	0.18	407.00	73.26
	Total				1216.83
	Add 1 % Water charges				12.17
	Total				1229.00
	Add 15 % Contractor's profit and overheads				184.35
	Cost for 10 sqm.				1413.35
	Cost for 1 sqm.				141.33
	Say				141.35

16.65 Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti theft steel to be installed as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				
8685	Delineator	each	1.00	275.00	275.00
9999	Fixing materials.	L.S.	78.00	1.73	134.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Fixing charges.	L.S.	39.00	1.73	67.47
	Total				477.41
	Add 1 % Water charges				4.77
	Total				482.18
	Add 15 % Contractor's profit and overheads				72.33
	Cost of 1 no.				554.51
	Say				554.50

16.66 Excavating holes upto 0.10 cum, including getting out the excavated soil, then returning the soil as deported in layers not exceeding 20 cm in depth, including consolidating and deposited layer by ramming watering etc., disposing of surplus excavated soil as directed with in a lead of 50 mm and lift upto 1.5 m.

16.66.1 All kind of soil

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.8.1	Details of cost for 30 holes- Earth work 30x0.10 = 3.0 cum.	cum	3.00	166.40	499.20(A)
9999	Extra labour for filling and ramming Rate as per item no. 2.8.1 of SH: Earth work	L.S.	13.52	1.73	23.39
	Sundries				522.59
	TOTAL				
	Add 1 % Water charges on all except (A) i.e. on (522.59 - 499.20) = 23.39				0.23
	TOTAL				522.82
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (522.82 - 499.20) = 23.62				3.54
	Cost of 30 holes				526.36
	Cost of 1 hole				17.54
	Say				17.55

16.67 Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8694	Details of cost for 10 sqm MATERIAL Precast pavement slab 450 x 450 x 50 mm (M - 30)	each	48.00	70.00	3360.00
9977	Carriage of slab. 20mm (bed and joints) CM. 1:5 (1 cement: 5 coarse sand)	L.S.	52.00	1.73	89.96
3.10	Rate as per Item Number 3.10 of SH: Mortars	cum	0.25	3565.05	891.26

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0155	Mason (average)	day	1.10	467.00	513.70
0100	Bandhani	day	1.10	407.00	447.70
0114	Beldar	day	0.55	368.00	202.40
0101	Bhisti	day	0.27	407.00	109.89
9999	Sundries	L.S.	10.79	1.73	18.67
	Total				5633.58
	Add 1 % Water charges				56.34
	Total				5689.92
	Add 15 % Contractor's profit and overheads				853.49
	Cost for 10 sqm.				6543.41
	Cost for 1 sqm				654.34
	Say				654.35

16.68 Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 sqm				
	MATERIAL				
8689	Interlocking C.C. paver block (60 mm thick, M-30)	sqm	10.00	350.00	3500.00
	Bedding layer - 50mm thick				
0982	Coarse sand (zone III) =10x0.050=0.50 cum	cum	0.50	1200.00	600.00
2203	Carriage of Coarse sand	cum	0.50	103.77	51.88
0983	Fine sand (zone IV)	cum	0.15	760.00	114.00
2203	Carriage of Coarse sand	cum	0.15	103.77	15.57
	Laying charges (Based on actual observation)				
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.00	368.00	368.00
0115	Coolie	day	0.50	368.00	184.00
	Total				5300.95
	Add 1 % Water charges				53.01
	Total				5353.96
	Add 15 % Contractor's profit and overheads				803.09
	Cost for 10.00 sqm				6157.05
	Cost for 1.00 sqm.				615.70
	Say				615.70

16.69 Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction

**of Engineer-in-charge (length of finished kerb edging shall be measured for payment).
(Precast C.C. kerb stone shall be approved by Engineer-in-charge).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost 100 metre i.e. 100x0.375x0.20=7.50 cum. No. of kerb stones = 100/0.405=247 Nos Precast C.C. Kerb stone M - 25 = 247x0.40x0.375x0.20=7.41 cum MATERIAL				
8686	Precast C.C. Kerb stone M - 25	cum	7.41	3800.00	28158.00
	Mortar 1:3 for fixing joints = 246x1x [(0.115+0.20)/2] x 0.375x0.005 = 0.073 cum Cement mortar 1:3 (1 cement : 3 coarse sand)				
3.8	Rate as per Item Number 3.8 of SH: Mortars	cum	0.073	4723.50	344.82
	Labour for fixing of kerb stones				
0123	Mason (brick layer) 1st class	day	2.50	487.00	1217.50
0124	Mason (brick layer) 2nd class	day	2.50	448.00	1120.00
0114	Beldar	day	2.50	368.00	920.00
0115	Coolie	day	1.65	368.00	607.20
	Total				32367.52
	Add 1 % Water charges				323.68
	Total				32691.20
	Add 15 % Contractor's profit and overheads				4903.68
	Cost of 7.50 cum				37594.88
	cost for 1 cum.				5012.65
	Say				5012.65

16.70 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.

16.70.1 Made of G.I. wire of dia 4 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm. MATERIAL G.I. chain link 50x50 mm mesh = 10.00 sqm. Wastage @ 5% = 0.50 sqm. Total = 10.50 sqm.				
8695	Chain link fabric fencing mesh of size 50x50 mm made of G.I. wire of dia 4 mm	sqm	10.50	258.00	2709.00
9977	Carriage.	L.S.	156.00	1.73	269.88
	LABOUR				
0103	Blacksmith 2nd class	day	2.14	448.00	958.72
0114	Beldar	day	1.62	368.00	596.16
9999	Sundries including G.I. wire, nuts and bolts and washers.	L.S.	174.75	1.73	302.32
	Total				4836.08
	Add 1 % Water charges				48.36
	Total				4884.44
	Add 15 % Contractor's profit and overheads				732.67
	Cost for 10 sqm.				5617.11
	Cost for 1 sqm.				561.71
	Say				561.70

16.70.2 Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm. MATERIAL G.I. chain link 50x50 mm mesh PVC coated = 10.00 sqm. Wastage @ 5% = 0.50 sqm. Total = 10.50 sqm.				
8696	Chain link fabric fencing mesh of size 50x50 mm made of G.I. wire of dia 4 mm, PVC coated to outer dia 5 mm	sqm	10.50	285.00	2992.50
9977	Carriage.	L.S.	156.00	1.73	269.88
	LABOUR				
0103	Blacksmith 2nd class	day	2.14	448.00	958.72
0114	Beldar	day	1.62	368.00	596.16
9999	Sundries including G.I. wire, nuts and bolts and washers.	L.S.	174.75	1.73	302.32
	Total				5119.58
	Add 1 % Water charges				51.20
	Total				5170.78
	Add 15 % Contractor's profit and overheads				775.62
	Cost for 10 sqm.				5946.40
	Cost for 1 sqm.				594.64
	Say				594.65

16.71 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia 3 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm. MATERIAL G.I. chain link 25x25 mm mesh = 10.00 sqm. Wastage @ 5% = 0.50 sqm. Total = 10.50 sqm.				
8697	Chain link fabric fencing mesh of size 25x25 mm made of G.I. wire of dia 3 mm	sqm	10.50	285.00	3992.50
9977	Carriage.	L.S.	156.00	1.73	269.88
	LABOUR				
0103	Blacksmith 2nd class	day	2.14	448.00	958.72
0114	Beldar	day	1.62	368.00	596.16
9999	Sundries including G.I. wire, nuts and bolts and washers.	L.S.	174.75	1.73	302.32
	Total				5119.58
	Add 1 % Water charges				51.20
	Total				5170.78
	Add 15 % Contractor's profit and overheads				775.62
	Cost for 10 sqm.				5946.40
	Cost for 1 sqm.				594.64
	Say				594.65

16.72 Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1158	Detail of cost for 2.25 cum MATERIAL 22.5 cm thick stone (Hard) Stone for pitching 15 cm x 22.5 cm Carriage by mechanical transport i/c loading unloading and stacking	cum	2.25	636.00	1431.00
2215	Carriage of Soling stone & masonry stone TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost for 2.25 cum Cost for one cum Say	cum	2.25	122.08	274.68 1705.68 17.06 1722.74 258.41 1981.15 880.51 880.50

16.73 Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm including preparing the bedding surface etc. all complete. (Payment for Stone to be made separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm LABOUR				
0123	Mason (brick layer) 1st class	day	1.08	487.00	525.96
0124	Mason (brick layer) 2nd class	day	1.08	448.00	483.84
0114	Beldar	day	2.15	368.00	791.20
0115	Coolie	day	1.61	368.00	592.48
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				2405.17
	Add 1 % Water charges				24.05
	TOTAL				2429.22
	Add 15 % Contractor's profit and overheads				364.38
	Cost for 10 sqm				2793.60
	Cost for one sqm				279.36
	Say				279.35

16.74 75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with :**16.74.1 Moorum**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0810	Details of cost for 100 sqm MATERIAL Moorum Carriage by mechanical transport i/c loading unloading and stacking	cum	7.50	450.00	3375.00
2265	Carriage of Moorum	cum	7.50	103.77	778.27

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	LABOUR Beldar	day	1.64	368.00	603.52
0101	Bhisti	day	0.13	407.00	52.91
	TOTAL				4809.70
	Add 1 % Water charges				48.10
	TOTAL				4857.80
	Add 15 % Contractor's profit and overheads				728.67
	Cost for 100 sqm				5586.47
	Cost per sqm				55.86
	Say				55.85

16.74.2 Stone aggregate 20 mm nominal size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Detail of cost for 100 sqm MATERIAL Stone Aggregate (Single size) : 20 mm nominal size 100sqm x7.50cm= 7.50 cum	cum	7.50	1300.00	9750.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	7.50	103.77	778.27
0114	LABOUR Beldar	day	2.05	368.00	754.40
0101	Bhisti	day	0.13	407.00	52.91
	TOTAL				11335.58
	Add 1 % Water charges				113.36
	TOTAL				11448.94
	Add 15 % Contractor's profit and overheads				1717.34
	Cost for 100 sqm				13166.28
	Cost per sqm				131.66
	Say				131.65

16.74.3 Stone aggregate 40 mm nominal size

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0293	Detail of cost for 100 sqm MATERIAL Stone Aggregate (Single size) : 40 mm nominal size 100sqm x7.50cm= 7.50 cum	cum	7.50	1250.00	9375.00
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	7.50	112.79	845.94
0114	LABOUR Beldar	day	2.05	368.00	754.40
0101	Bhisti	day	0.13	407.00	52.91
	TOTAL				11028.25
	Add 1 % Water charges				110.28
	TOTAL				11138.53
	Add 15 % Contractor's profit and overheads				1670.78
	Cost for 100 sqm				12809.31
	Cost per sqm				128.09
	Say				128.10

16.75 Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.37.1	Details of cost for 1.00 cum MATERIAL Ready mix concrete M 25 = 1.00 cum. i/c placing of concrete, vibrating, leveling etc. Rate as per Item No.5.37.1 of SH:RCC	cum	1.00	6713.60	6713.60(A)
9999	Operational charges for vacuum dewatering system i/c screed vibration , placing of filter mat , top mat, vacuum process, floating , troweling, Brooming etc.	L.S.	57.20	1.73	98.96
9999	T& P charges i/c consumable power charges, loading , unloading and hire charges of equipments	L.S.	41.60	1.73	71.97
	Total				6884.53
	Add 1 % Water charges on all except (A) i.e. on (6884.53 - 6713.60) = 170.93				1.71
	Total				6886.24
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6886.24 - 6713.60) = 172.64				25.90
	Cost for 1 cum				6912.14
	Say				6912.15

16.76 Deduct for using of M-20 grade concrete instead of M-25 grade concrete in C.C. pavement.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0367	Details of cost for 1 cum. Cement for M-25 mix = 0.410 t Cement for M - 20 mix = 0.383 t Difference = 0.027 t MATERIAL	tonne	0.027	5700.00	153.90
2209	Portland Cement (OPC-43 grade) Carriage of Cement	tonne	0.027	92.24	2.49
7318	Plasticizer for M- 25 mix = 2.050kg Plasticizer for M- 20 mix = 1.915 kg Difference = 0.135 kg Plasticizer / super plasticizer	kilogram	0.135	38.00	5.13
	Total				161.52
	Add 1 % Water charges				1.62
	Total				163.14
	Add 15 % Contractor's profit and overheads				24.47
	Cost for 1 cum.				187.61
	Say				187.60

16.77 Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material within all lifts and lead upto 1km (by mechanical means).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm				
	LABOUR				
0128	Mate	day	0.01	407.00	4.07
0114	Beldar	day	0.25	368.00	92.00
	MACHINERY				
0038	Tractor with ripper attachment.	day	0.01	1100.00	11.00
0014	Front end loader capacity 1.00 cum	day	0.025	6000.00	150.00
0017	Hire and running charges of tipper	day	0.02875	1800.00	51.75
	TOTAL				308.82
	Add 1 % Water charges				3.09
	TOTAL				311.91
	Add 15 % Contractor's profit and overheads				46.79
	Cost for 100 sqm				358.70
	Cost for 1 sqm				3.58
	Say				3.60

16.78 Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.

16.78.1 With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (450 tonnes)				
	MATERIAL				
	Close graded granular sub-base material as per Grading-I of specifications				
	53mm to 9.5mm @ 50% = 144 cum				
	9.5 mm to 2.36mm @ 20% = 57 cum				
	2.36mm below @ 30% = 86.40 cum				
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	72.00	1150.00	82800.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	72.00	1300.00	93600.00
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	72.00	112.79	8121.03
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	72.00	103.77	7471.35
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	57.00	900.00	51300.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	57.00	103.77	5914.82
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	43.20	1150.00	49680.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	43.20	1150.00	49680.00
2203	Carriage of Coarse sand	cum	86.40	103.77	8965.62
	Machinery/ Hire charges:				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0059	Wet Mix Plant 60 TPH @75 tonne capacity	hour	6.00	750.00	4500.00
0070	Generator 100 KVA/125 KVA	hour	6.00	300.00	1800.00
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	4.50	200.00	900.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km Tipper -5 Cum Add 10 per cent of cost of carriage to cover cost of loading and unloading	tonne km	4500.00	3.00	13500.00
0050	Motor Grader 3.35 metre blade	hour	6.00	2100.00	12600.00
0054	Vibratory roller 8 to 10 tonne LABOUR	hour	6.00	650.00	3900.00
0128	Mate	day	0.40	407.00	162.80
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	407.00	814.00
0114	Beldar	day	8.00	368.00	2944.00
	Total				404803.62
	Add 1 % Water charges				4048.04
	Total				408851.66
	Add 15 % Contractor's profit and overheads				61327.75
	Cost for 225 cum(450 Tonne)				470179.41
	Cost per cum.				2089.68
	Say				2089.70

16.78.2 With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (450 tonnes) MATERIAL Close graded graunlar sub-base material as per Grading-I of specifications 26.5mm to 9.5mm @ 35% = 100.80 cum 9.5 mm to 2.36mm @ 25% = 72 cum 2.36mm below @ 40% = 115.20 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	50.40	1250.00	63000.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	50.40	1300.00	65520.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	100.80	103.77	10459.89
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	72.00	900.00	64800.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	72.00	103.77	7471.35
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	57.60	1150.00	66240.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	57.60	1150.00	66240.00
2203	Carriage of Coarse sand	cum	115.20	103.77	11954.15
0059	Machinery/ Hire charges: Wet Mix Plant 60 TPH @75 tonne capacity	hour	6.00	750.00	4500.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0070	Generator 100 KVA/125 KVA	hour	6.00	300.00	1800.00
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	4.50	200.00	900.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km Tipper -5 Cum	tonne km	4500.00	3.00	13500.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1350.00
0050	Motor Grader 3.35 metre blade	hour	6.00	2100.00	12600.00
0054	Vibratory roller 8 to 10 tonne LABOUR	hour	6.00	650.00	3900.00
0128	Mate	day	0.40	407.00	162.80
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	407.00	814.00
0114	Beldar	day	8.00	368.00	2944.00
	Total				402956.19
	Add 1 % Water charges				4029.56
	Total				406985.75
	Add 15 % Contractor's profit and overheads				61047.86
	Cost for 225 cum(450 Tonne)				468033.61
	Cost per cum.				2080.14
	Say				2080.15

16.78.3 With material conforming to Grade-III (size range 26.5 mm to 0.075 mm) having CBR Value-20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (450 tonnes) MATERIAL				
	Close graded granular sub-base material as per Grading-III of specifications				
	9.5mm to 4.75mm @ 35% = 100.80 cum				
	4.75 mm to 2.36mm @ 12.5% = 36.00 cum				
	2.36mm below @ 52.5% = 151.20 cum				
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	100.80	900.00	90720.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	100.80	103.77	10459.89
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	36.00	900.00	32400.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	36.00	103.77	3735.67
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	75.60	1150.00	86940.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	75.60	1150.00	86940.00
2203	Carriage of Coarse sand	cum	151.20	103.77	15689.83
	Machinery/ Hire charges:				
0059	Wet Mix Plant 60 TPH @75 tonne capacity	hour	6.00	750.00	4500.00
0070	Generator 100 KVA/125 KVA	hour	6.00	300.00	1800.00
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	4.50	200.00	900.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km	tonne km	4500.00	3.00	13500.00
	Tipper -5 Cum				1350.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1350.00
0050	Motor Grader 3.35 metre blade	hour	6.00	2100.00	12600.00
0054	Vibratory roller 8 to 10 tonne	hour	6.00	650.00	3900.00
	LABOUR				
0128	Mate	day	0.40	407.00	162.80
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	407.00	814.00
0114	Beldar	day	8.00	368.00	2944.00
	Total				374156.19
	Add 1 % Water charges				3741.56
	Total				377897.75
	Add 15 % Contractor's profit and overheads				56684.66
	Cost for 225 cum(450 Tonne)				434582.41
	Cost per cum.				1931.47
	Say				1931.45

16.79 Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 225 cum (495 tonne) MATERIAL Conforming to table 45mm to 22.4mm @ 30% = 89.10 cum Qty for 0292,0293,0294,0295 codes = 89.10 / 4 = 22.275 cum Qty for 2206, 2202 codes = 89.10 / 2 = 4 4.55 cum 22.4 mm to 2.36mm @ 40% = 118.80 cum Qty for 0294,0295 codes = 118.80 / 4 = 29.70 cum Qty for 1179 code = 118.80 / 2 = 59.40 cum 2.36 mm to 75 micron @ 30% = 89.10 cum Qty for 2903, 2904 codes = 89.10 / 2 = 44.55 cum				
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	22.275	1150.00	25616.25
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	22.275	1250.00	27843.75
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	22.275	1250.00	27843.75
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	22.275	1300.00	28957.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	44.55	112.79	5024.89
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	44.55	103.77	4622.90
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	29.70	1250.00	37125.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	29.70	1300.00	38610.00
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	59.40	900.00	53460.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	118.80	103.77	12327.72
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	44.55	1150.00	51232.50
2904	Stone chippings/ screenings 150 micron nominal size	cum	44.55	1150.00	51232.50
2203	Carriage of Coarse sand	cum	89.10	103.77	9245.79
0059	Machinery/ Hire charges: Wet Mix Plant 60 TPH @75 tonne capacity	hour	6.60	750.00	4950.00
0070	Generator 100 KVA/125 KVA	hour	6.00	300.00	1800.00
0057	Water Tanker 5 to 6 KL capacity 5 km lead with one trip per hour	hour	3.00	200.00	600.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	6.00	800.00	4800.00
0053	Tipper 10 tonne capacity(taking lead= 10 Km) =450x10 =4500 t.Km Tipper -5 Cum	tonne km	4950.00	3.00	14850.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				1485.00
0065	Paver finisher Mechanical 100 TPH	hour	6.00	700.00	4200.00
0054	Vibratory roller 8 to 10 tonne	hour	3.90	650.00	2535.00
	LABOUR				
0128	Mate	day	0.48	407.00	195.36
0139	Skilled Beldar (for floor rubbing etc.)	day	2.00	407.00	814.00
0114	Beldar	day	10.00	368.00	3680.00
	Total				413051.91
	Add 1 % Water charges				4130.52
	Total				417182.43
	Add 15 % Contractor's profit and overheads				62577.36
	Cost for 225 cum(450 Tonne)				479759.79
	Cost per cum.				2132.26
	Say				2132.25

16.80 Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with

8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 450 cum (990 tonne) MATERIAL Crushed stone coarse aggregate of 25mm & 12.5 mm nominal sizes graded as per specifications @ 0.90 cum/cum of concrete conforming to specification. = 405 cum Coarse Sand @0.45 m3 per cum of concrete = 203 cum Cement @150 Kg. per cum of concrete = 67.50 cum Qty for 0294,0296 codes = 405 / 2 = 202.50 cum				
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	202.50	1250.00	253125.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	202.50	1300.00	263250.00
0982	Coarse sand (zone III)	cum	203.00	1200.00	243600.00
0367	Portland Cement (OPC-43 grade)	tonne	67.50	5700.00	384750.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	405.00	103.77	42026.32
2203	Carriage of Coarse sand	cum	203.00	103.77	21065.05
2209	Carriage of Cement	tonne	67.50	92.24	6226.12
	Machinery/ Hire charges:				
0052	Front end loader 1 cum bucket capacity (incl POL) @75 tonne capacity	hour	6.00	800.00	4800.00
0066	Batching and Mixing Plant @ 75 cum per hour	hour	6.00	2500.00	15000.00
0069	Generator 250 KVA 5 km lead with one trip per hour	hour	6.00	400.00	2400.00
0065	Paver finisher Mechanical 100 TPH	hour	6.00	700.00	4200.00
0054	Vibratory roller 8 to 10 tonne	hour	8.00	650.00	5200.00
0057	Water Tanker 5 to 6 KL capacity	hour	8.00	200.00	1600.00
0053	Tipper -5 Cum	tonne km	9900.00	3.00	29700.00
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				2970.00
	LABOUR				
0128	Mate	day	1.12	407.00	455.84
0139	Skilled Beldar (for floor rubbing etc.)	day	6.00	407.00	2442.00
0114	Beldar	day	22.00	368.00	8096.00
	Total				1290906.33
	Add 1 % Water charges				12909.06
	Total				1303815.39
	Add 15 % Contractor's profit and overheads				195572.31
	Cost for 450 cum(990 Tonne)				1499387.70
	Cost per cum.				3331.97
	Say				3331.95

16.81 Providing and erecting 2.00 metre high temporary barricading at site as per drawing/ direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge.”(Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
16.81X	Details of cost for 2.5 metre MATERIAL				
16.81Y	Rate as per Sub Analysis No.16.81X	metre	2.50	33.40	83.50
13.50.3	Rate as per Sub Analysis No.16.81Y	metre	2.50	917.15	2292.88
13.61.1	Rate as per Item No.13.50.3 of SH: FINISHING	sqm	11.00	29.10	320.10(A)
	Rate as per Item No.13.61.1 of SH: FINISHING	sqm	11.00	78.40	862.40(A)
	TOTAL				3558.88
	Add 1 % Water charges on all except (A) i.e. on (3558.88 - 1182.50) = 2376.38				23.76
	TOTAL				3582.64
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3582.64 - 1182.50) = 2400.14				360.02
	Cost of 2.5 metre				3942.66
	Cost of 1 metre				1577.06
	Say				1577.05

16.81X Sub analysis item for material component of Item No. 16.81

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1013	Sub analysis item no.16.81X to be used in Item No. 16.81 Details of cost for 2.5 meter MATERIAL M.S. Sheet 1.63mm thick = 1x2.50x2.00 = 5.00 sqm @ 12.80 kg/sqm = 64.00 kg wastage @ 5%= 3.20 kg Total = 67.20 kg Mild steel sheets for tanks MS Angle - 40 x 40 x 6 mm Outframe=2x(2.50+2.00)=9.00 m Vertical extra = 2x0.300 = 0.60 m Horizontal = 1x2.50 =2.50 m Bracing = 1x3.20 = 3.20 m	quintal	0.672	3775.00	2536.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1007	Bracing at bottom = 2x0.50 = 1.00 m Total = 16.30 m @ 3.50 kg/m = 57.05 kg + wastage @ 5% = 2.85 kg Total = 59.90 kg Structurals such as tees,angles channels and R.S. joists M.S. Channel = 2x0.50 =1.00 m @ 5.70 kg/m = 5.70 kg+ wastage @ 5% = 0.29 kg Total = 5.99 kg	quintal	0.599	3775.00	2261.23
1007	Structurals such as tees, angles channels and R.S. joists M.S. Flat 30x5 mm Horizontal = 3x2.50 = 7.50 m Vertical = 2x2.00 = 4.00 m Total = 11.50 m @ 1.20 kg/m = 13.80 kg + wastage @ 5% = 0.69 kg Total = 14.49 kg	quintal	0.0599	3775.00	226.12
1008	Flats upto 10 mm in thickness	quintal	0.1449	3675.00	532.51
2205	Carriage of Steel	tonne	0.148	92.24	13.65
	TOTAL				5570.31
	Add for maintenance @ 10% on				557.03
	Less for salvage value of material @ 50% on				-2785.16
	TOTAL				3342.18
	Assuming that material will become unserviceable after using 40 times, cost of 2.5 metre using once = S/40 Cost of 2.5 meter				83.55
	Cost of 1 meter				33.42
	Say				33.40

16.81Y Sub analysis item for fabrication charges of Item No. 16.81

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1215	Sub analysis item no.16.81Y to be used in Item No. 16.81 Details of cost for 2.5 metre MATERIAL Welding by electric plant Cutting, assembling and erection charges LABOUR	cm	165.00	2.00	330.00
0102	Blacksmith 1st class	day	0.115	487.00	56.01
0103	Blacksmith 2nd class	day	0.115	448.00	51.52
0100	Bandhani	day	0.11	407.00	44.77
0114	Beldar	day	0.83	368.00	305.44
9999	Sundries	L.S.	12.10	1.73	20.93
	Labour for riveting / bolting / cutting etc.				
0116	Fitter (grade 1)	day	0.41	487.00	199.67
0103	Blacksmith 2nd class	day	0.54	448.00	241.92
0100	Bandhani	day	0.70	407.00	284.90
0114	Beldar	day	0.54	368.00	198.72
0139	Skilled Beldar (for floor rubbing etc.)	day	0.81	407.00	329.67

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	12.10	1.73	20.93
	TOTAL				2084.48
	Shifting including transportation, re-erection etc. @ 10%				208.45
	TOTAL Cost of 2.5 meter				2292.93
	Cost of 1 meter				917.17
	Say				917.15

16.82 Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 meter				
	LABOUR				
0114	Beldar	day	0.75	368.00	276.00
0115	Coolie	day	3.00	368.00	1104.00
9999	Sundries	L.S.	2.00	1.73	3.46
	TOTAL				1383.46
	Add 1 % Water charges				13.83
	TOTAL				1397.29
	Add 15 % Contractor's profit and overheads				209.59
	Cost of 100 meter				1606.88
	Cost of 1 meter				16.06
	Say				16.05

16.82 Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 meter				
	LABOUR				
0114	Beldar	day	0.75	368.00	276.00
0115	Coolie	day	3.00	368.00	1104.00
9999	Sundries	L.S.	2.00	1.73	3.46
	TOTAL				1383.46
	Add 1 % Water charges				13.83
	TOTAL				1397.29
	Add 15 % Contractor's profit and overheads				209.59
	Cost of 100 meter				1606.88
	Cost of 1 meter				16.06
	Say				16.05

- 16.83 Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	LABOUR				
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	1.00	368.00	368.00
9999	Sundries	L.S.	2.70	1.73	4.67
	TOTAL				464.67
	Add 1 % Water charges				4.65
	TOTAL				469.32
	Add 15 % Contractor's profit and overheads				70.40
	Cost of 10 sqm.				539.72
	Cost of 1 sqm				53.97
	Say				53.95

- 16.84 Laying old cement concrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
0982	Bedding layer 50mm thick Coarse sand (zone III) Qty = 10 x 0.05 = 0.50 cum	cum	0.50	1200.00	600.00
2203	Carriage of Coarse sand	cum	0.50	103.77	51.88
0983	Fine sand (zone IV)	cum	0.15	760.00	114.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.15	103.77	15.57
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.00	368.00	368.00
0115	Coolie	day	0.50	368.00	184.00
	TOTAL				1800.95
	Add 1 % Water charges				18.01
	TOTAL				1818.96
	Add 15 % Contractor's profit and overheads				272.84
	Cost of 10 sqm.				2091.80
	Cost of 1 sqm				209.18
	Say				209.20

- 16.85 Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand), including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 meter. MATERIAL Number of kerb stones = $100 / 0.405$ = 247 Nos. Qty. = $247 \times 0.40 \times 0.375 \times 0.20 = 7.41$ cum No. of joints = $247 - 1 = 246$ Nos. Cement Mortar 1:3 for fixing joints = $246 \times [(0.115 + 0.20)/2 \times 0.375 \times 0.005]$ = 0.073 cum				
3.8	Rate as per Item No.3.8 of SH:MORTARS	cum	0.073	4723.50	344.82
	LABOUR				
0123	Mason (brick layer) 1st class	day	2.50	487.00	1217.50
0124	Mason (brick layer) 2nd class	day	2.50	448.00	1120.00
0114	Beldar	day	2.50	368.00	920.00
0115	Coolie	day	1.65	368.00	607.20
	TOTAL				4209.52
	Add 1 % Water charges				42.10
	TOTAL				4251.62
	Add 15 % Contractor's profit and overheads				637.74
	Cost of 100 meter.				4889.36
	Cost of 1 meter.				48.89
	Say				48.90

- 16.86 Providing and laying gang saw cut 18 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.**

- 16.86.1 With granite stone of area less than 0.50 sqm.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 0.5sqm. Mirror polished granite 0.5 sqm. Waste @5% = $0.025 + 0.5 = 0.525$ sqm. Granite of any colour, 18 mm thick (slab area upto 0.50 sqm)				
7295	Rate as per Item No.3.9 of SH: MORTARS	sqm	0.525	1750.00	918.75
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.012	3970.50	47.65

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR :				
0123	Mason (brick layer) 1st class	day	0.56	487.00	272.72
0114	Beldar	day	0.05	368.00	18.40
0115	Coolie	day	0.05	368.00	18.40
9999	Sundries	L.S.	17.60	1.73	30.45
	TOTAL				1306.37
	Add 1 % Water charges				13.06
	TOTAL				1319.43
	Add 15 % Contractor's profit and overheads				197.91
	Rate per sqm.				3034.68
	Say				3034.70

16.87 Providing and laying gang saw cut 30 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.

16.87.1 With granite stone of area less than 0.50 sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 0.50 sqm.				
	MATERIAL				
	Mirror polished granite 0.50 sqm.				
	Waste @5% total = 0.025 +0.50 = 0.525 sqm.				
7296	Granite stone slab 30mm thick	sqm	0.525	2000.00	1050.00
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.012	3970.50	47.65
	LABOUR :				
0123	Mason (brick layer) 1st class	day	0.56	487.00	272.72
0114	Beldar	day	0.05	368.00	18.40
0115	Coolie	day	0.05	368.00	18.40
9999	Sundries	L.S.	17.60	1.73	30.45
	TOTAL				1437.62
	Add 1 % Water charges				14.38
	TOTAL				1452.00
	Add 15 % Contractor's profit and overheads				217.80
	Rate per sqm.				3339.60
	Say				3339.60

16.88 Providing and laying matt finished vitrified tile of size 100x100x16mm having water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in out door floors such as footpath, court yard multi models etc., laid on 20mm thick base of cement mortar 1:4 (1cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 sqm.				
	MATERIAL				
	Matt finished vitrified tile 100x100 x16mm =10sqm.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7895	Matt finished vitrified tile 100x100 x16mm	sqm	1.00	377.00	377.00
9977	Sundries	L.S.	6.24	1.73	10.80
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.024	3970.50	95.29
9999	Sundries	L.S.	3.64	1.73	6.30
0367	Portland Cement (OPC-43 grade)	tonne	0.0033	5700.00	18.81
	LABOUR :				
0123	Mason (brick layer) 1st class	day	0.20	487.00	97.40
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				725.75
	Add 1 % Water charges				7.26
	TOTAL				733.01
	Add 15 % Contractor's profit and overheads				109.95
	Cost per sqm.				842.96
	Say				842.95

16.89 Providing and laying matt finished vitrified tile of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 sqm.				
	MATERIAL				
	Tile 300x300 x9.8mm = 1.00 sqm.				
7896	Vitrified tile	sqm	1.00	309.00	309.00
9977	Sundries	L.S.	6.24	1.73	10.80
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.024	3970.50	95.29
9999	Sundries	L.S.	3.64	1.73	6.30
0367	Portland Cement (OPC-43 grade)	tonne	0.0033	5700.00	18.81
	LABOUR :				
0123	Mason (brick layer) 1st class	day	0.20	487.00	97.40
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				657.75
	Add 1 % Water charges				6.58
	TOTAL				664.33
	Add 15 % Contractor's profit and overheads				99.65
	Rate per sqm.				763.98
	Say				764.00

16.90 Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the

joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 1 sqm. MATERIAL:				
	Tile 300x300 x9.8mm = 1.00 sqm.				
7893	Tactile tile	sqm	1.00	900.00	900.00
9977	Carriage	L.S.	6.24	1.73	10.80
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.024	3970.50	95.29
9999	Sundries	L.S.	3.64	1.73	6.30
0367	Portland Cement (OPC-43 grade)	tonne	0.0033	5700.00	18.81
	LABOUR :				
0123	Mason (brick layer) 1st class	day	0.20	487.00	97.40
0115	Coolie	day	0.20	368.00	73.60
9999	Sundries	L.S.	26.91	1.73	46.55
	TOTAL				1248.75
	Add 1 % Water charges				12.49
	TOTAL				1261.24
	Add 15 % Contractor's profit and overheads				189.19
	Cosr per sqm				1450.43
	Say				1450.45

16.91 Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.

16.91.1 60mm thick cement concrete paver block of M-35 grade with approved colour, design & pattern.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm. MATERIAL :				
7773	Coloured inter locking C.C. paver Block	sqm	10.00	500.00	5000.00
0983	Fine sand (zone IV)	cum	0.50	760.00	380.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.65	103.77	67.45
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.00	368.00	368.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries	L.S.	25.00	1.73	43.25
	TOTAL				6510.20
	Add 1 % Water charges				65.10
	TOTAL				6575.30
	Add 15 % Contractor's profit and overheads				986.30
	Cost of 10 Cum.				7561.60
	Cost of 1 Cum.				756.16
	Say				756.15

16.91.2 80 mm thick C.C. paver block of M-30 grade with approved color design and pattern.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 sqm.				
	MATERIALS :				
8785	Interlocking C.C. paver block (80 mm thick, M-30)	sqm	10.00	370.00	3700.00
0982	Coarse sand (zone 111) (10 x 0.050 = 0.50 cum)	cum	0.50	1200.00	600.00
2203	Carriage of Coarse sand	cum	0.50	103.77	51.88
0983	Fine sand (zone IV)	cum	0.15	760.00	114.00
2261	Carriage of Fine sand	cum	0.15	103.77	15.57
	Labour for Laying				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.00	368.00	368.00
0115	Coolie	day	0.50	368.00	184.00
	TOTAL				5500.95
	Add 1 % Water charges				55.01
	TOTAL				5555.96
	Add 15 % Contractor's profit and overheads				833.39
	Cost of 10 Cum.				6389.35
	Cost of 1 Cum.				638.93
	Say				638.95

16.92 Providing and fixing 10x10x7.50 cm Granite stone block hand cut and chisel dressed on top, for paving in floors, drains etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 sqm.				
	MATERIALS :				
	Stone size 10x10x7.50cm =1sqm+5% wastage=sqm				
7774	Stone size 10x10x7.50cm	each	827.00	9.00	7443.00
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.434	3970.50	1723.20
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00
	LABOUR :				
0124	Mason (brick layer) 2nd class	day	1.08	448.00	483.84
0114	Beldar	day	0.25	368.00	92.00
0115	Coolie	day	1.62	368.00	596.16
0101	Bhisti	day	0.27	407.00	109.89
13.33.1	Rate as per Item No.13.33.1 of SH: FINISHING	sqm	10.00	168.45	1684.50(A)
	TOTAL				12246.59
	Add 1 % Water charges on all except (A) i.e. on (12246.59 - 1684.50) = 10562.09				105.62
	TOTAL				12352.21
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (12352.21 - 1684.50) = 10667.71				1600.16
	Cost of 10 sqm.				13952.37
	Cost of 1 sqm.				1395.23
	Say				1395.25

- 16.93 Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centering, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100mm c/c on both ways , neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick , 100 mm wide MS sheet duly painted over priming coat , reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc i/c cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.1	Details of cost of 1 No of size 1.50 x 0.40 = 0.60 sqm MATERIALS : Precast RCC M-25 Rate as per Item No.5.33.1 of SH: REINFORCED CEMENT CONCRETE	cum	0.06	6446.45	386.79(A)
5.22.6	Reinforcement TMT Rate as per Item No.5.22.6 of SH: REINFORCED CEMENT CONCRETE	Kg	4.59	56.60	259.79(A)
10.22	Welding by gas plant/ Electric plant Rate as per Item No.10.22 of SH: STEEL WORK	cm	82.00	2.85	233.70(A)
1013	M.S. sheet 1.60 mm thick 2x(1.50+0.40)x0.10x0.016x7850=4.77kg Mild steel sheets for tanks	quintal	0.0477	3775.00	180.07
13.61.1	Paint 2x(1.50+0.40)x0.10=0.38sqm Rate as per Item No.13.61.1 of SH: FINISHING	sqm	0.38	78.40	29.79(A)
13.18	Neat Cement Punning 1x1.50x0.40=0.60 sqm Rate as per Item No.13.18 of SH: FINISHING	sqm	0.60	42.60	25.56(A)
	TOTAL				1115.70
	Add 1 % Water charges on all except (A) i.e. on (1115.70 - 935.63) = 180.07				1.80
	TOTAL				1117.50
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1117.50 - 935.63) = 181.87				27.28
	Cost of 0.60 sqm.				1144.78
	Cost of 1 sqm.				1907.96
	Say				1907.95

- 16.94 Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of ± 2%) Zinc coated, Mesh wire diameter 3.0 mm, mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2mm, supplied @3% by**

weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8576	Details cost of one Gabion box/Crates of size 2mx1mx1m = 2 cum MATERIAL Crates made of Mesh type 10x12 (D=100 mm) Zn coated. (Mesh wire diameter 3.00 mm). Surface area required = 11.00 sqm.	sqm	11.00	190.00	2090.00
7753	Stone boulder with least dimension 200mm LABOUR	cum	2.00	700.00	1400.00
0128	Mate	day	0.10	407.00	40.70
0125	Mason (for plain stone work) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.50	368.00	552.00
	TOTAL				4306.70
	Add 1 % Water charges				43.07
	TOTAL				4349.77
	Add 15 % Contractor's profit and overheads				652.47
	Cost of 2 cum				5002.24
	Cost of 1 cum				2501.12
	Say				2501.10

16.95 Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$) Zinc+PVC coated, Mesh wire diameter 2.7/3.7mm, mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm (ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8577	Details cost of one Gabion box/Crates of size 2mx1mx1m = 2 cum MATERIAL Crates made of Mesh type 10x12 (D=100 mm) Zn+PVC coated. Mesh wire diameter 2.70/3.70 mm (ID/OD). Surface area required = 11.00 sqm.	sqm	11.00	220.00	2420.00
7753	Stone boulder with least dimension 200mm LABOUR	cum	2.00	700.00	1400.00
0128	Mate	day	0.10	407.00	40.70
0125	Mason (for plain stone work) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.50	368.00	552.00
	TOTAL				4636.70
	Add 1 % Water charges				46.37
	TOTAL				4683.07
	Add 15 % Contractor's profit and overheads				702.46
	Cost of 2 cum				5385.53
	Cost of 1 cum				2692.76
	Say				2692.75

16.96 Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012, MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of $\pm 2\%$), Zinc+10% Al alloy+PVC coated, Mesh wire diameter 2.7/3.7mm (ID/OD), mechanically edged/ selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm (ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details cost of one Gabion box/Crates of size 2mx1mx1m = 2 cum				
	MATERIAL				
8578	Crates made of Mesh type 10x12 (D=100 mm) Zn+10% Al alloy + PVC coated. Mesh wire diameter 2.70/3.70 mm (ID/OD). Surface area required = 11.00 sqm.	sqm	11.00	290.00	3190.00
7753	Stone boulder with least dimension 200mm	cum	2.00	700.00	1400.00
	LABOUR				
0128	Mate	day	0.10	407.00	40.70
0125	Mason (for plain stone work) 2nd class	day	0.50	448.00	224.00
0114	Beldar	day	1.50	368.00	552.00
	TOTAL				5406.70
	Add 1 % Water charges				54.07
	TOTAL				5460.77
	Add 15 % Contractor's profit and overheads				819.12
	Cost of 2 cum				6279.89
	Cost of 1 cum				3139.94
	Say				3139.95

SUB HEAD : 17.0
SANITARY INSTALLATIONS

17.1 Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:

17.1.1 White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
1954	Vitreous china orrisa type w.c. pan size 580 mm	each	1.00	780.00	780.00
7358	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	600.00	600.00
1896	100 mm S.C.I. trap with vent heel	each	1.00	315.00	315.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.25	487.00	608.75
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				3008.35
	Add 1 % Water charges				30.08
	TOTAL				3038.43
	Add 15 % Contractor's profit and overheads				455.76
	Cost of each				3494.19
	Say				3494.20

17.1.2 Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
7805	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724mm X 578mm	each	1.00	3600.00	3600.00
7358	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	600.00	600.00
1896	100 mm S.C.I. trap with vent heel	each	1.00	315.00	315.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.25	487.00	608.75
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				5828.35
	Add 1 % Water charges				58.28
	TOTAL				5886.63
	Add 15 % Contractor's profit and overheads				882.99
	Cost of each				6769.62
	Say				6769.60

17.2 Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :

17.2.1 W.C. pan with ISI marked white solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
1875	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	1.00	330.00	330.00
1955	Vitreous china pedestal type water closet	each	1.00	700.00	700.00
7358	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	600.00	600.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.25	487.00	608.75
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				2943.35
	Add 1 % Water charges				29.43
	TOTAL				2972.78
	Add 15 % Contractor's profit and overheads				445.92
	Cost of each				3418.70
	Say				3418.70

17.2.2 W.C. pan with ISI marked black solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
1876	Black plastic seat (solid) with lid C.P.brass hinges and rubber buffers	each	1.00	310.00	310.00
1955	Vitreous china pedestal type water closet	each	1.00	700.00	700.00
7358	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	600.00	600.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.25	487.00	608.75
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				2923.35
	Add 1 % Water charges				29.23
	TOTAL				2952.58
	Add 15 % Contractor's profit and overheads				442.89
	Cost of each				3395.47
	Say				3395.45

17.3 Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.3.1 W.C. pan with ISI marked white solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
1875	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	1.00	330.00	330.00
1955	Vitreous china pedestal type water closet	each	1.00	700.00	700.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1.00	1300.00	1300.00
9999	Overflow arrangement and specials for overflow pipe	L.S.	62.79	1.73	108.63
1350	Mosquito proof coupling of approved design	each	1.00	30.00	30.00
9999	Plugs ,screws etc.	L.S.	13.52	1.73	23.39
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				3955.01
	Add 1 % Water charges				39.55
	TOTAL				3994.56
	Add 15 % Contractor's profit and overheads				599.18
	Cost of each				4593.74
	Say				4593.75

17.3.2 W.C. pan with ISI marked black solid plastic seat and lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
1876	Black plastic seat (solid) with lid C.P.brass hinges and rubber buffers	each	1.00	310.00	310.00
1955	Vitreous china pedestal type water closet	each	1.00	700.00	700.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1.00	1300.00	1300.00
9999	Overflow arrangement and specials for overflow pipe	L.S.	62.79	1.73	108.63
1350	Mosquito proof coupling of approved design	each	1.00	30.00	30.00
9999	Plugs, screws etc.	L.S.	13.52	1.73	23.39
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				3935.01
	Add 1 % Water charges				39.35
	TOTAL				3974.36
	Add 15 % Contractor's profit and overheads				596.15
	Cost of each				4570.51
	Say				4570.50

17.4 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.4.1 One urinal basin with 5 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1913	Vitreous china lipped front urinal	each	1.00	460.00	460.00
7359	P.V.C. automatic flushing cistern 5 lts capacity	each	1.00	490.00	490.00
7375	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Single lipped urinal	each	1.00	465.00	465.00
9999	Red lead, white lead and gasket	L.S.	13.52	1.73	23.39
9999	Plugs ,screws etc.	L.S.	13.52	1.73	23.39
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9999	Painting of fittings etc.	L.S.	39.00	1.73	67.47
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	0.88	487.00	428.56
0123	Mason (brick layer) 1st class	day	0.88	487.00	428.56
0114	Beldar	day	1.50	368.00	552.00
	TOTAL				3008.31
	Add 1 % Water charges				30.08
	TOTAL				3038.39
	Add 15 % Contractor's profit and overheads				455.76
	Cost of each				3494.15
	Say				3494.15

17.4.2 Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1913	Vitreous china lipped front urinal	each	2.00	460.00	920.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7359	P.V.C. automatic flushing cistern 5 lts capacity	each	1.00	490.00	490.00
7376	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of two lipped urinals	each	1.00	800.00	800.00
9999	Red lead, white lead and gasket	L.S.	20.28	1.73	35.08
9999	Plugs ,screws etc.	L.S.	20.28	1.73	35.08
9999	Cement, sand and grit etc.	L.S.	20.28	1.73	35.08
9999	Painting of fittings etc.	L.S.	39.00	1.73	67.47
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.50	487.00	730.50
0123	Mason (brick layer) 1st class	day	1.50	487.00	730.50
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				4626.26
	Add 1 % Water charges				46.26
	TOTAL				4672.52
	Add 15 % Contractor's profit and overheads				700.88
	Cost of each				5373.40
	Say				5373.40

17.4.3 Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1913	Vitreous china lipped front urinal	each	3.00	460.00	1380.00
7361	P.V.C. automatic flushing cistern 10 lts capacity	each	1.00	530.00	530.00
7377	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of three lipped urinals	each	1.00	1100.00	1100.00
9999	Red lead, white lead and gasket	L.S.	33.67	1.73	58.25
9999	Plugs ,screws etc.	L.S.	33.67	1.73	58.25
9999	Cement, sand and grit etc.	L.S.	33.67	1.73	58.25
9999	Painting of fittings etc.	L.S.	39.00	1.73	67.47
9977	Carriage of materials	L.S.	40.30	1.73	69.72
	LABOUR				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0123	Mason (brick layer) 1st class	day	2.00	487.00	974.00
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				6373.94
	Add 1 % Water charges				63.74
	TOTAL				6437.68
	Add 15 % Contractor's profit and overheads				965.65
	Cost of each				7403.33
	Say				7403.35

17.4.4 Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1913	Vitreous china lipped front urinal	each	4.00	460.00	1840.00
7361	P.V.C. automatic flushing cistern 10 lts capacity	each	1.00	530.00	530.00
7378	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of four lipped urinals	each	1.00	1500.00	1500.00
9999	Red lead, white lead and gasket	L.S.	53.82	1.73	93.11
9999	Plugs ,screws etc.	L.S.	53.82	1.73	93.11
9999	Cement, sand and grit etc.	L.S.	53.82	1.73	93.11
9999	Painting of fittings etc.	L.S.	39.00	1.73	67.47
9977	Carriage of materials	L.S.	53.82	1.73	93.11
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0123	Mason (brick layer) 1st class	day	3.00	487.00	1461.00
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				8703.91
	Add 1 % Water charges				87.04
	TOTAL				8790.95
	Add 15 % Contractor's profit and overheads				1318.64
	Cost of each				10109.59
	Say				10109.60

17.5 Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required :

17.5.1 Single half stall urinal with 5 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556	each	1.00	907.00	907.00
7359	P.V.C. automatic flushing cistern 5 lts capacity	each	1.00	490.00	490.00
1532	Flush pipe with union spreaders and clamps all in C.P. brass for single stall	each	1.00	270.00	270.00
1891	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 50 mm dia	each	1.00	170.00	170.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	40.43	1.73	69.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	1.75	487.00	852.25
0123	Mason (brick layer) 1st class	day	2.00	487.00	974.00
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				5327.08
	Add 1 % Water charges				53.27
	TOTAL				5380.35
	Add 15 % Contractor's profit and overheads				807.05
	Cost of each				6187.40
	Say				6187.40

17.5.2 Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556	each	2.00	907.00	1814.00
7359	P.V.C. automatic flushing cistern 5 lts capacity	each	1.00	490.00	490.00
1533	Flush pipe with union spreaders and clamps all in C.P. brass for double stall	each	1.00	400.00	400.00
1891	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 50 mm dia	each	1.00	170.00	170.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	53.82	1.73	93.11
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	53.82	1.73	93.11
	LABOUR				
0116	Fitter (grade 1)	day	2.50	487.00	1217.50
0123	Mason (brick layer) 1st class	day	3.00	487.00	1461.00
0114	Beldar	day	6.00	368.00	2208.00
	TOTAL				8022.06
	Add 1 % Water charges				80.22
	TOTAL				8102.28
	Add 15 % Contractor's profit and overheads				1215.34
	Cost of each				9317.62
	Say				9317.60

17.5.3 Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556	each	3.00	907.00	2721.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7361	P.V.C. automatic flushing cistern 10 lts capacity	each	1.00	530.00	530.00
1534	Flush pipe with union spreaders and clamps all in C.P. brass for range of three stall	each	1.00	520.00	520.00
1893	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 80 mm dia	each	1.00	225.00	225.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	80.73	1.73	139.66
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	67.21	1.73	116.27
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0123	Mason (brick layer) 1st class	day	3.50	487.00	1704.50
0114	Beldar	day	7.00	368.00	2576.00
	TOTAL				10068.77
	Add 1 % Water charges				100.69
	TOTAL				10169.46
	Add 15 % Contractor's profit and overheads				1525.42
	Cost of each				11694.88
	Say				11694.90

17.5.4 Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556	each	4.00	907.00	3628.00
7361	P.V.C. automatic flushing cistern 10 lts capacity	each	1.00	530.00	530.00
1535	Flush pipe with union spreaders and clamps all in C.P. brass for range of four stall	each	1.00	600.00	600.00
1893	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 80 mm dia	each	1.00	225.00	225.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	107.64	1.73	186.22
9999	Painting of fittings etc.	L.S.	39.00	1.73	67.47
9977	Carriage of materials	L.S.	80.73	1.73	139.66
	LABOUR				
0116	Fitter (grade 1)	day	3.50	487.00	1704.50
0123	Mason (brick layer) 1st class	day	4.00	487.00	1948.00
0114	Beldar	day	8.00	368.00	2944.00
	TOTAL				12003.21
	Add 1 % Water charges				120.03
	TOTAL				12123.24
	Add 15 % Contractor's profit and overheads				1818.49
	Cost of each				13941.73
	Say				13941.75

17.6 Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. / PVC flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete, including painting of fittings and cutting and making good the walls and floors etc. wherever required :

17.6.1 Single squatting plate with 5 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1915	Vitreous china squatting plate urinal	each	1.00	1053.00	1053.00
7359	P.V.C. automatic flushing cistern 5 lts capacity	each	1.00	490.00	490.00
1540	Flush pipe and spreaders G.I.for single set of one squatting plate urinal	each	1.00	175.00	175.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	26.91	1.73	46.55
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	1.75	487.00	852.25
0123	Mason (brick layer) 1st class	day	0.75	487.00	365.25
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				4207.94
	Add 1 % Water charges				42.08
	TOTAL				4250.02
	Add 15 % Contractor's profit and overheads				637.50
	Cost of each				4887.52
	Say				4887.50

17.6.2 Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1915	Vitreous china squatting plate urinal	each	2.00	1053.00	2106.00
7359	P.V.C. automatic flushing cistern 5 lts capacity	each	1.00	490.00	490.00
1541	Flush pipe and spreaders G.I.for range of two squatting plates urinal	each	1.00	250.00	250.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	53.82	1.73	93.11
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	33.15	1.73	57.35
	LABOUR				
0116	Fitter (grade 1)	day	2.50	487.00	1217.50
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				6248.30
	Add 1 % Water charges				62.48
	TOTAL				6310.78
	Add 15 % Contractor's profit and overheads				946.62
	Cost of each				7257.40
	Say				7257.40

17.6.3 Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1915	Vitreous china squatting plate urinal	each	3.00	1053.00	3159.00
7361	P.V.C. automatic flushing cistern 10 lts capacity	each	1.00	530.00	530.00
1542	Flush pipe and spreaders G.I.for range of three squatting plates urinal	each	1.00	300.00	300.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	80.73	1.73	139.66
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	42.12	1.73	72.87
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0123	Mason (brick layer) 1st class	day	1.50	487.00	730.50
0114	Beldar	day	5.00	368.00	1840.00
	TOTAL				8308.37
	Add 1 % Water charges				83.08
	TOTAL				8391.45
	Add 15 % Contractor's profit and overheads				1258.72
	Cost of each				9650.17
	Say				9650.15

17.6.4 Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1915	Vitreous china squatting plate urinal	each	4.00	1053.00	4212.00
7361	P.V.C. automatic flushing cistern 10 lts capacity	each	1.00	530.00	530.00
1543	Flush pipe and spreaders G.I.for range of four squatting plates urinal	each	1.00	390.00	390.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.73	30.36
9999	Cement, sand and grit etc.	L.S.	107.64	1.73	186.22
9999	Painting of fittings etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	69.03	1.73	119.42
	LABOUR				
0116	Fitter (grade 1)	day	3.50	487.00	1704.50
0123	Mason (brick layer) 1st class	day	1.75	487.00	852.25
0114	Beldar	day	5.50	368.00	2024.00
	TOTAL				10093.73
	Add 1 % Water charges				100.94
	TOTAL				10194.67
	Add 15 % Contractor's profit and overheads				1529.20
	Cost of each				11723.87
	Say				11723.85

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:

17.7.1 White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1947	Vitreous china flat back wash basin 630x450 mm	each	1.00	725.00	725.00
1885	15 mm C.P.brass tap	each	2.00	210.00	420.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.67	368.00	246.56
	TOTAL				1978.97
	Add 1 % Water charges				19.79
	TOTAL				1998.76
	Add 15 % Contractor's profit and overheads				299.81
	Cost of each				2298.57
	Say				2298.55

17.7.2 White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1947	Vitreous china flat back wash basin 630x450 mm	each	1.00	725.00	725.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				1739.64
	Add 1 % Water charges				17.40
	TOTAL				1757.04
	Add 15 % Contractor's profit and overheads				263.56
	Cost of each				2020.60
	Say				2020.60

17.7.3 White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	550.00	550.00
1885	15 mm C.P.brass tap	each	2.00	210.00	420.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.67	368.00	246.56
	TOTAL				1803.97
	Add 1 % Water charges				18.04
	TOTAL				1822.01
	Add 15 % Contractor's profit and overheads				273.30
	Cost of each				2095.31
	Say				2095.30

17.7.4 White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	550.00	550.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				1564.64
	Add 1 % Water charges				15.65
	TOTAL				1580.29
	Add 15 % Contractor's profit and overheads				237.04
	Cost of each				1817.33
	Say				1817.35

17.7.5 White Vitreous China Angle back wash basin size 600 x 480 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1949	Vitreous china angle back wash basin 600x480 mm	each	1.00	725.00	725.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				1739.64
	Add 1 % Water charges				17.40
	TOTAL				1757.04
	Add 15 % Contractor's profit and overheads				263.56
	Cost of each				2020.60
	Say				2020.60

17.7.6 White Vitreous China Angle back wash basin size 400 x 400 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1950	Vitreous china angle back wash basin 400x400 mm	each	1.00	425.00	425.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				1439.64
	Add 1 % Water charges				14.40
	TOTAL				1454.04
	Add 15 % Contractor's profit and overheads				218.11
	Cost of each				1672.15
	Say				1672.15

17.7.7 White Vitreous China Flat back wash basin size 450x 300 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7004	Vitreous china flat back wash basin 450x300 mm	each	1.00	325.00	325.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				1339.64
	Add 1 % Water charges				13.40
	TOTAL				1353.04
	Add 15 % Contractor's profit and overheads				202.96
	Cost of each				1556.00
	Say				1556.00

17.7.8 White Vitreous China Surgeon type wash basin of size 660x460 mm with a pair of 15 mm C.P. brass pillar taps with elbow including operated levers

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1.00	1000.00	1000.00
7363	15 mm C.P. brass tap with elbow operation lever	each	2.00	450.00	900.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.67	368.00	246.56
	TOTAL				2733.97
	Add 1 % Water charges				27.34
	TOTAL				2761.31
	Add 15 % Contractor's profit and overheads				414.20
	Cost of each				3175.51
	Say				3175.50

17.7.9 White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI Marked

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1.00	1000.00	1000.00
7363	15 mm C.P. brass tap with elbow operation lever	each	1.00	450.00	450.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				2254.64
	Add 1 % Water charges				22.55
	TOTAL				2277.19
	Add 15 % Contractor's profit and overheads				341.58
	Cost of each				2618.77
	Say				2618.75

17.7.10 Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7806	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm X 355mm	each	1.00	1500.00	1500.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				2514.64
	Add 1 % Water charges				25.15
	TOTAL				2539.79
	Add 15 % Contractor's profit and overheads				380.97
	Cost of each				2920.76
	Say				2920.75

17.7.11 Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7807	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm X 345mm	each	1.00	1500.00	1500.00
1885	15 mm C.P.brass tap	each	1.00	210.00	210.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				2514.64
	Add 1 % Water charges				25.15
	TOTAL				2539.79
	Add 15 % Contractor's profit and overheads				380.97
	Cost of each				2920.76
	Say				2920.75

17.7A Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:-

(a) White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	550.00	550.00
9007	C.P. Brass Centre Hole Basin Mixer With Cast Spout (Kigston/Marc/Prima/ Parko/ Hindware)	each	1.00	1200.00	1200.00
1951	C.P. brass waste 32 mm	each	1.00	80.00	80.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, Sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.63	368.00	231.84
	TOTAL				2569.25
	Add 1 % Water charges				25.69
	TOTAL				2594.94
	Add 15 % Contractor's profit and overheads				389.24
	Cost of each				2984.18
	Say				2984.20

17.7B Providing and fixing wash basin with C.I. brackets, 15 mm PTMT pillar cock, 32 mm PTMT waste coupling of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required. White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm PTMT pillar cock.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No.				
	MATERIAL				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	550.00	550.00
7406	PTMT pillar cock	each	1.00	129.00	129.00
7491	PTMT - Waste Coupling 31/32 mm	each	1.00	36.00	36.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Red Lead, White Lead and Gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc	L.S.	13.39	1.73	23.16
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.67	368.00	246.56
	TOTAL				1468.97
	Add 1 % Water charges				14.69
	TOTAL				1483.66
	Add 15 % Contractor's profit and overheads				222.55
	Cost of each				1706.21
	Say				1706.20

17.8 Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pedestal				
	MATERIAL				
1396	Vitreous china pedestal for wash basin	each	1.00	700.00	700.00
9999	White cement mortar	L.S.	40.30	1.73	69.72
9988	Carriage of materials and fixing charges	L.S.	40.43	1.73	69.94
	TOTAL				839.66
	Add 1 % Water charges				8.40
	TOTAL				848.06
	Add 15 % Contractor's profit and overheads				127.21
	Cost of each				975.27
	Say				975.25

17.9 Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste complete, including painting the fittings and brackets, cutting and making good the walls wherever required:

17.9.1 White glazed fire clay kitchen sink of size 600x450x 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1863	Fire clay kitchen sink: 600x450x250 mm	each	1.00	1300.00	1300.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	40.00	40.00
1952	C.P. brass waste 40 mm	each	1.00	95.00	95.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting brackets etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.56	368.00	206.08
	TOTAL				2094.92
	Add 1 % Water charges				20.95
	TOTAL				2115.87
	Add 15 % Contractor's profit and overheads				317.38
	Cost of each				2433.25
	Say				2433.25

17.10 Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :

17.10.1 Kitchen sink with drain board

17.10.1.1 510x1040 mm bowl depth 250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7095	Stainless steel kitchen sink - with drain board bowl depth 250 mm.	each	1.00	2600.00	2600.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	65.00	130.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.73	46.78
9999	Painting of brackets etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.60	487.00	292.20
0114	Beldar	day	0.82	368.00	301.76
	TOTAL				3547.82
	Add 1 % Water charges				35.48
	TOTAL				3583.30
	Add 15 % Contractor's profit and overheads				537.50
	Cost of each				4120.80
	Say				4120.80

17.10.1.2 510x1040 mm bowl depth 225 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7096	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 225 mm.	each	1.00	2350.00	2350.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	65.00	130.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.73	46.78
9999	Painting of brackets etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.60	487.00	292.20
0114	Beldar	day	0.82	368.00	301.76
	TOTAL				3297.82
	Add 1 % Water charges				32.98
	TOTAL				3330.80
	Add 15 % Contractor's profit and overheads				499.62
	Cost of each				3830.42
	Say				3830.40

17.10.1.3 510x1040 mm bowl depth 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7097	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 200 mm.	each	1.00	2300.00	2300.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	65.00	130.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.73	46.78
9999	Painting of brackets etc.	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.60	487.00	292.20
0114	Beldar	day	0.82	368.00	301.76
	TOTAL				3247.82
	Add 1 % Water charges				32.48
	TOTAL				3280.30
	Add 15 % Contractor's profit and overheads				492.05
	Cost of each				3772.35
	Say				3772.35

17.10.1.4 510x1040 mm bowl depth 178 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7098	Stainless steel kitchen sink - with drain board 510x1040mm bowl depth 178 mm	each	1.00	2250.00	2250.00
1309	C.I. bracket for wash basin and sinks	pair	2.00	65.00	130.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.73	46.78

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Painting brackets	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.60	487.00	292.20
0114	Beldar	day	0.82	368.00	301.76
	TOTAL				3197.82
	Add 1 % Water charges				31.98
	TOTAL				3229.80
	Add 15 % Contractor's profit and overheads				484.47
	Cost of each				3714.27
	Say				3714.25

17.10.2 Kitchen sink without drain board

17.10.2.1 610x510 mm bowl depth 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7101	Stainless steel kitchen sink - without drain board 610x510mm bowl depth 200 mm	each	1.00	1500.00	1500.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9999	Painting brackets	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.56	368.00	206.08
	TOTAL				2132.26
	Add 1 % Water charges				21.32
	TOTAL				2153.58
	Add 15 % Contractor's profit and overheads				323.04
	Cost of each				2476.62
	Say				2476.60

17.10.2.2 610x460 mm bowl depth 200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7102	Stainless steel kitchen sink - without drain board 610x460mm bowl depth 200 mm.	each	1.00	1250.00	1250.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9999	Painting brackets	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.56	368.00	206.08
	TOTAL				1882.26
	Add 1 % Water charges				18.82
	TOTAL				1901.08
	Add 15 % Contractor's profit and overheads				285.16
	Cost of each				2186.24
	Say				2186.25

17.10.2.3 470x420 mm bowl depth 178 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7103	Stainless steel kitchen sink - without drain board 470x420mm bowl depth 178 mm	each	1.00	1100.00	1100.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9999	Painting brackets	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.56	368.00	206.08
	TOTAL				1732.26
	Add 1 % Water charges				17.32
	TOTAL				1749.58
	Add 15 % Contractor's profit and overheads				262.44
	Cost of each				2012.02
	Say				2012.00

17.11 Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required :

17.11.1 Size 450x300x150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1871	White vitreous china laboratory sink 450x300x150 mm	each	1.00	820.00	820.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	40.00	40.00
1952	C.P. brass waste 40 mm	each	1.00	95.00	95.00
1895	C.P.brass trap40 mm dia	each	1.00	250.00	250.00
3617	C.P.brass union 40 mm dia	each	1.00	195.00	195.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Sundries	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.56	368.00	206.08
	TOTAL				2059.92
	Add 1 % Water charges				20.60
	TOTAL				2080.52
	Add 15 % Contractor's profit and overheads				312.08
	Cost of each				2392.60
	Say				2392.60

17.11.2 Size 600x450x200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1872	White vitreous china laboratory sink 600x450x200 mm	each	1.00	1525.00	1525.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	1.00	40.00	40.00
1952	C.P. brass waste 40 mm	each	1.00	95.00	95.00
1895	C.P.brass trap 40 mm dia	each	1.00	250.00	250.00
3617	C.P.brass union 40 mm dia	each	1.00	195.00	195.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.73	27.89
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Sundries	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0123	Mason (brick layer) 1st class	day	0.33	487.00	160.71
0114	Beldar	day	0.56	368.00	206.08
	TOTAL				2764.92
	Add 1 % Water charges				27.65
	TOTAL				2792.57
	Add 15 % Contractor's profit and overheads				418.89
	Cost of each				3211.46
	Say				3211.45

17.12 Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :

17.12.1 White glazed fire clay draining board of size 600x450x 25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7364	White glazed fire clay draining board 600x450x25 mm	each	1.00	550.00	550.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	65.00	65.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9999	Painting brackets etc.	L.S.	26.00	1.73	44.98
9977	Carriage of materials	L.S.	7.80	1.73	13.49

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	0.06	487.00	29.22
0123	Mason (brick layer) 1st class	day	0.17	487.00	82.79
0114	Beldar	day	0.22	368.00	80.96
	TOTAL				889.60
	Add 1 % Water charges				8.90
	TOTAL				898.50
	Add 15 % Contractor's profit and overheads				134.78
	Cost of each				1033.28
	Say				1033.30

17.13 Providing and fixing white vitreous china water closet squatting pan (Indian type) :

17.13.1 Long pattern W.C. pan of size 580 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1953	Vitreous china indian type w.c. pan size 580 mm	each	1.00	450.00	450.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				924.05
	Add 1 % Water charges				9.24
	TOTAL				933.29
	Add 15 % Contractor's profit and overheads				139.99
	Cost of each				1073.28
	Say				1073.30

17.13.2 Orissa pattern W.C. pan of size 580x440 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1954	Vitreous china orrisa type w.c. pan size 580 mm	each	1.00	780.00	780.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				1254.05
	Add 1 % Water charges				12.54
	TOTAL				1266.59
	Add 15 % Contractor's profit and overheads				189.99
	Cost of each				1456.58
	Say				1456.60

17.14 Extra for using coloured W.C. pan instead of white W.C. pan :**17.14.1 Orissa pattern W.C. pan 580x440 mm**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
7104	Difference in cost of Coloured Orissa pattern W.C. pan 580x440 mm	each	1.00	980.00	980.00
1954	Vitreous china orrisa type w.c. pan size 580 mm	each	-1.00	780.00	-780.00
	TOTAL				200.00
	Add 1 % Water charges				2.00
	TOTAL				202.00
	Add 15 % Contractor's profit and overheads				30.30
	Cost of each				232.30
	Say				232.30

17.15 Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1955	Vitreous china pedestal type water closet	each	1.00	700.00	700.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.73	23.16
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				1174.05
	Add 1 % Water charges				11.74
	TOTAL				1185.79
	Add 15 % Contractor's profit and overheads				177.87
	Cost of each				1363.66
	Say				1363.65

17.16 Extra for using coloured pedestal type W.C pan (European type) with low level cistern of same colour instead of white vitreous china W.C pan and cistern.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
7105	Coloured Pedestal type W.C. pan 580x440 mm (European type)	each	1.00	900.00	900.00
	Deduct				
1955	Vitreous china pedestal type water closet	each	-1.00	700.00	-700.00
7106	Coloured Vitreous china 10 lit. low level cistern	each	1.00	1100.00	1100.00
	Deduct				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7005	Vitreous china 10 litres low level cistern without fittings	each	-1.00	750.00	-750.00
	TOTAL				550.00
	Add 1 % Water charges				5.50
	TOTAL				555.50
	Add 15 % Contractor's profit and overheads				83.33
	Cost of each				638.83
	Say				638.85

17.16A Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1313	Details of cost for 1 No. 8 mm dia C.P. Brass/ S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate for European type W.C.(Hindware/ Kingston/Prima/Parko/Marc)	each	1.00	200.00	200.00
9999	Carriage of material and fixing charges	L.S.	11.20	1.73	19.38
	TOTAL				219.38
	Add 1 % Water charges				2.19
	TOTAL				221.57
	Add 15 % Contractor's profit and overheads				33.24
	Cost of each				254.81
	Say				254.80

17.17 Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet :

17.17.1 250x130x30 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pair				
	MATERIAL				
1363	Vitreous china foot rests 250x130x30 mm	pair	1.00	100.00	100.00
9988	Cement, sand including carriage of materials	L.S.	8.06	1.73	13.94
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.06	487.00	29.22
	TOTAL				143.16
	Add 1 % Water charges				1.43
	TOTAL				144.59
	Add 15 % Contractor's profit and overheads				21.69
	Cost for 1 pair				166.28
	Say				166.30

17.17.2 250x125x25 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pair				
	MATERIAL				
1970	Vitreous china foot rests 250x125x25 mm	pair	1.00	100.00	100.00
9988	Cement, sand including carriage of materials	L.S.	8.06	1.73	13.94
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.06	487.00	29.22
	TOTAL				143.16
	Add 1 % Water charges				1.43
	TOTAL				144.59
	Add 15 % Contractor's profit and overheads				21.69
	Cost for 1 pair				166.28
	Say				166.30

17.18 Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.**17.18.1 10 litre capacity - White**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7358	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	600.00	600.00
9977	Carriage of materials	L.S.	5.20	1.73	9.00
	LABOUR				
	(Considering 1 fitter and 1 beldar can fix 8 cistern in one day)				
0116	Fitter (grade 1)	day	0.125	487.00	60.88
0114	Beldar	day	0.125	368.00	46.00
	TOTAL				715.88
	Add 1 % Water charges				7.16
	TOTAL				723.04
	Add 15 % Contractor's profit and overheads				108.46
	Cost of each				831.50
	Say				831.50

17.18.2 10 litre capacity - coloured

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7123	Coloured High density polythylene/ poly propylene 10 lit. (full flush) capacity controlled low level flushing cistern with fittings	each	1.00	540.00	540.00
9977	Carriage of materials	L.S.	7.02	1.73	12.14
	LABOUR				
	(Considering 1 fitter and 1 beldar can fix 8 cistern in one day)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	Fitter (grade 1)	day	0.125	487.00	60.88
0114	Beldar	day	0.125	368.00	46.00
	TOTAL				659.02
	Add 1 % Water charges				6.59
	TOTAL				665.61
	Add 15 % Contractor's profit and overheads				99.84
	Cost of each				765.45
	Say				765.45

17.19 Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.

17.19.1 10 litre (full flush) capacity-white

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7126	White Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings	each	1.00	800.00	800.00
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				1250.89
	Add 1 % Water charges				12.51
	TOTAL				1263.40
	Add 15 % Contractor's profit and overheads				189.51
	Cost of each				1452.91
	Say				1452.90

17.19.2 10 litre (full flush) capacity-coloured

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7127	Coloured Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings	each	1.00	1200.00	1200.00
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				1650.89
	Add 1 % Water charges				16.51
	TOTAL				1667.40
	Add 15 % Contractor's profit and overheads				250.11
	Cost of each				1917.51
	Say				1917.50

17.20 Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :

17.20.1 White solid plastic seat with lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1875	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	1.00	330.00	330.00
9988	Carriage of materials and fixing charges	L.S.	13.39	1.73	23.16
	TOTAL				353.16
	Add 1 % Water charges				3.53
	TOTAL				356.69
	Add 15 % Contractor's profit and overheads				53.50
	Cost of each				410.19
	Say				410.20

17.20.2 Black solid plastic seat with lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1876	Black plastic seat (solid) with lid C.P.brass hinges and rubber buffers	each	1.00	310.00	310.00
9988	Carriage of materials and fixing charges	L.S.	13.39	1.73	23.16
	TOTAL				333.16
	Add 1 % Water charges				3.33
	TOTAL				336.49
	Add 15 % Contractor's profit and overheads				50.47
	Cost of each				386.96
	Say				386.95

17.20.3 Coloured (other than black & white) solid plastic seat with lid

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
7107	Difference in cost of Coloured (other than black) solid P.V.C. seat in European W.C. pan	each	1.00	405.00	405.00
9988	Carriage of materials and fixing charges	L.S.	13.39	1.73	23.16
	TOTAL				428.16
	Add 1 % Water charges				4.28
	TOTAL				432.44
	Add 15 % Contractor's profit and overheads				64.87
	Cost of each				497.31
	Say				497.30

17.22 Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1614	G.I. inlet connection	each	1.00	60.00	60.00
9988	Carriage of materials and fixing charges	L.S.	13.39	1.73	23.16
	TOTAL				83.16
	Add 1 % Water charges				0.83
	TOTAL				83.99
	Add 15 % Contractor's profit and overheads				12.60
	Cost of each				96.59
	Say				96.60

17.22A Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				
7121	Bottle Trap (Hindware/ Kingston/ Prima/ Parko / Marc)	each	1.00	650.00	650.00
9988	Carriage and sundries	L.S.	20.00	1.73	34.60
	TOTAL				684.60
	Add 1 % Water charges				6.85
	TOTAL				691.45
	Add 15 % Contractor's profit and overheads				103.72
	Cost of each				795.17
	Say				795.15

17.22B Providing and fixing CP Brass Single lever telephonic wall mixer of quality & make as approved by Engineer in charge.

(a) 15 mm nominal dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				
7122	CP Brass Single lever telephonic wall mixer of approved make (Hindware/Kingston/ Prima /Parko/ Mark)	each	1.00	4000.00	4000.00
9977	Carriage of material and fixing charges	L.S.	34.71	1.73	60.05
	TOTAL				4060.05
	Add 1 % Water charges				40.60
	TOTAL				4100.65
	Add 15 % Contractor's profit and overheads				615.10
	Cost of each				4715.75
	Say				4715.75

17.23 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1913	Vitreous china lipped front urinal	each	1.00	460.00	460.00
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	LABOUR				
0116	Fitter (grade 1)	day	0.38	487.00	185.06
0114	Beldar	day	0.38	368.00	139.84
	TOTAL				801.32
	Add 1 % Water charges				8.01
	TOTAL				809.33
	Add 15 % Contractor's profit and overheads				121.40
	Cost of each				930.73
	Say				930.75

17.24 Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1915	Vitreous china squatting plate urinal	each	1.00	1053.00	1053.00
9999	Cement, sand and grit etc.	L.S.	10.79	1.73	18.67
9977	Carriage of materials	L.S.	13.39	1.73	23.16
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				1949.83
	Add 1 % Water charges				19.50
	TOTAL				1969.33
	Add 15 % Contractor's profit and overheads				295.40
	Cost of each				2264.73
	Say				2264.75

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :

17.25.1 Flat back wash basin of size 630x450 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1947	Vitreous china flat back wash basin 630x450 mm	each	1.00	725.00	725.00
9999	Fixing charges	L.S.	53.82	1.73	93.11

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	TOTAL				834.53
	Add 1 % Water charges				8.35
	TOTAL				842.88
	Add 15 % Contractor's profit and overheads				126.43
	Cost of each				969.31
	Say				969.30

17.25.2 Flat back wash basin of size 550x400 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3229	Vitreous china flat back wash basin 550x400 mm	each	1.00	550.00	550.00
9999	Fixing charges	L.S.	53.82	1.73	93.11
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	TOTAL				659.53
	Add 1 % Water charges				6.60
	TOTAL				666.13
	Add 15 % Contractor's profit and overheads				99.92
	Cost of each				766.05
	Say				766.05

17.25.3 Angle back wash basin of size 600x480 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1949	Vitreous china angle back wash basin 600x480 mm	each	1.00	725.00	725.00
9999	Fixing charges	L.S.	53.82	1.73	93.11
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	TOTAL				834.53
	Add 1 % Water charges				8.35
	TOTAL				842.88
	Add 15 % Contractor's profit and overheads				126.43
	Cost of each				969.31
	Say				969.30

17.25.4 Angle back wash basin of size 400x400 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1950	Vitreous china angle back wash basin 400x400 mm	each	1.00	425.00	425.00
9999	Fixing charges	L.S.	53.82	1.73	93.11

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	TOTAL				534.53
	Add 1 % Water charges				5.35
	TOTAL				539.88
	Add 15 % Contractor's profit and overheads				80.98
	Cost of each				620.86
	Say				620.85

17.25.5 Flat back wash basin of size 450x300 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7004	Vitreous china flat back wash basin 450x300 mm	each	1.00	325.00	325.00
9999	Fixing charges	L.S.	53.82	1.73	93.11
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	TOTAL				434.53
	Add 1 % Water charges				4.35
	TOTAL				438.88
	Add 15 % Contractor's profit and overheads				65.83
	Cost of each				504.71
	Say				504.70

17.25.6 Surgeon type wash basin of size 660x460 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1.00	1000.00	1000.00
9999	Fixing charges	L.S.	53.82	1.73	93.11
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	TOTAL				1109.53
	Add 1 % Water charges				11.10
	TOTAL				1120.63
	Add 15 % Contractor's profit and overheads				168.09
	Cost of each				1288.72
	Say				1288.70

17.26 Providing and fixing kitchen sink including making all connections excluding cost of fittings.

17.26.1 White glazed fire clay sink of size 600x450x250 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1863	Fire clay kitchen sink: 600x450x250 mm	each	1.00	1300.00	1300.00
9999	Fixing charges	L.S.	40.43	1.73	69.94

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of materials	L.S.	10.79	1.73	18.67
	TOTAL				1388.61
	Add 1 % Water charges				13.89
	TOTAL				1402.50
	Add 15 % Contractor's profit and overheads				210.38
	Cost of each				1612.88
	Say				1612.90

17.27 Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings :

17.27.1 Size 450x300x150 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1871	White vitreous china laboratry sink 450x300x150 mm	each	1.00	820.00	820.00
9999	Fixing charges	L.S.	40.43	1.73	69.94
9977	Carriage of materials	L.S.	10.79	1.73	18.67
	TOTAL				908.61
	Add 1 % Water charges				9.09
	TOTAL				917.70
	Add 15 % Contractor's profit and overheads				137.66
	Cost of each				1055.36
	Say				1055.35

17.27.2 Size 600x450x200 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1872	White vitreous china laboratry sink 600x450x200 mm	each	1.00	1525.00	1525.00
9999	Fixing charges	L.S.	40.43	1.73	69.94
9977	Carriage of materials	L.S.	10.79	1.73	18.67
	TOTAL				1613.61
	Add 1 % Water charges				16.14
	TOTAL				1629.75
	Add 15 % Contractor's profit and overheads				244.46
	Cost of each				1874.21
	Say				1874.20

17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.

17.28.1 Semi rigid pipe

17.28.1.1 32 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7117	Details of cost for one no. MATERIAL Semi Rigid PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	1.00	30.00	30.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				65.08
	Add 1 % Water charges				0.65
	TOTAL				65.73
	Add 15 % Contractor's profit and overheads				9.86
	Cost of each				75.59
	Say				75.60

17.28.1.2 40 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7118	Details of cost for one no. MATERIAL Semi Rigid PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	1.00	35.00	35.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				70.08
	Add 1 % Water charges				0.70
	TOTAL				70.78
	Add 15 % Contractor's profit and overheads				10.62
	Cost of each				81.40
	Say				81.40

17.28.2 Flexible pipe

17.28.2.1 32 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7119	Details of cost for one no. MATERIAL Flexible (coil shaped) PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	1.00	28.00	28.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				63.08
	Add 1 % Water charges				0.63
	TOTAL				63.71
	Add 15 % Contractor's profit and overheads				9.56
	Cost of each				73.27
	Say				73.25

17.28.2.2 40 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7120	Details of cost for one no. MATERIAL Flexible (coil shaped) PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	1.00	30.00	30.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				65.08
	Add 1 % Water charges				0.65
	TOTAL				65.73
	Add 15 % Contractor's profit and overheads				9.86
	Cost of each				75.59
	Say				75.60

17.29 Providing and fixing 100 mm sand cast Iron grating for gully trap.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1369	Details of cost for one no. MATERIAL S.C.I. gully or nahani grating 100 mm dia	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	4.16	1.73	7.20
	TOTAL				25.20
	Add 1 % Water charges				0.25
	TOTAL				25.45
	Add 15 % Contractor's profit and overheads				3.82
	Cost of each				29.27
	Say				29.25

17.30 Providing and fixing in position 25 mm diameter mosquito proof coupling of approved municipal design.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1350	Details of cost for one no. MATERIAL Mosquito proof coupling of approved design	each	1.00	30.00	30.00
9988	Carriage of materials and fixing charges	L.S.	1.82	1.73	3.15
	TOTAL				33.15
	Add 1 % Water charges				0.33
	TOTAL				33.48
	Add 15 % Contractor's profit and overheads				5.02
	Cost of each				38.50
	Say				38.50

17.31 Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1392	Mirror of superior make glass 60x45 cm	each	1.00	310.00	310.00
7116	Hard board 6 mm thick 600x450 mm	sqm	0.27	120.00	32.40
	Wooden cleats				
9.32	Rate as per item no 9.32 of SH : Wood and PVC work	each	4.00	21.85	87.40(A)
0588	Chromium plated Brass screws 25 mm	100 Nos	0.04	190.00	7.60
9977	Carriage of materials	L.S.	4.16	1.73	7.20
9999	Sundries	L.S.	1.43	1.73	2.47
	LABOUR				
0112	Carpenter 2nd class	day	0.33	448.00	147.84
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				716.35
	Add 1 % Water charges on all except (A) i.e. on (716.35 - 87.40) = 628.95				6.29
	TOTAL				722.64
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (722.64 - 87.40) = 635.24				95.29
	Cost of each				817.93
	Say				817.95

17.32 Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :

17.32.1 Circular shape 450 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7112	Circular shape 450 mm dia Mirror with Plastic moulded frame	each	1.00	450.00	450.00
	Hard board 0.45x0.45 = 0.2025 sqm Add wastage @ 10% = 0.0203 sqm = 0.2228 sqm say 0.22sqm				
7116	Hard board 6 mm thick	sqm	0.22	120.00	26.40
7048	Rawl plug 50 mm (designation 10 no.)	each	2.00	10.00	20.00
0588	Chromium plated Brass screws 25 mm	100 Nos	0.02	190.00	3.80
9999	Sundries	L.S.	1.43	1.73	2.47
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0112	Carpenter 2nd class	day	0.33	448.00	147.84

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				779.15
	Add 1 % Water charges				7.79
	TOTAL				786.94
	Add 15 % Contractor's profit and overheads				118.04
	Cost of each				904.98
	Say				905.00

17.32.2 Rectangular shape 453x357 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7113	Details of cost for one no. MATERIAL Rectangular shape 453x357 mm Mirror with Plastic moulded frame	each	1.00	300.00	300.00
	Hard board $0.453 \times 0.357 = 0.1617$ sqm				
	Add wastage @ 10% = 0.0162 sqm = 0.1779 sqm say 0.18 sqm				
7116	Hard board 6 mm thick	sqm	0.18	120.00	21.60
7048	Rawl plug 50 mm (designation 10 no.)	each	4.00	10.00	40.00
0588	Chromium plated Brass screws 25 mm	100 Nos	0.04	190.00	7.60
9999	Sundries	L.S.	1.43	1.73	2.47
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0112	Carpenter 2nd class	day	0.33	448.00	147.84
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				648.15
	Add 1 % Water charges				6.48
	TOTAL				654.63
	Add 15 % Contractor's profit and overheads				98.19
	Cost of each				752.82
	Say				752.80

17.32.3 Oval shape 450x350 mm (outer dimensions)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7114	Details of cost for one no. MATERIAL Oval shape 450x350 mm (outer dimensions) Mirror with Plastic moulded frame	each	1.00	350.00	350.00
	Hard board $0.45 \times 0.35 = 0.1575$ sqm				
	Add wastage @ 10% = 0.0158 sqm = 0.1733 sqm say 0.17 sqm				
7116	Hard board 6 mm thick	sqm	0.17	120.00	20.40
7048	Rawl plug 50 mm (designation 10 no.)	each	4.00	10.00	40.00
0588	Chromium plated Brass screws 25 mm	100 Nos	0.04	190.00	7.60
9999	Sundries	L.S.	1.43	1.73	2.47
9977	Carriage of materials	L.S.	4.16	1.73	7.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0112	LABOUR Carpenter 2nd class	day	0.33	448.00	147.84
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				696.95
	Add 1 % Water charges				6.97
	TOTAL				703.92
	Add 15 % Contractor's profit and overheads				105.59
	Cost of each				809.51
	Say				809.50

17.32.4 Rectangular shape 1500x450 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7115	Details of cost for one no. MATERIAL Rectangular shape 1500x450 mm Mirror with Plastic moulded frame	each	1.00	700.00	700.00
	Hard board 1.50x0.45 = 0.675 sqm				
	Add wastage @ 10% = 0.0675 sqm = 0.7425 sqm say 0.74sqm				
7116	Hard board 6 mm thick	sqm	0.74	120.00	88.80
7048	Rawl plug 50 mm (designation 10 no.)	each	6.00	10.00	60.00
0588	Chromium plated Brass screws 25 mm	100 Nos	0.06	190.00	11.40
9999	Sundries	L.S.	1.43	1.73	2.47
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0112	Carpenter 2nd class	day	0.33	448.00	147.84
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				1139.15
	Add 1 % Water charges				11.39
	TOTAL				1150.54
	Add 15 % Contractor's profit and overheads				172.58
	Cost of each				1323.12
	Say				1323.10

17.33 Providing and fixing 600x120x5 mm glass shelf with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3228	Details of cost for one no. MATERIAL 600x120 mm glass shelf with anodised aluminium angle frame, C.P. brass brackets and guard rail of standard size	each	1.00	250.00	250.00
7048	Rawl plug 50 mm (designation 10 no.)	each	2.00	10.00	20.00
0586	Chromium plated Brass screws 40 mm	100 Nos	0.04	310.00	12.40
9977	Carriage of materials	L.S.	4.16	1.73	7.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0112	LABOUR Carpenter 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	0.25	368.00	92.00
	TOTAL				493.60
	Add 1 % Water charges				4.94
	TOTAL				498.54
	Add 15 % Contractor's profit and overheads				74.78
	Cost of each				573.32
	Say				573.30

17.34 Providing and fixing toilet paper holder :

17.34.1 C.P. brass

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1889	C.P.brass toilet paper holder of standard size	each	1.00	185.00	185.00
	Wooden cleats				
9.32	Rate as per item no 9.32 of SH : Wood and PVC work	each	2.00	21.85	43.70(A)
0588	Chromium plated Brass screws 25 mm	100 Nos	0.02	190.00	3.80
9977	Carriage of materials	L.S.	4.29	1.73	7.42
	LABOUR				
0112	Carpenter 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				337.84
	Add 1 % Water charges on all except (A) i.e. on (337.84 - 43.70) = 294.14				2.94
	TOTAL				340.78
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (340.78 - 43.70) = 297.08				44.56
	Cost of each				385.34
	Say				385.35

17.34.2 Vitreous china

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of one no. MATERIAL				
3749	Vitreous china toilet paper holder of standard size	each	1.00	100.00	100.00
	Wooden cleats				
9.32	Rate as per item no 9.32 of SH : Wood and PVC work	each	2.00	21.85	43.70(A)
0588	Chromium plated Brass screws 25 mm	100 Nos	0.06	190.00	11.40
9977	Carriage of materials	L.S.	4.29	1.73	7.42

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0112	LABOUR Carpenter 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				260.44
	Add 1 % Water charges on all except (A) i.e. on (260.44 - 43.70) = 216.74				2.17
	TOTAL				262.61
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (262.61 - 43.70) = 218.91				32.84
	Cost of each				295.45
	Say				295.45

17.35 Providing and fixing soil, waste and vent pipes :

17.35.1 100 mm dia

17.35.1.1 Sand cast iron S&S pipe as per IS: 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 17.37 m (1.8mx10)-(9x0.07m) = 17.37 m				
	MATERIAL				
1617	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100mm dia	each	10.50	1150.00	12075.00
9999	Scaffolding	L.S.	80.73	1.73	139.66
9977	Carriage of materials	L.S.	53.82	1.73	93.11
	LABOUR				
0116	Fitter (grade 1)	day	0.42	487.00	204.54
0100	Bandhani	day	0.21	407.00	85.47
0114	Beldar	day	0.83	368.00	305.44
	TOTAL				12903.22
	Add 1 % Water charges				129.03
	TOTAL				13032.25
	Add 15 % Contractor's profit and overheads				1954.84
	Cost for 17.37 m pan				14987.09
	Cost per metre				862.81
	Say				862.80

17.35.1.2 Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16.87 m (1.75mx10)-(9x0.07m) = 16.87 m				
	MATERIAL				
3620	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:100mm dia	each	10.50	1196.00	12558.00
9999	Scaffolding	L.S.	80.73	1.73	139.66
9977	Carriage of materials	L.S.	53.82	1.73	93.11

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.42	487.00	204.54
0100	Bandhani	day	0.21	407.00	85.47
0114	Beldar	day	0.83	368.00	305.44
	TOTAL				13386.22
	Add 1 % Water charges				133.86
	TOTAL				13520.08
	Add 15 % Contractor's profit and overheads				2028.01
	Cost for 16.87 m pan				15548.09
	Cost per metre				921.64
	Say				921.65

17.35.1.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7621	Detail of cost for 18.00 m (6 x 3.00 m) MATERIAL Hubless centrifugally cast (spun) iron pipes as per IS 15905 - 100 mm dia (3000 mm length pipe)	metre	18.54	729.00	13515.66
	i/c (3% wastage)				
9999	Scaffolding	L.S.	80.73	1.73	139.66
9977	Carriage of materials	L.S.	53.82	1.73	93.11
	LABOUR				
0116	Fitter (grade 1)	day	0.42	487.00	204.54
0100	Bandhani	day	0.21	407.00	85.47
0114	Beldar	day	0.83	368.00	305.44
	TOTAL				14343.88
	Add 1 % Water charges				143.44
	TOTAL				14487.32
	Add 15 % Contractor's profit and overheads				2173.10
	Cost of 18.00 metre				16660.42
	Cost of 1 metre				925.57
	Say				925.55

17.35.2 75 mm diameter :

17.35.2.1 Sand cast iron S&S pipe as per IS: 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1616	Details of cost for 17.42 m (1.8mx10)-(9x0.065m) = 17.415 m say 17.42 m MATERIAL S.C.I. soil, waste and vent single socketed pipe 1.80 metres long:75mm dia	each	10.50	950.00	9975.00
9999	Scaffolding	L.S.	80.73	1.73	139.66
9977	Carriage of materials	L.S.	40.38	1.73	69.86

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.35	487.00	170.45
0100	Bandhani	day	0.17	407.00	69.19
0114	Beldar	day	0.70	368.00	257.60
	TOTAL				10681.76
	Add 1 % Water charges				106.82
	TOTAL				10788.58
	Add 15 % Contractor's profit and overheads				1618.29
	Cost for 17.42 m pan				12406.87
	Cost per metre				712.21
	Say				712.20

17.35.2.2 Centrifugally cast (spun) iron socketed pipe as per IS: 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3621	Details of cost for 16.92 m (1.75mx10)-(9x0.065m) = 16.915 m say 16.92 m MATERIAL C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:75mm dia including 5% allowance for wastage	each	10.50	1035.00	10867.50
9999	Scaffolding	L.S.	80.73	1.73	139.66
9977	Carriage of materials	L.S.	40.38	1.73	69.86
	LABOUR				
0116	Fitter (grade 1)	day	0.35	487.00	170.45
0100	Bandhani	day	0.17	407.00	69.19
0114	Beldar	day	0.70	368.00	257.60
	TOTAL				11574.26
	Add 1 % Water charges				115.74
	TOTAL				11690.00
	Add 15 % Contractor's profit and overheads				1753.50
	Cost for 16.92 m pan				13443.50
	Cost per metre				794.53
	Say				794.55

17.35.2.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7622	Detail of cost for 18.00 m (6 x 3.00 m) MATERIAL Hubless centrifugally cast (spun) iron pipes as per IS 15905 - 75 mm dia (3000 mm length pipe) i/c (3% wastage)	metre	18.54	597.00	11068.38
9999	Scaffolding	L.S.	80.73	1.73	139.66
9977	Carriage of materials	L.S.	40.38	1.73	69.86
	LABOUR				
0116	Fitter (grade 1)	day	0.35	487.00	170.45
0100	Bandhani	day	0.17	407.00	69.19

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.70	368.00	257.60
	TOTAL				11775.14
	Add 1 % Water charges				117.75
	TOTAL				11892.89
	Add 15 % Contractor's profit and overheads				1783.93
	Cost of 18.00 metre				13676.82
	Cost of 1 metre				759.82
	Say				759.80

17.36 Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :

17.36.1 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Details of cost for 4 joints MATERIAL Cement mortar, spun yarn etc.	L.S.	6.89	1.73	11.92
	LABOUR				
0116	Fitter (grade 1)	day	0.28	487.00	136.36
0114	Beldar	day	0.28	368.00	103.04
	TOTAL				251.32
	Add 1 % Water charges				2.51
	TOTAL				253.83
	Add 15 % Contractor's profit and overheads				38.07
	Cost of 4 joints				291.90
	Cost of 1 joint				72.97
	Say				72.95

17.36.2 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Details of cost for 4 joints MATERIAL Cement mortar, spun yarn etc.	L.S.	8.06	1.73	13.94
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				296.09
	Add 1 % Water charges				2.96
	TOTAL				299.05
	Add 15 % Contractor's profit and overheads				44.86
	Cost of 4 joints				343.91
	Cost of 1 joint				85.97
	Say				85.95

17.37 Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :

17.37.1 For 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos.				
	MATERIAL				
1331	M.S.Holder bat clamp of approved design for 100 mm S.C.I. pipe	each	5.00	20.00	100.00
9977	Carriage of bat clamps	L.S.	2.47	1.73	4.27
	LABOUR				
0116	Fitter (grade 1)	day	0.125	487.00	60.88
0124	Mason (brick layer) 2nd class	day	0.75	448.00	336.00
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	7.15	1.73	12.37
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.0033	1300.00	4.29
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0011	1300.00	1.43
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.0044	103.77	0.46
0982	Coarse sand (zone III)	cum	0.0022	1200.00	2.64
2203	Carriage of Coarse sand	cum	0.0022	103.77	0.23
0367	Portland Cement (OPC-43 grade)	tonne	0.0016	5700.00	9.12
2209	Carriage of Cement	tonne	0.0016	92.24	0.15
0114	Beldar	day	0.0045	368.00	1.66
0115	Coolie	day	0.0032	368.00	1.18
0101	Bhisti	day	0.0014	407.00	0.57
0123	Mason (brick layer) 1st class	day	0.0003	487.00	0.15
0124	Mason (brick layer) 2nd class	day	0.0003	448.00	0.13
0128	Mate	day	0.0002	407.00	0.08
9999	Hire charges of machine etc.	L.S.	0.26	1.73	0.45
9999	Sundries	L.S.	0.13	1.73	0.22
9999	Sundries	L.S.	0.13	1.73	0.22
	TOTAL				720.50
	Add 1 % Water charges				7.21
	TOTAL				727.71
	Add 15 % Contractor's profit and overheads				109.16
	Cost of 5.00 bat clamps				836.87
	Cost of each				167.37
	Say				167.35

17.37.2 For 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos.				
	MATERIAL				
1332	M.S.Holder bat clamp of approved design for 75 mm S.C.I. pipe	each	5.00	18.00	90.00
9977	Carriage of bat clamps	L.S.	2.47	1.73	4.27
	LABOUR				
0116	Fitter (grade 1)	day	0.125	487.00	60.88
0124	Mason (brick layer) 2nd class	day	0.75	448.00	336.00
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	7.15	1.73	12.37
	C.C. Black 5x0.1x0.1x0.1 = 0.005 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	0.0033	1300.00	4.29
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.0011	1300.00	1.43
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.0044	103.77	0.46
0982	Coarse sand (zone III)	cum	0.0022	1200.00	2.64
2203	Carriage of Coarse sand	cum	0.0022	103.77	0.23
0367	Portland Cement (OPC-43 grade)	tonne	0.0016	5700.00	9.12
2209	Carriage of Cement	tonne	0.0016	92.24	0.15
0114	Beldar	day	0.0045	368.00	1.66
0115	Coolie	day	0.0032	368.00	1.18
0101	Bhisti	day	0.0014	407.00	0.57
0123	Mason (brick layer) 1st class	day	0.0003	487.00	0.15
0124	Mason (brick layer) 2nd class	day	0.0003	448.00	0.13
0128	Mate	day	0.0002	407.00	0.08
9999	Hire charges of machine etc.	L.S.	0.26	1.73	0.45
9999	Sundries	L.S.	0.13	1.73	0.22
9999	Sundries	L.S.	0.13	1.73	0.22
	TOTAL				710.50
	Add 1 % Water charges				7.11
	TOTAL				717.61
	Add 15 % Contractor's profit and overheads				107.64
	Cost of 5.00 bat clamps				825.25
	Cost of each				165.05
	Say				165.05

17.38 Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.38.1 100 mm dia

17.38.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1625	S.C.I. bend with access door 100mm dia	each	1.00	252.00	252.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				293.39
	Add 1 % Water charges				2.93
	TOTAL				296.32
	Add 15 % Contractor's profit and overheads				44.45
	Cost of each				340.77
	Say				340.75

17.38.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3624	S.C.I. S&S bends with access door 100mm dia	each	1.00	290.00	290.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				331.39
	Add 1 % Water charges				3.31
	TOTAL				334.70
	Add 15 % Contractor's profit and overheads				50.21
	Cost of each				384.91
	Say				384.90

17.38.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one no. MATERIAL				
7639	Hubless centrifugally cast (spun) iron bend with access door - 100 mm dia as per IS 15905	each	1.00	380.00	380.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				421.39
	Add 1 % Water charges				4.21
	TOTAL				425.60
	Add 15 % Contractor's profit and overheads				63.84
	Cost of each				489.44
	Say				489.45

17.38.2 75 mm dia**17.38.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1624	S.C.I. bend with access door 75mm dia	each	1.00	200.00	200.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				233.67
	Add 1 % Water charges				2.34
	TOTAL				236.01
	Add 15 % Contractor's profit and overheads				35.40
	Cost of each				271.41
	Say				271.40

17.38.2.2 Sand cast iron S&S as per IS- 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3625	S.C.I. S&S bends with access door 75mm dia	each	1.00	240.00	240.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				273.67
	Add 1 % Water charges				2.74
	TOTAL				276.41
	Add 15 % Contractor's profit and overheads				41.46
	Cost of each				317.87
	Say				317.85

17.38.2.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one no.				
	MATERIAL				
7640	Hubless centrifugally cast (spun) iron bend with access door - 75 mm dia as per IS 15905 including cost of bolts & nuts.	each	1.00	303.00	303.00
1373	Rubber insertions for 80 mm dia pipe joints 3mm thick	each	1.00	15.00	15.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				336.67
	Add 1 % Water charges				3.37
	TOTAL				340.04
	Add 15 % Contractor's profit and overheads				51.01
	Cost of each				391.05
	Say				391.05

17.39 Providing and fixing plain bend of required degree.**17.39.1 100 mm dia****17.39.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1621	S.C.I. plain bend 100 mm dia	each	1.00	350.00	350.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				373.39
	Add 1 % Water charges				3.73
	TOTAL				377.12
	Add 15 % Contractor's profit and overheads				56.57
	Cost of each				433.69
	Say				433.70

17.39.1.2 Sand cast iron S&S as per IS : 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3628	S.C.I. S&S bend100mm dia	each	1.00	265.00	265.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				288.39
	Add 1 % Water charges				2.88
	TOTAL				291.27
	Add 15 % Contractor's profit and overheads				43.69
	Cost of each				334.96
	Say				334.95

17.39.1.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one no.				
	MATERIAL				
7623	Hubless centrifugally cast (spun) iron plain bend as per IS 15905- 100 mm dia	each	1.00	241.00	241.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				264.39
	Add 1 % Water charges				2.64
	TOTAL				267.03
	Add 15 % Contractor's profit and overheads				40.05
	Cost of each				307.08
	Say				307.10

17.39.2 75 mm dia**17.39.2.1 Sand cast iron S&S as per IS -1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1620	S.C.I. plain bend 75 mm dia	each	1.00	170.00	170.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				188.67
	Add 1 % Water charges				1.89
	TOTAL				190.56
	Add 15 % Contractor's profit and overheads				28.58
	Cost of each				219.14
	Say				219.15

17.39.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3629	S.C.I. S&S bend 75mm dia	each	1.00	195.00	195.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				213.67
	Add 1 % Water charges				2.14
	TOTAL				215.81
	Add 15 % Contractor's profit and overheads				32.37
	Cost of each				248.18
	Say				248.20

17.39.2.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one no. MATERIAL				
7624	Hubless centrifugally cast (spun) iron plain bend as per IS 15905 - 75 mm dia	each	1.00	164.00	164.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				182.67
	Add 1 % Water charges				1.83
	TOTAL				184.50
	Add 15 % Contractor's profit and overheads				27.68
	Cost of each				212.18
	Say				212.20

17.40 Providing and fixing heel rest sanitary bend**17.40.1 100 mm dia****17.40.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1667	Sand cast iron heel rest bend 100mm dia	each	1.00	250.00	250.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				273.39
	Add 1 % Water charges				2.73
	TOTAL				276.12
	Add 15 % Contractor's profit and overheads				41.42
	Cost of each				317.54
	Say				317.55

17.40.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3634	S.C.I. S&S heel rest sanitary bend 100mm dia	each	1.00	296.00	296.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				319.39
	Add 1 % Water charges				3.19
	TOTAL				322.58
	Add 15 % Contractor's profit and overheads				48.39
	Cost of each				370.97
	Say				370.95

17.40.2 75 mm dia**17.40.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1666	Sand cast iron heel rest bend 75mm dia	each	1.00	220.00	220.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				238.67
	Add 1 % Water charges				2.39
	TOTAL				241.06
	Add 15 % Contractor's profit and overheads				36.16
	Cost of each				277.22
	Say				277.20

17.40.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3635	S.C.I. S&S heel rest sanitary bend 75mm dia	each	1.00	250.00	250.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				268.67
	Add 1 % Water charges				2.69
	TOTAL				271.36
	Add 15 % Contractor's profit and overheads				40.70
	Cost of each				312.06
	Say				312.05

17.41 Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :**17.41.1 100x100x100x100 mm**

17.41.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1637	S.C.I. double equal junctions 100x100x 100x100 mm dia with access door.	each	1.00	550.00	550.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.39	1.73	23.16
	TOTAL				591.16
	Add 1 % Water charges				5.91
	TOTAL				597.07
	Add 15 % Contractor's profit and overheads				89.56
	Cost of each				686.63
	Say				686.65

17.41.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3654	S.C.I. S&S double equal junctions with access door 100x100x100x100 mm.	each	1.00	615.00	615.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.39	1.73	23.16
	TOTAL				656.16
	Add 1 % Water charges				6.56
	TOTAL				662.72
	Add 15 % Contractor's profit and overheads				99.41
	Cost of each				762.13
	Say				762.15

17.41.2 75x75x75x75 mm**17.41.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1636	S.C.I. double equal junctions 75x75x75x 75 mm dia with access door.	each	1.00	425.00	425.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				458.67
	Add 1 % Water charges				4.59
	TOTAL				463.26
	Add 15 % Contractor's profit and overheads				69.49
	Cost of each				532.75
	Say				532.75

17.41.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3655	S.C.I. S&S double equal junctions with access door 75x75x75x75 mm.	each	1.00	480.00	480.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				513.67
	Add 1 % Water charges				5.14
	TOTAL				518.81
	Add 15 % Contractor's profit and overheads				77.82
	Cost of each				596.63
	Say				596.65

17.42 Providing and fixing double equal plain junction of required degree.**17.42.1 100x100x100x100 mm****17.42.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1634	S.C.I. plain double equal junctions 100x100x100x100 mm dia	each	1.00	520.00	520.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				543.39
	Add 1 % Water charges				5.43
	TOTAL				548.82
	Add 15 % Contractor's profit and overheads				82.32
	Cost of each				631.14
	Say				631.15

17.42.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3650	S.C.I. S&S double equal junctions 100x100x100x100 mm	each	1.00	620.00	620.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				643.39
	Add 1 % Water charges				6.43
	TOTAL				649.82
	Add 15 % Contractor's profit and overheads				97.47
	Cost of each				747.29
	Say				747.30

17.42.1.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7625	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron double equal plain junction as per IS 15905 - 100x100x100x100 mm dia	each	1.00	532.00	532.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				555.39
	Add 1 % Water charges				5.55
	TOTAL				560.94
	Add 15 % Contractor's profit and overheads				84.14
	Cost of each				645.08
	Say				645.10

17.42.2 75x75x75x75 mm

17.42.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1633	Details of cost for one no. MATERIAL S.C.I. plain double equal junctions 75x75x75x75 mm dia	each	1.00	346.00	346.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				364.67
	Add 1 % Water charges				3.65
	TOTAL				368.32
	Add 15 % Contractor's profit and overheads				55.25
	Cost of each				423.57
	Say				423.55

17.42.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3651	Details of cost for one no. MATERIAL S.C.I. S&S double equal junctions 75x75x75x75 mm	each	1.00	462.00	462.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				480.67
	Add 1 % Water charges				4.81
	TOTAL				485.48
	Add 15 % Contractor's profit and overheads				72.82
	Cost of each				558.30
	Say				558.30

17.42.2.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7626	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron double equal plain junction as per IS 15905 - 75x75x75x75 mm dia	each	1.00	286.00	286.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				304.67
	Add 1 % Water charges				3.05
	TOTAL				307.72
	Add 15 % Contractor's profit and overheads				46.16
	Cost of each				353.88
	Say				353.90

17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.43.1 100x100x100 mm

17.43.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1631	Details of cost for one no. MATERIAL S.C.I. single equal junctions 100x100x 100 mm dia with access door.	each	1.00	376.00	376.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				417.39
	Add 1 % Water charges				4.17
	TOTAL				421.56
	Add 15 % Contractor's profit and overheads				63.23
	Cost of each				484.79
	Say				484.80

17.43.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3644	Details of cost for one no. MATERIAL S.C.I. S&S single equal junctions with access door 100x100x100 mm	each	1.00	495.00	495.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				536.39
	Add 1 % Water charges				5.36
	TOTAL				541.75
	Add 15 % Contractor's profit and overheads				81.26
	Cost of each				623.01
	Say				623.00

17.43.2 75x75x75 mm**17.43.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1630	S.C.I. single equal junctions 75x75x75 mm dia with access door.	each	1.00	278.00	278.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				311.67
	Add 1 % Water charges				3.12
	TOTAL				314.79
	Add 15 % Contractor's profit and overheads				47.22
	Cost of each				362.01
	Say				362.00

17.43.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3645	S.C.I. S&S single equal junctions with access door 75x75x75 mm	each	1.00	373.00	373.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				406.67
	Add 1 % Water charges				4.07
	TOTAL				410.74
	Add 15 % Contractor's profit and overheads				61.61
	Cost of each				472.35
	Say				472.35

17.44 Providing and fixing single equal plain junction of required degree :**17.44.1 100x100x100 mm****17.44.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1628	S.C.I. plain single equal junctions 100x100x100 mm dia	each	1.00	450.00	450.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				473.39
	Add 1 % Water charges				4.73
	TOTAL				478.12
	Add 15 % Contractor's profit and overheads				71.72
	Cost of each				549.84
	Say				549.85

17.44.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3640	Details of cost for one no. MATERIAL S.C.I. S&S single equal junctions 100x100x100 mm	each	1.00	472.00	472.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				495.39
	Add 1 % Water charges				4.95
	TOTAL				500.34
	Add 15 % Contractor's profit and overheads				75.05
	Cost of each				575.39
	Say				575.40

17.44.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7627	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron single equal plain junction as per IS 15905 - 100x100x100 mm dia	each	1.00	410.00	410.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				433.39
	Add 1 % Water charges				4.33
	TOTAL				437.72
	Add 15 % Contractor's profit and overheads				65.66
	Cost of each				503.38
	Say				503.40

17.44.2 75x75x75 mm**17.44.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1627	Details of cost for one no. MATERIAL S.C.I. plain single equal junctions 75x75x75 mm dia	each	1.00	265.00	265.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				283.67
	Add 1 % Water charges				2.84
	TOTAL				286.51
	Add 15 % Contractor's profit and overheads				42.98
	Cost of each				329.49
	Say				329.50

17.44.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3641	Details of cost for one no. MATERIAL S.C.I. S&S single equal junctions 75x75x75 mm	each	1.00	330.00	330.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				348.67
	Add 1 % Water charges				3.49
	TOTAL				352.16
	Add 15 % Contractor's profit and overheads				52.82
	Cost of each				404.98
	Say				405.00

17.44.2.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7628	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron single equal plain junction as per IS 15905 - 75x75x75 mm dia	each	1.00	225.00	225.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				243.67
	Add 1 % Water charges				2.44
	TOTAL				246.11
	Add 15 % Contractor's profit and overheads				36.92
	Cost of each				283.03
	Say				283.05

17.45 Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete:

17.45.1 100x100x75x75 mm

17.45.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1662	Details of cost for one no. MATERIAL Sand cast iron S&S double unequal junctions: 100x100x75x75 mm dia with access door.	each	1.00	550.00	550.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				591.39
	Add 1 % Water charges				5.91
	TOTAL				597.30
	Add 15 % Contractor's profit and overheads				89.60
	Cost of each				686.90
	Say				686.90

17.45.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3674	S.C.I. S&S double unequal junctions with access door 100x100x75x75 mm	each	1.00	850.00	850.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				891.39
	Add 1 % Water charges				8.91
	TOTAL				900.30
	Add 15 % Contractor's profit and overheads				135.05
	Cost of each				1035.35
	Say				1035.35

17.46 Providing and fixing double unequal plain junction of required degree :**17.46.1 100x100x75x75 mm****17.46.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1659	Sand cast iron S&S plain double unequal junctions : 100x100x75x75 mm dia	each	1.00	550.00	550.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				573.39
	Add 1 % Water charges				5.73
	TOTAL				579.12
	Add 15 % Contractor's profit and overheads				86.87
	Cost of each				665.99
	Say				666.00

17.46.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3670	S.C.I. S&S double unequal junctions 100x100x75x75 mm	each	1.00	800.00	800.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				823.39
	Add 1 % Water charges				8.23
	TOTAL				831.62
	Add 15 % Contractor's profit and overheads				124.74
	Cost of each				956.36
	Say				956.35

17.46.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7629	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron double unequal plain junction as per IS 15905 - 100x100x75x75 mm dia	each	1.00	421.00	421.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				444.39
	Add 1 % Water charges				4.44
	TOTAL				448.83
	Add 15 % Contractor's profit and overheads				67.32
	Cost of each				516.15
	Say				516.15

17.47 Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :

17.47.1 100x100x75 mm

17.47.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1656	Details of cost for one no. MATERIAL Sand cast iron S&S single unequal junctions: 100x100x75 mm dia with access door.	each	1.00	400.00	400.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				441.39
	Add 1 % Water charges				4.41
	TOTAL				445.80
	Add 15 % Contractor's profit and overheads				66.87
	Cost of each				512.67
	Say				512.65

17.47.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3664	Details of cost for one no. MATERIAL S.C.I. S&S single unequal junctions with access door 100x100x75 mm	each	1.00	640.00	640.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				681.39
	Add 1 % Water charges				6.81
	TOTAL				688.20
	Add 15 % Contractor's profit and overheads				103.23
	Cost of each				791.43
	Say				791.45

17.48 Providing and fixing single unequal plain junction of required degree :**17.48.1 100x100x75 mm****17.48.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1653	Details of cost for one no. MATERIAL Sand cast iron S&S plain single unequal junctions : 100x100x75 mm dia	each	1.00	370.00	370.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				393.39
	Add 1 % Water charges				3.93
	TOTAL				397.32
	Add 15 % Contractor's profit and overheads				59.60
	Cost of each				456.92
	Say				456.90

17.48.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3660	Details of cost for one no. MATERIAL S.C.I. S&S single unequal junctions 100x100x75 mm	each	1.00	570.00	570.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				593.39
	Add 1 % Water charges				5.93
	TOTAL				599.32
	Add 15 % Contractor's profit and overheads				89.90
	Cost of each				689.22
	Say				689.20

17.48.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7630	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron single unequal plain junction as per IS 15905 - 100x100x75 mm dia	each	1.00	392.00	392.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				415.39
	Add 1 % Water charges				4.15
	TOTAL				419.54
	Add 15 % Contractor's profit and overheads				62.93
	Cost of each				482.47
	Say				482.45

17.49 Providing and fixing double equal plain invert branch of required degree:**17.49.1 100x100x100x100 mm****17.49.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1673	Details of cost for one no. MATERIAL S.C.I. double equal invert branch of required degree 100x100x100x100 mm dia	each	1.00	550.00	550.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				573.39
	Add 1 % Water charges				5.73
	TOTAL				579.12
	Add 15 % Contractor's profit and overheads				86.87
	Cost of each				665.99
	Say				666.00

17.49.1.2 Sand cast iron S&S as per IS 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3685	Details of cost for one no. MATERIAL S.C.I. S&S double equal invert branch of required degree 100x100x100x100 mm dia	each	1.00	530.00	530.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				553.39
	Add 1 % Water charges				5.53
	TOTAL				558.92
	Add 15 % Contractor's profit and overheads				83.84
	Cost of each				642.76
	Say				642.75

17.49.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7631	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron double equal plain invert branch as per IS 15905 - 100x100x100x100 mm dia	each	1.00	653.00	653.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				676.39
	Add 1 % Water charges				6.76
	TOTAL				683.15
	Add 15 % Contractor's profit and overheads				102.47
	Cost of each				785.62
	Say				785.60

17.49.2 75x75x75x75 mm**17.49.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
1672	MATERIAL S.C.I. double equal invert branch of required degree 75x75x75x75 mm dia	each	1.00	410.00	410.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				428.67
	Add 1 % Water charges				4.29
	TOTAL				432.96
	Add 15 % Contractor's profit and overheads				64.94
	Cost of each				497.90
	Say				497.90

17.49.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
3686	MATERIAL S.C.I. S&S double equal invert branch of required degree 75x75x75x75 mm dia	each	1.00	425.00	425.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				443.67
	Add 1 % Water charges				4.44
	TOTAL				448.11
	Add 15 % Contractor's profit and overheads				67.22
	Cost of each				515.33
	Say				515.35

17.50 Providing and fixing single equal plain invert branch of required degree :**17.50.1 100x100x100 mm****17.50.1.1 Sand cast iron S&S as per iron 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
1670	MATERIAL S.C.I. single equal invert branch of required degree 100x100x100 mm dia	each	1.00	410.00	410.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				433.39
	Add 1 % Water charges				4.33
	TOTAL				437.72
	Add 15 % Contractor's profit and overheads				65.66
	Cost of each				503.38
	Say				503.40

17.50.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3681	Details of cost for one no. MATERIAL S.C.I. S&S single equal invert branch of required degree 100x100x100 mm dia	each	1.00	425.00	425.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				448.39
	Add 1 % Water charges				4.48
	TOTAL				452.87
	Add 15 % Contractor's profit and overheads				67.93
	Cost of each				520.80
	Say				520.80

17.50.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7632	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron single equal plain invert branch as per IS 15905 - 100x100x100 mm dia	each	1.00	410.00	410.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				433.39
	Add 1 % Water charges				4.33
	TOTAL				437.72
	Add 15 % Contractor's profit and overheads				65.66
	Cost of each				503.38
	Say				503.40

17.50.2 75x75x75 mm**17.50.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1669	Details of cost for one no. MATERIAL S.C.I. single equal invert branch of required degree 75x75x75 mm dia	each	1.00	320.00	320.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				338.67
	Add 1 % Water charges				3.39
	TOTAL				342.06
	Add 15 % Contractor's profit and overheads				51.31
	Cost of each				393.37
	Say				393.35

17.50.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3682	Details of cost for one no. MATERIAL S.C.I. S&S single equal invert branch of required degree 75x75x75 mm dia	each	1.00	323.00	323.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				341.67
	Add 1 % Water charges				3.42
	TOTAL				345.09
	Add 15 % Contractor's profit and overheads				51.76
	Cost of each				396.85
	Say				396.85

17.50.2.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7633	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron single equal plain invert branch as per IS 15905 - 75x75x75 mm dia	each	1.00	270.00	270.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				288.67
	Add 1 % Water charges				2.89
	TOTAL				291.56
	Add 15 % Contractor's profit and overheads				43.73
	Cost of each				335.29
	Say				335.30

17.51 Providing and fixing double unequal invert branch of required degree :**17.51.1 100x100x75x75 mm****17.51.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1677	Details of cost for one no. MATERIAL S.C.I. double unequal invert branch of required degree 100x100x75x75 mm dia	each	1.00	570.00	570.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				593.39
	Add 1 % Water charges				5.93
	TOTAL				599.32
	Add 15 % Contractor's profit and overheads				89.90
	Cost of each				689.22
	Say				689.20

17.51.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3695	Details of cost for one no. MATERIAL S.C.I. S&S double unequal invert branch of required degree 100x100x75x75 mm dia	each	1.00	725.00	725.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				748.39
	Add 1 % Water charges				7.48
	TOTAL				755.87
	Add 15 % Contractor's profit and overheads				113.38
	Cost of each				869.25
	Say				869.25

17.52 Providing and fixing single unequal plain invert branch of required degree :**17.52.1 100x100x75 mm****17.52.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1674	Details of cost for one no. MATERIAL S.C.I. single unequal invert branch of required degree 100x100x75 mm dia	each	1.00	495.00	495.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				518.39
	Add 1 % Water charges				5.18
	TOTAL				523.57
	Add 15 % Contractor's profit and overheads				78.54
	Cost of each				602.11
	Say				602.10

17.52.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3690	Details of cost for one no. MATERIAL S.C.I. S&S single unequal invert branch of required degree 100x100x75 mm dia	each	1.00	545.00	545.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				568.39
	Add 1 % Water charges				5.68
	TOTAL				574.07
	Add 15 % Contractor's profit and overheads				86.11
	Cost of each				660.18
	Say				660.20

17.52.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7634	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron single unequal plain invert branch 45 degree as per IS 15905 - 100x100x75 mm dia	each	1.00	450.00	450.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				473.39
	Add 1 % Water charges				4.73
	TOTAL				478.12
	Add 15 % Contractor's profit and overheads				71.72
	Cost of each				549.84
	Say				549.85

17.53 Providing and fixing sand cast iron S&S off sets as per IS: 1729

17.53.1 76 mm off sets

17.53.1.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3746	Details of cost for one no. MATERIAL S.C.I. S&S, 75 mm offset for 75 mm dia pipe	each	1.00	218.00	218.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				236.67
	Add 1 % Water charges				2.37
	TOTAL				239.04
	Add 15 % Contractor's profit and overheads				35.86
	Cost of each				274.90
	Say				274.90

17.53.1.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3747	Details of cost for one no. MATERIAL S.C.I. S&S, 75 mm offset for 100 mm dia pipe	each	1.00	363.00	363.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				381.67
	Add 1 % Water charges				3.82
	TOTAL				385.49
	Add 15 % Contractor's profit and overheads				57.82
	Cost of each				443.31
	Say				443.30

17.53.2 114 mm off sets**17.53.2.1 With 75 mm dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3712	Details of cost for one no. MATERIAL S.C.I. S&S, 114 mm offset for 75 mm dia pipe	each	1.00	300.00	300.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				323.39
	Add 1 % Water charges				3.23
	TOTAL				326.62
	Add 15 % Contractor's profit and overheads				48.99
	Cost of each				375.61
	Say				375.60

17.53.2.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3713	Details of cost for one no. MATERIAL S.C.I. S&S, 114 mm offset for 100 mm dia pipe	each	1.00	383.00	383.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				406.39
	Add 1 % Water charges				4.06
	TOTAL				410.45
	Add 15 % Contractor's profit and overheads				61.57
	Cost of each				472.02
	Say				472.00

17.53.3 152 mm off sets**17.53.3.1 With 75 mm dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3716	Details of cost for one no. MATERIAL S.C.I. S&S, 152 mm offset for 75 mm dia pipe	each	1.00	358.00	358.00
9988	Carriage of materials and fixing charges	L.S.	17.94	1.73	31.04
	TOTAL				389.04
	Add 1 % Water charges				3.89
	TOTAL				392.93
	Add 15 % Contractor's profit and overheads				58.94
	Cost of each				451.87
	Say				451.85

17.53.3.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3717	Details of cost for one no. MATERIAL S.C.I. S&S, 152 mm offset for 100 mm dia pipe	each	1.00	455.00	455.00
9988	Carriage of materials and fixing charges	L.S.	17.94	1.73	31.04
	TOTAL				486.04
	Add 1 % Water charges				4.86
	TOTAL				490.90
	Add 15 % Contractor's profit and overheads				73.64
	Cost of each				564.54
	Say				564.55

17.53A Providing and fixing Hubless centrifugally cast iron offsets epoxy coated inside & outside as per IS:15905**17.53A.1 65 mm offsets****17.53A.1.1 With 100 mm dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7635	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron 65 mm offset with 100 mm dia pipe as per IS 15905	each	1.00	378.00	378.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				396.67
	Add 1 % Water charges				3.97
	TOTAL				400.64
	Add 15 % Contractor's profit and overheads				60.10
	Cost of each				460.74
	Say				460.75

17.53A.1.2 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7636	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron 65 mm offset with 75 mm dia pipe as per IS 15905	each	1.00	308.00	308.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				326.67
	Add 1 % Water charges				3.27
	TOTAL				329.94
	Add 15 % Contractor's profit and overheads				49.49
	Cost of each				379.43
	Say				379.45

17.54 Providing and fixing sand cast iron S&S off sets as per IS: 3989 :**17.54.1 75 mm off sets**

17.54.1.1 With 75 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3699	Details of cost for one no. MATERIAL	each	1.00	225.00	225.00
9988	S.C.I. S&S, 75 mm offset for 75 mm dia pipe	L.S.	10.79	1.73	18.67
	Carriage of materials and fixing charges				243.67
	TOTAL				2.44
	Add 1 % Water charges				246.11
	TOTAL				36.92
	Add 15 % Contractor's profit and overheads				283.03
	Cost of each				283.05
	Say				

17.54.2 150 mm off sets**17.54.2.1 With 75 mm dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3707	Details of cost for one no. MATERIAL	each	1.00	285.00	285.00
9988	S.C.I. S&S, 150 mm offset for 75 mm dia pipe	L.S.	16.12	1.73	27.89
	Carriage of materials and fixing charges				312.89
	TOTAL				3.13
	Add 1 % Water charges				316.02
	TOTAL				47.40
	Add 15 % Contractor's profit and overheads				363.42
	Cost of each				363.40
	Say				

17.54.2.2 With 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3708	Details of cost for one no. MATERIAL	each	1.00	390.00	390.00
9988	S.C.I. S&S, 150 mm offset for 100 mm dia pipe	L.S.	16.12	1.73	27.89
	Carriage of materials and fixing charges				417.89
	TOTAL				4.18
	Add 1 % Water charges				422.07
	TOTAL				63.31
	Add 15 % Contractor's profit and overheads				485.38
	Cost of each				485.40
	Say				

17.54A Providing and fixing Hubless centrifugally cast iron offsets epoxy coated inside & outside as per IS:15905**17.54A.1 130 mm offsets****17.54A.1.1 With 100 mm dia**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7637	Detail of cost for one no. MATERIAL	each	1.00	457.00	457.00
	Hubless centrifugally cast (spun) iron 130 mm offset with 100 mm dia pipe as per IS 15905				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				480.39
	Add 1 % Water charges				4.80
	TOTAL				485.19
	Add 15 % Contractor's profit and overheads				72.78
	Cost of each				557.97
	Say				557.95

17.54A.1.2 With 75 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7638	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron 130 mm offset with 75 mm dia pipe as per IS 15905	each	1.00	325.00	325.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				343.67
	Add 1 % Water charges				3.44
	TOTAL				347.11
	Add 15 % Contractor's profit and overheads				52.07
	Cost of each				399.18
	Say				399.20

17.55 Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :

17.55.1 100 mm

17.55.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1683	Details of cost for one no. MATERIAL S.C.I. door pieces 100 mm dia	each	1.00	400.00	400.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				441.39
	Add 1 % Water charges				4.41
	TOTAL				445.80
	Add 15 % Contractor's profit and overheads				66.87
	Cost of each				512.67
	Say				512.65

17.55.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3728	Details of cost for one no. MATERIAL S.C.I. S&S door pieces 100 mm dia	each	1.00	400.00	400.00
1374	Rubber insertions for 100 mm dia pipe joints	each	1.00	18.00	18.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				441.39
	Add 1 % Water charges				4.41
	TOTAL				445.80
	Add 15 % Contractor's profit and overheads				66.87
	Cost of each				512.67
	Say				512.65

17.55.2 75 mm**17.55.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1682	S.C.I. door pieces 75 mm dia	each	1.00	275.00	275.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				308.67
	Add 1 % Water charges				3.09
	TOTAL				311.76
	Add 15 % Contractor's profit and overheads				46.76
	Cost of each				358.52
	Say				358.50

17.55.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3729	S.C.I. S&S door pieces 75 mm dia	each	1.00	295.00	295.00
1373	Rubber insertions for 80 mm dia pipe joints	each	1.00	15.00	15.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				328.67
	Add 1 % Water charges				3.29
	TOTAL				331.96
	Add 15 % Contractor's profit and overheads				49.79
	Cost of each				381.75
	Say				381.75

17.56 Providing and fixing terminal guard :**17.56.1 100 mm****17.56.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1640	Slotted cowl (terminal guard) 100 mm dia	each	1.00	190.00	190.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				213.39
	Add 1 % Water charges				2.13
	TOTAL				215.52
	Add 15 % Contractor's profit and overheads				32.33
	Cost of each				247.85
	Say				247.85

17.56.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3733	S.C.I. S&S, Slotted Cowl (Terminal Guard) 100 mm	each	1.00	264.00	264.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				287.39
	Add 1 % Water charges				2.87
	TOTAL				290.26
	Add 15 % Contractor's profit and overheads				43.54
	Cost of each				333.80
	Say				333.80

17.56.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7641	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron terminal guard (slotted cowl) - 100 mm dia as per IS 15905	each	1.00	283.00	283.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				306.39
	Add 1 % Water charges				3.06
	TOTAL				309.45
	Add 15 % Contractor's profit and overheads				46.42
	Cost of each				355.87
	Say				355.85

17.56.2 75 mm

17.56.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1639	Details of cost for one no. MATERIAL Slotted cowl (terminal guard)75 mm dia	each	1.00	151.00	151.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				169.67
	Add 1 % Water charges				1.70
	TOTAL				171.37
	Add 15 % Contractor's profit and overheads				25.71
	Cost of each				197.08
	Say				197.10

17.56.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3734	Details of cost for one no. MATERIAL S.C.I. S&S, Slotted Cowl (Terminal Guard) 75 mm	each	1.00	210.00	210.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				228.67
	Add 1 % Water charges				2.29
	TOTAL				230.96
	Add 15 % Contractor's profit and overheads				34.64
	Cost of each				265.60
	Say				265.60

17.57 Providing and fixing collar :**17.57.1 100 mm****17.57.1.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1686	S.C.I. collar 100 mm dia	each	1.00	138.00	138.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				161.39
	Add 1 % Water charges				1.61
	TOTAL				163.00
	Add 15 % Contractor's profit and overheads				24.45
	Cost of each				187.45
	Say				187.45

17.57.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3738	S.C.I. S&S, collars 100 mm	each	1.00	279.00	279.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				302.39
	Add 1 % Water charges				3.02
	TOTAL				305.41
	Add 15 % Contractor's profit and overheads				45.81
	Cost of each				351.22
	Say				351.20

17.57.2 75 mm**17.57.2.1 Sand cast iron S&S as per IS - 1729**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1685	S.C.I. collar 75 mm dia	each	1.00	92.00	92.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				110.67
	Add 1 % Water charges				1.11
	TOTAL				111.78
	Add 15 % Contractor's profit and overheads				16.77
	Cost of each				128.55
	Say				128.55

17.57.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3739	S.C.I. S&S, collars 75 mm	each	1.00	170.00	170.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				188.67
	Add 1 % Water charges				1.89
	TOTAL				190.56
	Add 15 % Contractor's profit and overheads				28.58
	Cost of each				219.14
	Say				219.15

17.57A Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe**17.57A.1 100 mm dia****17.57A.1.1 SS 304 grade coupling with EPDM rubber gasket**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one no.				
	MATERIAL				
7644	SS 304 grade shielded coupling with EPDM rubber gasket for 100 mm dia Hubless centrifugally cast (spun) iron	each	1.00	287.00	287.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				310.39
	Add 1 % Water charges				3.10
	TOTAL				313.49
	Add 15 % Contractor's profit and overheads				47.02
	Cost of each				360.51
	Say				360.50

17.57A.2 75 mm dia**17.57A.2.1 SS 304 grade coupling with EPDM rubber gasket**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one no.				
	MATERIAL				
7645	SS 304 grade shielded coupling with EPDM rubber gasket for 75 mm dia Hubless centrifugally cast (spun) iron	each	1.00	262.00	262.00
9977	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				280.67
	Add 1 % Water charges				2.81
	TOTAL				283.48
	Add 15 % Contractor's profit and overheads				42.52
	Cost of each				326.00
	Say				326.00

17.58 Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :

17.58.1 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one joint				
	MATERIAL				
1397	Pig lead	kilogram	0.98	138.00	135.24
1881	Spun yarn	kilogram	0.11	50.00	5.50
9999	Kerosene oil, fuel and other sundries	L.S.	13.52	1.73	23.39
9977	Carriage of materials	L.S.	1.43	1.73	2.47
	LABOUR				
0116	Fitter (grade 1)	day	0.06	487.00	29.22
0117	Assistant Fitter or 2nd class Fitter	day	0.06	448.00	26.88
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				266.86
	Add 1 % Water charges				2.67
	TOTAL				269.53
	Add 15 % Contractor's profit and overheads				40.43
	Cost of each				309.96
	Say				309.95

17.58.2 75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one joint				
	MATERIAL				
1397	Pig lead	kilogram	0.88	138.00	121.44
1881	Spun yarn	kilogram	0.09	50.00	4.50
9999	Kerosene oil, fuel and other sundries	L.S.	10.79	1.73	18.67
9977	Carriage of materials	L.S.	1.43	1.73	2.47
	LABOUR				
0116	Fitter (grade 1)	day	0.05	487.00	24.35
0117	Assistant Fitter or 2nd class Fitter	day	0.05	448.00	22.40
0114	Beldar	day	0.09	368.00	33.12
	TOTAL				226.95
	Add 1 % Water charges				2.27
	TOTAL				229.22
	Add 15 % Contractor's profit and overheads				34.38
	Cost of each				263.60
	Say				263.60

17.58.3 50 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one joint				
	MATERIAL				
1397	Pig lead	kilogram	0.77	138.00	106.26
1881	Spun yarn	kilogram	0.06	50.00	3.00
9999	Kerosene oil, fuel and other sundries	L.S.	6.76	1.73	11.69
9977	Carriage of materials	L.S.	1.43	1.73	2.47

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.04	487.00	19.48
0117	Assistant Fitter or 2nd class Fitter	day	0.05	448.00	22.40
0114	Beldar	day	0.05	368.00	18.40
	TOTAL				183.70
	Add 1 % Water charges				1.84
	TOTAL				185.54
	Add 15 % Contractor's profit and overheads				27.83
	Cost of each				213.37
	Say				213.35

17.59 Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :

17.59.1 100 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1330	Details of cost for one no. MATERIAL Clamps and M.S. stays including bolts and nuts for 100 mm pipe	each	1.00	30.00	30.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				53.39
	Add 1 % Water charges				0.53
	TOTAL				53.92
	Add 15 % Contractor's profit and overheads				8.09
	Cost of each				62.01
	Say				62.00

17.59.2 75 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1335	Details of cost for one no. MATERIAL Clamps and M.S. stays including bolts and nuts for 75 mm pipe	each	1.00	30.00	30.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				48.67
	Add 1 % Water charges				0.49
	TOTAL				49.16
	Add 15 % Contractor's profit and overheads				7.37
	Cost of each				56.53
	Say				56.55

17.59.3 50 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1334	Details of cost for one no. MATERIAL Clamps and M.S. stays including bolts and nuts for 50 mm pipe	each	1.00	28.00	28.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	9.49	1.73	16.42
	TOTAL				44.42
	Add 1 % Water charges				0.44
	TOTAL				44.86
	Add 15 % Contractor's profit and overheads				6.73
	Cost of each				51.59
	Say				51.60

17.60 Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :

17.60.1 100 mm inlet and 100 mm outlet

17.60.1.1 Sand cast iron S&S as per IS: 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7808	Details of cost for one no. MATERIAL Centrifugally cast (spun) iron S&S 100 mm inlet and 100 mm outlet	each	1.00	435.00	435.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				890.61
	Add 1 % Water charges				8.91
	TOTAL				899.52
	Add 15 % Contractor's profit and overheads				134.93
	Cost of each				1034.45
	Say				1034.45

17.60.1.2 Sand Cast Iron S&S as per IS: 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1897	Details of cost for one no. MATERIAL 100 mm S.C.I. trap with 100 mm inlet and 100 mm outlet	each	1.00	275.00	275.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				730.61
	Add 1 % Water charges				7.31
	TOTAL				737.92
	Add 15 % Contractor's profit and overheads				110.69
	Cost of each				848.61
	Say				848.60

17.60.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7642	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron trap with 100 mm inlet and 100 mm outlet as per IS 15905	each	1.00	560.00	560.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				583.39
	Add 1 % Water charges				5.83
	TOTAL				589.22
	Add 15 % Contractor's profit and overheads				88.38
	Cost of each				677.60
	Say				677.60

17.60.2 100 mm inlet and 75 mm outlet

17.60.2.1 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7809	Details of cost for one no. MATERIAL Centrifugally cast (spun) iron S&S 100 mm inlet and 75 mm outlet	each	1.00	468.00	468.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				923.61
	Add 1 % Water charges				9.24
	TOTAL				932.85
	Add 15 % Contractor's profit and overheads				139.93
	Cost of each				1072.78
	Say				1072.80

17.60.2.2 Sand Cast Iron S&S as per IS- 1729

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1898	Details of cost for one no. MATERIAL 100 mm S.C.I. trap with 100 mm inlet and 75 mm outlet	each	1.00	218.00	218.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.73	23.39
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				673.61
	Add 1 % Water charges				6.74
	TOTAL				680.35
	Add 15 % Contractor's profit and overheads				102.05
	Cost of each				782.40
	Say				782.40

17.60.2.3 Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7643	Detail of cost for one no. MATERIAL Hubless centrifugally cast (spun) iron trap with 100 mm inlet and 75 mm outlet as per IS 15905	each	1.00	404.00	404.00
9977	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				427.39
	Add 1 % Water charges				4.27
	TOTAL				431.66
	Add 15 % Contractor's profit and overheads				64.75
	Cost of each				496.41
	Say				496.40

17.61 Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size), including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :

17.61.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.2.5	Details of cost for one metre MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate) Rate as per item no 4.2.5 of SH : Concrete work	cum	0.02	5992.75	131.84(A)
9999	Plastering in cement mortar 1:4	L.S.	10.40	1.73	17.99
9977	Carriage of materials	L.S.	4.16	1.73	7.20
0123	LABOUR Mason (brick layer) 1st class	day	0.14	487.00	68.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.27	368.00	99.36
	TOTAL				324.57
	Add 1 % Water charges on all except (A) i.e. on (324.57 - 131.84) = 192.73				1.93
	TOTAL				326.50
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (326.50 - 131.84) = 194.66				29.20
	Cost of one metre				355.70
	Say				355.70

17.61.2 75 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL				
	Cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate)				
4.2.5	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.02	5992.75	89.89(A)
9999	Plastering in cement mortar 1:4	L.S.	7.80	1.73	13.49
9977	Carriage of materials	L.S.	3.51	1.73	6.07
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.10	487.00	48.70
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				231.75
	Add 1 % Water charges on all except (A) i.e. on (231.75 - 89.89) = 141.86				1.42
	TOTAL				233.17
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (233.17 - 89.89) = 143.28				21.49
	Cost of one metre				254.66
	Say				254.65

17.61.3 50 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre				
	MATERIAL				
	Cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate)				
4.2.5	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.01	5992.75	47.94(A)
9999	Plastering in cement mortar 1:4	L.S.	5.20	1.73	9.00
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.07	487.00	34.09

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.14	368.00	51.52
	TOTAL				147.27
	Add 1 % Water charges on all except (A) i.e. on (147.27 - 47.94) = 99.33				0.99
	TOTAL				148.26
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (148.26 - 47.94) = 100.32				15.05
	Cost of one metre				163.31
	Say				163.30

17.62 Painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality) on the outside surface of the cistern, flush pipe, other fittings, etc. complete for new work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cistern with fittings				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.23	100.00	23.00
4202	Red oxide Zinc chromate primer	litre	0.20	65.00	13.00
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.40	150.00	60.00
9977	Carriage of materials	L.S.	1.43	1.73	2.47
9999	Sundries	L.S.	6.76	1.73	11.69
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				406.16
	Add 1 % Water charges				4.06
	TOTAL				410.22
	Add 15 % Contractor's profit and overheads				61.53
	Cost of each				471.75
	Say				471.75

17.63 Re-painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint on the outside surface of the cistern, flush pipe, other fittings, etc. complete, including polishing of wooden seat and lid and cleaning of W.C. pan with acid wherever necessary.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cistern with fittings				
	MATERIAL				
0828	Anticorrosive bituminous paint (black)	litre	0.23	100.00	23.00
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	0.20	150.00	30.00
9999	Polishing of wooden seat and cleaning of W.C. pan with acid	L.S.	20.67	1.73	35.76
9988	Sundries and carriage of materials	L.S.	7.15	1.73	12.37

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0131	LABOUR Painter	day	0.20	448.00	89.60
0114	Beldar	day	0.25	368.00	92.00
	TOTAL				282.73
	Add 1 % Water charges				2.83
	TOTAL				285.56
	Add 15 % Contractor's profit and overheads				42.83
	Cost of each				328.39
	Say				328.40

17.64 Repainting C.I. cistern with synthetic enamel paint of approved colour, brand and manufacture on the outside surface of cistern, flush pipe, other fittings etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0834	Details of cost for one cistern with fittings MATERIAL Synthetic enamel paint in all shades except black or chocolate shade	litre	0.20	150.00	30.00
9988	Sundries and carriage of materials	L.S.	3.64	1.73	6.30
	LABOUR				
0131	Painter	day	0.09	448.00	40.32
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				120.78
	Add 1 % Water charges				1.21
	TOTAL				121.99
	Add 15 % Contractor's profit and overheads				18.30
	Cost of each				140.29
	Say				140.30

17.65 Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :

17.65.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL Perimeter = $3.14 \times 110 \text{ mm} = 345.71$ Area $10 \times 0.3457 = 3.46 \text{ sqm}$ Priming coat				
13.50.3	Rate as per item no 13.50.3 of SH : Finishing Painting two coats with paint of any colour such as chocolate grey or buff etc.	sqm	3.46	29.10	100.69(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	3.46	78.40	271.26(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	17.16	1.73	29.69
	TOTAL				401.64
	Add 1 % Water charges on all except (A) i.e. on (401.64 - 371.95) = 29.69				0.30
	TOTAL				401.94
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (401.94 - 371.95) = 29.99				4.50
	Cost of 10 metres				406.44
	Cost of 1 metre				40.64
	Say				40.65

17.65.2 75 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL Perimeter = 3.14x82 mm =257.71 Area 10x0.2577 =2.577 sqm say 2.60 sq. m for outer surface Priming coat				
13.50.3	Rate as per item no 13.50.3 of SH : Finishing Painting two coats with paint of any colour such as chocolate grey or buff etc.	sqm	2.60	29.10	75.66(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	2.60	78.40	203.84(A)
9999	Add for delay	L.S.	15.21	1.73	26.31
	TOTAL				305.81
	Add 1 % Water charges on all except (A) i.e. on (305.81 - 279.50) = 26.31				0.26
	TOTAL				306.07
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (306.07 - 279.50) = 26.57				3.99
	Cost of 10 metres				310.06
	Cost of 1 metre				31.00
	Say				31.00

17.66 Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with one coat of synthetic enamel paint of any colour such as chocolate, grey or buff etc :

17.66.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metres Painting one coat with paint of any colour such as chocolate, grey or buff etc. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	3.46	51.30	177.50(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	12.22	1.73	21.14
	TOTAL				198.64
	Add 1 % Water charges on all except (A) i.e. on (198.64 - 177.50) = 21.14				0.21
	TOTAL				198.85
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (198.85 - 177.50) = 21.35				3.20
	Cost of 10 metres				202.05
	Cost of 1 metre				20.20
	Say				20.20

17.66.2 75 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metres Painting one coat with paint of any colour such as chocolate, grey or buff etc. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	2.58	51.30	132.20(A)
9999	Add for delay	L.S.	9.49	1.73	16.42
	TOTAL				148.62
	Add 1 % Water charges on all except (A) i.e. on (148.62 - 132.20) = 16.42				0.16
	TOTAL				148.78
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (148.78 - 132.20) = 16.58				2.49
	Cost of 10 metres				151.27
	Cost of 1 metre				15.12
	Say				15.10

17.67 Repainting bath tub of size 1700x730x430 mm with enamel paint.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0830	Details of cost for one tub MATERIAL Enamel paint	litre	0.90	155.00	139.50
9999	Sundries	L.S.	6.76	1.73	11.69
	LABOUR				
0131	Painter	day	0.25	448.00	112.00
0115	Coolie	day	0.25	368.00	92.00
	TOTAL				355.19
	Add 1 % Water charges				3.55
	TOTAL				358.74
	Add 15 % Contractor's profit and overheads				53.81
	Cost of each				412.55
	Say				412.55

17.68 Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat & lid fixed with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40 mm flush bend, 20 mm over flow pipe, with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required:

17.68.1 White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1875	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	1.00	330.00	330.00
1965	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	each	1.00	1300.00	1300.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1.00	1300.00	1300.00
9999	20 mm G.I.over flow pipe and specials for over flow pipe	L.S.	276.25	1.73	477.91
1350	Mosquito proof coupling of approved design	each	1.00	30.00	30.00
9999	Plugs, screws etc.	L.S.	59.15	1.73	102.33
9999	Red lead, white lead and gaskin etc.	L.S.	71.76	1.73	124.14
9999	Cement,sand and grit	L.S.	118.43	1.73	204.88
9977	Carriage of materials	L.S.	118.43	1.73	204.88
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				5416.14
	Add 1 % Water charges				54.16
	TOTAL				5470.30
	Add 15 % Contractor's profit and overheads				820.55
	Cost of each				6290.85
	Say				6290.85

17.69 Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.

17.69.1 Waste coupling 31 mm dia of 79 mm length and 62mm breadth weighing not less than 45 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
7491	PTMT Waste Coupling 31/32MM	each	1.00	36.00	36.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				71.08
	Add 1 % Water charges				0.71
	TOTAL				71.79
	Add 15 % Contractor's profit and overheads				10.77
	Cost of each				82.56
	Say				82.55

17.69.2 Waste coupling 38 mm dia of 83 mm length and 77mm breadth, weighing not less than 60 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7492	PTMT Waste Coupling 38/40MM	each	1.00	50.00	50.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				85.08
	Add 1 % Water charges				0.85
	TOTAL				85.93
	Add 15 % Contractor's profit and overheads				12.89
	Cost of each				98.82
	Say				98.80

17.70 Providing and fixing PTMT Bottle Trap for Wash basin and sink.

17.70.1 Bottle trap 31mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7493	PTMT Bottle Trap 31/32MM	each	1.00	218.00	218.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				253.08
	Add 1 % Water charges				2.53
	TOTAL				255.61
	Add 15 % Contractor's profit and overheads				38.34
	Cost of each				293.95
	Say				293.95

17.70.2 Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7494	PTMT Bottle Trap 38/40MM	each	1.00	228.00	228.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				263.08
	Add 1 % Water charges				2.63
	TOTAL				265.71
	Add 15 % Contractor's profit and overheads				39.86
	Cost of each				305.57
	Say				305.55

17.71 Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7503	Details of cost for one no. MATERIAL PTMT Liquid Soap Container of 400ml capacity	each	1.00	107.00	107.00
9988	Carriage of materials and fixing charges	L.S.	6.76	1.73	11.69
	TOTAL				118.69
	Add 1 % Water charges				1.19
	TOTAL				119.88
	Add 15 % Contractor's profit and overheads				17.98
	Cost of each				137.86
	Say				137.85

17.72 Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7504	MATERIAL PTMT - Towel Ring 215x200x37mm	each	1.00	135.00	135.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				170.08
	Add 1 % Water charges				1.70
	TOTAL				171.78
	Add 15 % Contractor's profit and overheads				25.77
	Cost of each				197.55
	Say				197.55

17.73 Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.

17.73.1 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7505	Details of cost for one no. MATERIAL PTMT Towel Rail (450mm)	each	1.00	141.00	141.00
9.32	Wooden cleates Rate as per item no 9.32 of SH : Wood and PVC work	each	2.00	21.85	43.70(A)
0588	Chromium plated Brass screws 25 mm	100 Nos	6.00	190.00	11.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0112	Carpenter 2nd class	day	0.17	448.00	76.16
0114	Beldar	day	0.17	368.00	62.56
	TOTAL				342.02
	Add 1 % Water charges on all except (A) i.e. on (342.02 - 43.70) = 298.32				2.98
	TOTAL				345.00
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (345.00 - 43.70) = 301.30				45.20
	Cost of each				390.20
	Say				390.20

17.73.2 600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7506	PTMT Towel Rail (600mm)	each	1.00	169.00	169.00
	Wooden cleates				
9.32	Rate as per item no 9.32 of SH : Wood and PVC work	each	2.00	21.85	43.70(A)
0588	Chromium plated Brass screws 25 mm	100 Nos	6.00	190.00	11.40
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0112	Carpenter 2nd class	day	0.17	448.00	76.16
0114	Beldar	day	0.17	368.00	62.56
	TOTAL				370.02
	Add 1 % Water charges on all except (A) i.e. on (370.02 - 43.70) = 326.32				3.26
	TOTAL				373.28
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (373.28 - 43.70) = 329.58				49.44
	Cost of each				422.72
	Say				422.70

17.74 Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour, weighing not less than 300 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7507	PTMT Shelf 450x124x36mm	each	1.00	210.00	210.00
	Wooden cleates				
9.32	Rate as per item no 9.32 of SH : Wood and PVC work	each	2.00	21.85	43.70(A)
0588	Chromium plated Brass screws 25 mm	100 Nos	6.00	190.00	11.40
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0112	Carpenter 2nd class	day	0.17	448.00	76.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.17	368.00	62.56
	TOTAL				411.02
	Add 1 % Water charges on all except (A) i.e. on (411.02 - 43.70) = 367.32				3.67
	TOTAL				414.69
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (414.69 - 43.70) = 370.99				55.65
	Cost of each				470.34
	Say				470.35

17.75 Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes, weighing not less than 60 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7508	Details of cost for one no. MATERIAL	each	1.00	80.00	80.00
9988	PTMT Urinal Spreader 15mm	L.S.	6.76	1.73	11.69
	Carriage of materials and fixing charges				91.69
	TOTAL				0.92
	Add 1 % Water charges				92.61
	TOTAL				13.89
	Add 15 % Contractor's profit and overheads				106.50
	Cost of each				106.50
	Say				106.50

**17.76 Providing and fixing PTMT urinal cock of approved quality and colour.
17.76.1 15 mm nominal bore, 80 mm long, 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7858	Details of cost for 1 no. MATERIAL	each	1.00	110.00	110.00
9988	P.T.M.T. Urinal cock 15mm dia	L.S.	8.06	1.73	13.94
	Carriage of materials and fixing charges				123.94
	TOTAL				1.24
	Add 1 % Water charges				125.18
	TOTAL				18.78
	Add 15 % Contractor's profit and overheads				143.96
	Cost of each				143.95
	Say				143.95

17.77 Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners, including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolts on each side of the pipe.

17.77.1 Total bracket length 580 mm of approved shape and design (for single 100 mm dia pipe)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos. MATERIAL M.S. flats 50x5mm 5 x 0.58 = 2.90m @ 1.97 kg/ metre = 5.71 kg. M.S. flats 30x1.6mm 5x0.42 = 2.10m. 0.38kg/metre = 0.80kg. Total = 6.51kg. Add wastage 5% = 0.33kg. Total = 6.86 kg.= 0.0686 quintal				
1007	Structurals such as tees,angles channels and R.S. joists	quintal	0.07	3775.00	258.97
2205	Carriage of Steel	tonne	0.01	92.24	0.63
	LABOUR				
0116	Fitter (grade 1)	day	0.03	487.00	16.07
0103	Blacksmith 2nd class	day	0.05	448.00	21.95
0114	Beldar	Day	0.07	368.00	23.92
	priming coat 5x0.58x0.11 = 0.32 5x0.42x0.063 = 0.13 Total=0.45sqm				
13.50.1	Rate as per item no 13.50.1 of SH : Finishing	sqm	0.45	34.95	15.73(A)
9999	Sundries	L.S.	1.35	1.73	2.34
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 nos.				
8.8.1.1	"Rate asper item no. 8.8.1.1 of SH :- Marble work	each	20.00	25.25	505.00(A)
	Total				844.61
	Add 1 % Water charges on all except (A) i.e. on (844.61 - 520.73) = 323.88				3.24
	Total				847.85
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (847.85 - 520.73) = 327.12				49.07
	Cost of 5 Nos.				896.92
	Cost of each				179.38
	Say				179.40

17.77.2 Total bracket length 810 mm of approved shape and design (for two 100 mm dia pipes)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos. MATERIAL M.S. flats 50x5mm 5 x 0.81 = 4.05m @ 1.97 kg/ metre = 7.98 kg. M.S. flats 30x1.6mm 5x2x0.42 = 4.20m. 0.38kg/metre = 1.60kg. Total = 9.58kg. Add wastage 5% = 0.48kg. Total = 10.06 kg. M.S.flats 10.06kg. = 0.1006 quintal				
1007	Structurals such as tees,angles channels and R.S. joists	quintal	0.10	3775.00	379.77
2205	Carriage of Steel	tonne	0.01	92.24	0.93

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.05	487.00	23.38
0103	Blacksmith 2nd class	day	0.07	448.00	32.26
0114	Beldar	day	0.10	368.00	35.33
	priming coat 5x0.81x0.11 = 0.45 5x2x0.42x0.063 = 0.26 Total =0.71sqm				
13.50.1	Rate as per item no 13.50.1 of SH : Finishing	sqm	0.71	34.95	24.81(A)
9999	Sundries	L.S.	1.98	1.73	3.43
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 nos.				
8.8.1.1	"Rate asper item no. 8.8.1.1 of SH :- Marble work	each	20.00	25.25	505.00(A)
	Total				1004.91
	Add 1 % Water charges on all except (A) i.e. on (1004.91 - 529.81) = 475.10				4.75
	Total				1009.66
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1009.66 - 529.81) = 479.85				71.98
	Cost of 5 Nos.				1081.64
	Cost of each				216.32
	Say				216.30

17.77.3 Total bracket length 1040 mm of approved shape and design (for three 100 mm dia pipes)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 nos. MATERIAL M.S. flats 50x5mm 5 x 1.04= 5.20m @ 1.97 kg/ metre = 10.24 kg. M.S. flats 30x1.6mm 5x3x0.42 = 6.30m. 0.38kg/metre = 2.39kg. Total = 12.63kg. Add wastage 5% = 0.63kg. Total = 13.26 kg. M.S.flats 13.26kg. = 0.1326 quintal				
1007	Structurals such as tees,angles channels and R.S. joists	quintal	0.13	3775.00	500.57
2205	Carriage of Steel	tonne	0.01	92.24	1.22
	LABOUR				
0116	Fitter (grade 1)	day	0.06	487.00	30.68
0103	Blacksmith 2nd class	day	0.10	448.00	42.56
0114	Beldar	day	0.13	368.00	46.37
	priming coat 5x1.04x0.11 = 0.57 5x3x0.42x0.063 = 0.40 Total=0.97sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.1 9999	Rate as per item no 13.50.1 of SH : Finishing Sundries	sqm	0.97	34.95	33.90(A)
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 nos.	L.S.	2.60	1.73	4.50
8.8.1.1	Rate as per item no. 8.8.1.1 of SH :- Marble work	each	20.00	25.25	505.00(A)
	Total				1164.80
	Add 1 % Water charges on all except (A) i.e. on (1164.80 - 538.90) = 625.90				6.26
	Total				1171.06
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1171.06 - 538.90) = 632.16				94.82
	Cost of 5 Nos.				1265.88
	Cost of each				253.17
	Say				253.15

17.78 Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
7072	Wall mounted water closet	each	1.00	4650.00	4650.00
7073	Adjustable Vitreous China Cistern with fittings	each	1.00	2000.00	2000.00
1875	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	1.00	330.00	330.00
9977	Carriage of materials	L.S.	9.79	1.73	16.94
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				8338.94
	Add 1 % Water charges				83.39
	TOTAL				8422.33
	Add 15 % Contractor's profit and overheads				1263.35
	Cost of each				9685.68
	Say				9685.70

17.79 Providing & fixing white vitreous china water less urinal of size 600 x 330 x 315 mm having antibacterial /germs free ceramic surface, fixed with cartridge having debris catcher and hygiene seal.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
7074	White Vitreous China Waterless Urinal	each	1.00	10105.00	10105.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7075	Cistern with fittings for Waterless Urinal	each	1.00	2400.00	2400.00
9977	Carriage of materials	L.S.	9.79	1.73	16.94
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				12949.44
	Add 1 % Water charges				129.49
	TOTAL				13078.93
	Add 15 % Contractor's profit and overheads				1961.84
	Cost of each				15040.77
	Say				15040.75

17.80 Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pan				
	MATERIAL				
7076	White Vitreous Urinal	each	1.00	4000.00	4000.00
9977	Carriage of materials	L.S.	9.79	1.73	16.94
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				4444.44
	Add 1 % Water charges				44.44
	TOTAL				4488.88
	Add 15 % Contractor's profit and overheads				673.33
	Cost of each				5162.21
	Say				5162.20

17.81 Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1966	Details of cost for 1 no. MATERIAL Floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	flushing system including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc.	each	1.00	9500.00	9500.00
9977	Carriage of material	L.S.	9.79	1.73	16.94
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0114	Beldar	day	1.00	368.00	368.00
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
	TOTAL				10858.94
	Add 1 % Water charges				108.59
	TOTAL				10967.53
	Add 15 % Contractor's profit and overheads				1645.13
	Cost of each				12612.66
	Say				12612.65

SUB HEAD : 18.0
WATER SUPPLY

- 18.1 Providing and fixing Polyethelene-Aluminium-Polyethelene PE-AL-PE Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with clamps at 1.00 metre spacing. This includes testing of joints complete as per direction of the Engineer in charge.**

INTERNAL WORK - EXPOSED ON WALL

18.1.1 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8300	Details of cost for 10 metre MATERIAL 1216 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	62.00	620.00(X) 186.00
9999	Cement, sand and grit LABOUR	L.S.	2.73	1.73	4.72
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1509.99
	Add 1 % Water charges				15.10
	TOTAL				1525.09
	Add 15 % Contractor's profit and overheads				228.76
	Cost of 10 metre				1753.85
	Cost of 1 metre				175.38
	Say				175.40

18.1.2 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8301	Details of cost for 10 metre MATERIAL 1620 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	78.00	780.00(X) 234.00
9999	Cement, sand and grit LABOUR	L.S.	2.73	1.73	4.72
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.82	448.00	367.36
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1789.67
	Add 1 % Water charges				17.90
	TOTAL				1807.57
	Add 15 % Contractor's profit and overheads				271.14
	Cost of 10 metre				2078.71
	Cost of 1 metre				207.87
	Say				207.85

18.1.3 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8302	Details of cost for 10 metre MATERIAL 2025 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	110.00	1100.00(X) 330.00
9999	Cement, sand and grit LABOUR	L.S.	2.73	1.73	4.72
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2277.35
	Add 1 % Water charges				22.77
	TOTAL				2300.12
	Add 15 % Contractor's profit and overheads				345.02
	Cost of 10 metre				2645.14
	Cost of 1 metre				264.51
	Say				264.50

18.1.4 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8303	Details of cost for 10 metre MATERIAL 2532 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	157.00	1570.00(X) 471.00
9999	Cement, sand and grit LABOUR	L.S.	4.16	1.73	7.20
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04
0114	Beldar	day	0.98	368.00	360.64
	TOTAL				3008.59
	Add 1 % Water charges				30.09
	TOTAL				3038.68
	Add 15 % Contractor's profit and overheads				455.80
	Cost of 10 metre				3494.48
	Cost of 1 metre				349.44
	Say				349.45

18.1.5 3240 (40 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8304	Details of cost for 10 metre MATERIAL 3240 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	235.00	2350.00(X) 705.00
9999	Cement, sand and grit	L.S.	5.33	1.73	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	1.31	448.00	586.88
0114	Beldar	day	1.31	368.00	482.08
	TOTAL				4293.89
	Add 1 % Water charges				42.94
	TOTAL				4336.83
	Add 15 % Contractor's profit and overheads				650.52
	Cost of 10 metre				4987.35
	Cost of 1 metre				498.73
	Say				498.75

18.1.6 4050 (50 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8305	Details of cost for 10 metre MATERIAL 4050 mm PE-AL-PE Composit pressure pipe	metre	10.00	330.00	3300.00(X)
	Add 30% for fittings and wastage etc. on (X) 30 * X / 100				990.00
9999	Cement, sand and grit	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	1.31	448.00	586.88
0114	Beldar	day	1.31	368.00	482.08
	TOTAL				5528.89
	Add 1 % Water charges				55.29
	TOTAL				5584.18
	Add 15 % Contractor's profit and overheads				837.63
	Cost of 10 metre				6421.81
	Cost of 1 metre				642.18
	Say				642.20

18.2 Providing and fixing Polyethelene-Aluminium- Polyethelene PE-AL-PE Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.

Concealed work, including cutting chases and making good the wall etc.

18.2.1 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8300	1216 mm PE-AL-PE Composit pressure pipe Add 75% for fittings, clamps and wastage etc. on (X) 75 * X / 100	metre	10.00	62.00	620.00(X)
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 of SH: Water Supply LABOUR	metre	10.00	93.85	938.50(A)
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2722.77
	Add 1 % Water charges on all except (A) i.e. on (2722.77 - 938.50) = 1784.27				17.84
	TOTAL				2740.61
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2740.61 - 938.50) = 1802.11				270.32
	Cost of 10 metre				3010.93
	Cost of 1 metre				301.09
	Say				301.10

18.2.2 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8301	Details of cost for 10 metre MATERIAL 1620 mm PE-AL-PE Composit pressure pipe Add 75% for fittings, clamps and wastage etc. on (X) 75 * X / 100	metre	10.00	78.00	780.00(X)
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 of SH: water Supply LABOUR	metre	10.00	93.85	938.50
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				3002.77
	Add 1 % Water charges on all except (A) i.e. on (3002.77 - 938.50) = 2064.27				20.64
	TOTAL				3023.41
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3023.41 - 938.50) = 2084.91				312.74
	Cost of 10 metre				3336.15
	Cost of 1 metre				333.61
	Say				333.60

18.2.3 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8302	Details of cost for 10 metre MATERIAL 2025 mm PE-AL-PE Composit pressure pipe Add 75% for fittings, clamps and wastage etc. on (X) $75 * X / 100$	metre	10.00	110.00	1100.00(X)
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 of SH: Water Supply LABOUR	metre	10.00	93.85	938.50(A)
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				3562.77
	Add 1 % Water charges on all except (A) i.e. on (3562.77 - 938.50) = 2624.27				26.24
	TOTAL				3589.01
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3589.01 - 938.50) = 2650.51				397.58
	Cost of 10 metre				3986.59
	Cost of 1 metre				398.65
	Say				398.65

18.2.4 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8303	Details of cost for 10 metre MATERIAL 2532 mm PE-AL-PE Composit pressure pipe Add 75% for fittings, clamps and wastage etc. on (X) $75 * X / 100$	metre	10.00	157.00	1570.00(X)
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 of SH: Water Supply LABOUR	metre	10.00	93.85	938.50(A)
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				4385.27
	Add 1 % Water charges on all except (A) i.e. on (4385.27 - 938.50) = 3446.77				34.47
	TOTAL				4419.74
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4419.74 - 938.50) = 3481.24				522.19
	Cost of 10 metre				4941.93
	Cost of 1 metre				494.19
	Say				494.20

18.3 Providing and fixing Polyethelene-Aluminium- Polyethelene PE-AL-PE Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with trenching, refilling and testing of joints complete as per direction of the engineer in charge.

External work

18.3.1 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8300	Details of cost for 10 metre MATERIAL 1216 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	62.00	620.00(X) 186.00
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar Trenching and refilling etc.	day	0.16	368.00	58.88
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1389.60
	Add 1 % Water charges				13.90
	TOTAL				1403.50
	Add 15 % Contractor's profit and overheads				210.53
	Cost of 10 metre				1614.03
	Cost of 1 metre				161.40
	Say				161.40

18.3.2 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8301	Details of cost for 10 metre MATERIAL 1620 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	78.00	780.00(X) 234.00
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar Trenching and refilling etc.	day	0.16	368.00	58.88
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1597.60
	Add 1 % Water charges				15.98
	TOTAL				1613.58
	Add 15 % Contractor's profit and overheads				242.04
	Cost of 10 metre				1855.62
	Cost of 1 metre				185.56
	Say				185.55

18.3.3 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8302	Details of cost for 10 metre MATERIAL 2025 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	110.00	1100.00(X) 330.00
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.16	368.00	58.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2013.60
	Add 1 % Water charges				20.14
	TOTAL				2033.74
	Add 15 % Contractor's profit and overheads				305.06
	Cost of 10 metre				2338.80
	Cost of 1 metre				233.88
	Say				233.90

18.3.4 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8303	Details of cost for 10 metre MATERIAL 2532 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	157.00	1570.00(X) 471.00
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.16	368.00	58.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2624.60
	Add 1 % Water charges				26.25
	TOTAL				2650.85
	Add 15 % Contractor's profit and overheads				397.63
	Cost of 10 metre				3048.48
	Cost of 1 metre				304.84
	Say				304.85

18.3.5 3240 (40 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8304	Details of cost for 10 metre MATERIAL 3240 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	235.00	2350.00(X) 705.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar	day	0.33	368.00	121.44
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				3740.12
	Add 1 % Water charges				37.40
	TOTAL				3777.52
	Add 15 % Contractor's profit and overheads				566.63
	Cost of 10 metre				4344.15
	Cost of 1 metre				434.41
	Say				434.40

18.3.6 4050 (50 mm OD) pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8305	Details of cost for 10 metre MATERIAL 4050 mm PE-AL-PE Composit pressure pipe Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	330.00	3300.00(X) 990.00
	LABOUR				
0116	Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar	day	0.33	368.00	121.44
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				4975.12
	Add 1 % Water charges				49.75
	TOTAL				5024.87
	Add 15 % Contractor's profit and overheads				753.73
	Cost of 10 metre				5778.60
	Cost of 1 metre				577.86
	Say				577.85

18.7 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.

Internal work - Exposed on wall

18.7.1 15 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8636	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia.	metre	10.00	35.00	350.00(X)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 30% for fittings and wastage etc. on (X) 30 * X / 100				105.00
9999	Cement, sand and grit etc. LABOUR	L.S.	2.73	1.73	4.72
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.82	448.00	367.36
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1230.67
	Add 1 % Water charges				12.31
	TOTAL				1242.98
	Add 15 % Contractor's profit and overheads				186.45
	Cost of 10 metre				1429.43
	Cost of 1 metre				142.94
	Say				142.95

18.7.2 20 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
8637	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	54.00	540.00(X) 162.00
9999	Cement, sand and grit etc. LABOUR	L.S.	2.73	1.73	4.72
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1549.35
	Add 1 % Water charges				15.49
	TOTAL				1564.84
	Add 15 % Contractor's profit and overheads				234.73
	Cost of 10 metre				1799.57
	Cost of 1 metre				179.95
	Say				179.95

18.7.3 25 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
8638	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	78.00	780.00(X) 234.00
9999	Cement, sand and grit etc. LABOUR	L.S.	2.73	1.73	4.72
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1861.35
	Add 1 % Water charges				18.61
	TOTAL				1879.96
	Add 15 % Contractor's profit and overheads				281.99
	Cost of 10 metre				2161.95
	Cost of 1 metre				216.19
	Say				216.20

18.7.4 32 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8639	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	117.00	1170.00(X) 351.00
9999	Cement, sand and grit etc. LABOUR	L.S.	4.16	1.73	7.20
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04
0114	Beldar	day	0.98	368.00	360.64
	TOTAL				2488.59
	Add 1 % Water charges				24.89
	TOTAL				2513.48
	Add 15 % Contractor's profit and overheads				377.02
	Cost of 10 metre				2890.50
	Cost of 1 metre				289.05
	Say				289.05

18.7.5 40 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8640	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	160.00	1600.00(X) 480.00
9999	Cement, sand and grit etc. LABOUR	L.S.	5.33	1.73	9.22
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	1.31	448.00	586.88
0114	Beldar	day	1.31	368.00	482.08
	TOTAL				3318.89
	Add 1 % Water charges				33.19
	TOTAL				3352.08
	Add 15 % Contractor's profit and overheads				502.81
	Cost of 10 metre				3854.89
	Cost of 1 metre				385.48
	Say				385.50

18.7.6 50 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8641	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	268.00	2680.00(X) 804.00
9999	Cement, sand and grit etc. LABOUR	L.S.	5.33	1.73	9.22
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	1.31	448.00	586.88
0114	Beldar	day	1.31	368.00	482.08
	TOTAL				4722.89
	Add 1 % Water charges				47.23
	TOTAL				4770.12
	Add 15 % Contractor's profit and overheads				715.52
	Cost of 10 metre				5485.64
	Cost of 1 metre				548.56
	Say				548.55

18.8 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.

Concealed work, including cutting chases and making good the walls etc.

18.8.1 15 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8636	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia. Add 75% for fittings, clamps and wastage etc. on (X) 75 * X / 100	metre	10.00	35.00	350.00(X) 262.50
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 Of SH: Water Supply	metre	10.00	93.85	938.50(A)
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2250.27
	Add 1 % Water charges on all except (A) i.e. on (2250.27 - 938.50) = 1311.77				13.12
	TOTAL				2263.39
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2263.39 - 938.50) = 1324.89				198.73
	Cost of 10 metre				2462.12
	Cost of 1 metre				246.21
	Say				246.20

18.8.2 20 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8637	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia. Add 75% for fittings, clamps and wastage etc. on (X) $75 * X / 100$	metre	10.00	54.00	540.00(X) 405.00
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 Of SH: Water Supply	metre	10.00	93.85	938.50(A)
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2582.77
	Add 1 % Water charges on all except (A) i.e. on (2582.77 - 938.50) = 1644.27				16.44
	TOTAL				2599.21
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2599.21 - 938.50) = 1660.71				249.11
	Cost of 10 metre				2848.32
	Cost of 1 metre				284.83
	Say				284.85

18.8.3 25 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8638	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia. Add 75% for fittings, clamps and wastage etc. on (X) $75 * X / 100$	metre	10.00	78.00	780.00(X) 585.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 Of SH: Water Supply	metre	10.00	93.85	938.50(A)
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				3002.77
	Add 1 % Water charges on all except (A) i.e. on (3002.77 - 938.50) = 2064.27				20.64
	TOTAL				3023.41
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3023.41 - 938.50) = 2084.91				312.74
	Cost of 10 metre				3336.15
	Cost of 1 metre				333.61
	Say				333.60

18.8.4 32 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8639	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia. Add 75% for fittings, clamps and wastage etc. on (X) $75 * X / 100$	metre	10.00	117.00	1170.00(X)
					877.50
18.78	Making chases upto 7.5 x 7.5 cm. in walls and making good the same Rate as per item no. 18.78 Of SH: Water Supply	metre	10.00	93.85	938.50(A)
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				3685.27
	Add 1 % Water charges on all except (A) i.e. on (3685.27 - 938.50) = 2746.77				27.47
	TOTAL				3712.74
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3712.74 - 938.50) = 2774.24				416.14
	Cost of 10 metre				4128.88
	Cost of 1 metre				412.88
	Say				412.90

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.

External work

18.9.1 15 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8636	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia. Add 30% for fittings and wastage etc. on (X) $30 * X / 100$	metre	10.00	35.00	350.00(X) 105.00
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.16	368.00	58.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1038.60
	Add 1 % Water charges				10.39
	TOTAL				1048.99
	Add 15 % Contractor's profit and overheads				157.35
	Cost of 10 metre				1206.34
	Cost of 1 metre				120.63
	Say				120.65

18.9.2 20 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8637	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia. Add 30% for fittings and wastage etc. on (X) $30 * X / 100$	metre	10.00	54.00	540.00(X) 162.00
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.16	368.00	58.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1285.60
	Add 1 % Water charges				12.86
	TOTAL				1298.46
	Add 15 % Contractor's profit and overheads				194.77
	Cost of 10 metre				1493.23
	Cost of 1 metre				149.32
	Say				149.30

18.9.3 25 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8638	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100 LABOUR	metre	10.00	78.00	780.00(X) 234.00
0116	Fitter (grade 1)	day	0.12	487.00	58.44
0114	Beldar Trenching and refilling etc.	day	0.25	368.00	92.00
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1650.20
	Add 1 % Water charges				16.50
	TOTAL				1666.70
	Add 15 % Contractor's profit and overheads				250.01
	Cost of 10 metre				1916.71
	Cost of 1 metre				191.67
	Say				191.65

18.9.4 32 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8639	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100 LABOUR	metre	10.00	117.00	1170.00(X) 351.00
0116	Fitter (grade 1)	day	0.12	487.00	58.44
0114	Beldar Trenching and refilling etc.	day	0.25	368.00	92.00
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2157.20
	Add 1 % Water charges				21.57
	TOTAL				2178.77
	Add 15 % Contractor's profit and overheads				326.82
	Cost of 10 metre				2505.59
	Cost of 1 metre				250.55
	Say				250.55

18.9.5 40 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8640	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia.	metre	10.00	160.00	1600.00(X)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 30% for fittings and wastage etc. on (X) 30 * X / 100				480.00
	LABOUR				
0116	Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar	day	0.33	368.00	121.44
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2765.12
	Add 1 % Water charges				27.65
	TOTAL				2792.77
	Add 15 % Contractor's profit and overheads				418.92
	Cost of 10 metre				3211.69
	Cost of 1 metre				321.16
	Say				321.15

18.9.6 50 mm nominal outer dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8641	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	268.00	2680.00(X) 804.00
	LABOUR				
0116	Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar	day	0.33	368.00	121.44
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				4169.12
	Add 1 % Water charges				41.69
	TOTAL				4210.81
	Add 15 % Contractor's profit and overheads				631.62
	Cost of 10 metre				4842.43
	Cost of 1 metre				484.24
	Say				484.25

18.9.7 62.50 mm nominal inner dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8642	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 62.5mm inner dia. Add 30% for fittings and wastage etc. on (X) 30 * X / 100	metre	10.00	651.00	6510.00(X) 1953.00
	LABOUR				
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0114	Beldar	day	0.66	368.00	242.88

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Trenching and refilling etc. Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				9313.39
	Add 1 % Water charges				93.13
	TOTAL				9406.52
	Add 15 % Contractor's profit and overheads				1410.98
	Cost of 10 metre				10817.50
	Cost of 1 metre				1081.75
	Say				1081.75

18.9.8 75 mm nominal inner dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8643	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 75 mm inner dia. Add 30% for fittings and wastage etc. on (X) $30 * X / 100$	metre	10.00	730.00	7300.00(X) 2190.00
	LABOUR				
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0114	Beldar	day	0.66	368.00	242.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				10340.39
	Add 1 % Water charges				103.40
	TOTAL				10443.79
	Add 15 % Contractor's profit and overheads				1566.57
	Cost of 10 metre				12010.36
	Cost of 1 metre				1201.03
	Say				1201.05

18.9.9 100 mm nominal inner dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8644	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia. Add 30% for fittings and wastage etc. on (X) $30 * X / 100$	metre	10.00	985.00	9850.00(X) 2955.00
	LABOUR				
0116	Fitter (grade 1)	day	0.37	487.00	180.19
0114	Beldar	day	0.97	368.00	356.96
	Trenching and refilling etc.				
0114	Beldar	day	0.80	368.00	294.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.80	368.00	294.40
	TOTAL				13930.95
	Add 1 % Water charges				139.31
	TOTAL				14070.26
	Add 15 % Contractor's profit and overheads				2110.54
	Cost of 10 metre				16180.80
	Cost of 1 metre				1618.08
	Say				1618.10

18.9.10 150 mm nominal inner dia Pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8645	Details of cost for 10 metre MATERIAL Chlorinated Polyvinyl - chloride (CPVC) pipe 150 mm inner dia. Add 30% for fittings and wastage etc. on (X) $30 * X / 100$	metre	10.00	1462.00	14620.00(X) 4386.00
	LABOUR				
0116	Fitter (grade 1)	day	0.58	487.00	282.46
0114	Beldar	day	1.54	368.00	566.72
	Trenching and refilling etc.				
0114	Beldar	day	1.20	368.00	441.60
0115	Coolie	day	1.20	368.00	441.60
	TOTAL				20738.38
	Add 1 % Water charges				207.38
	TOTAL				20945.76
	Add 15 % Contractor's profit and overheads				3141.86
	Cost of 10 metre				24087.62
	Cost of 1 metre				2408.76
	Say				2408.75

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc.

Internal work - Exposed on wall

18.10.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1545	Details of cost for 10 metre MATERIAL G.I. pipes 15 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 12.30 = 14.145 \text{ kg} = 0.014145 \text{ tonne}$	metre	11.50	77.00	885.50
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.014145	92.24	1.30
9999	White lead, hemp, oil etc.	L.S.	8.06	1.73	13.94
9999	Cement, sand and grit etc.	L.S.	2.73	1.73	4.72
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1604.73
	Add 1 % Water charges				16.05
	TOTAL				1620.78
	Add 15 % Contractor's profit and overheads				243.12
	Cost of 10 metre				1863.90
	Cost of 1 metre				186.39
	Say				186.40

18.10.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1546	Details of cost for 10 metre MATERIAL G.I. pipes 20 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 15.90 = 18.285 \text{ kg} = 0.018285 \text{ tonne}$	metre	11.50	99.00	1138.50(A)
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.018285	92.24	1.69
9999	White lead, hemp, oil etc.	L.S.	8.06	1.73	13.94
9999	Cement, sand and grit etc.	L.S.	2.73	1.73	4.72
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.82	448.00	367.36
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				1929.80
	Add 1 % Water charges				19.30
	TOTAL				1949.10
	Add 15 % Contractor's profit and overheads				292.37
	Cost of 10 metre				2241.47
	Cost of 1 metre				224.14
	Say				224.15

18.10.3 25 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1547	Details of cost for 10 metre MATERIAL G.I. pipes 25 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 24.60 = 28.29 \text{ kg} = 0.02829 \text{ tonne}$	metre	11.50	110.00	1265.00(A)
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.02829	92.24	2.61
9999	White lead, hemp, oil etc.	L.S.	9.49	1.73	16.42
9999	Cement, sand and grit etc.	L.S.	4.16	1.73	7.20
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2133.86
	Add 1 % Water charges				21.34
	TOTAL				2155.20
	Add 15 % Contractor's profit and overheads				323.28
	Cost of 10 metre				2478.48
	Cost of 1 metre				247.84
	Say				247.85

18.10.4 32 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1548	Details of cost for 10 metre MATERIAL G.I. pipes 32 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 31.70 = 36.455 \text{ kg} = 0.036455 \text{ tonne}$	metre	11.50	145.00	1667.50
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.036455	92.24	3.36
9999	White lead, hemp, oil etc.	L.S.	9.49	1.73	16.42
9999	Cement, sand and grit etc.	L.S.	4.16	1.73	7.20
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.98	448.00	439.04
0114	Beldar	day	0.98	368.00	360.64
	TOTAL				2654.87
	Add 1 % Water charges				26.55
	TOTAL				2681.42
	Add 15 % Contractor's profit and overheads				402.21
	Cost of 10 metre				3083.63
	Cost of 1 metre				308.36
	Say				308.35

18.10.5 40 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1549	Details of cost for 10 metre MATERIAL G.I. pipes 40 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 36.50 = 41.975 \text{ kg} = 0.041975 \text{ tonne}$	metre	11.50	185.00	2127.50
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.041975	92.24	3.87
9999	White lead, hemp, oil etc.	L.S.	13.52	1.73	23.39
9999	Cement, sand and grit etc.	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	1.31	448.00	586.88

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.31	368.00	482.08
	TOTAL				3393.65
	Add 1 % Water charges				33.94
	TOTAL				3427.59
	Add 15 % Contractor's profit and overheads				514.14
	Cost of 10 metre				3941.73
	Cost of 1 metre				394.17
	Say				394.15

18.10.6 50 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1550	Details of cost for 10 metre MATERIAL G.I. pipes 50 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 51.70 = 59.455 \text{ kg} = 0.059455 \text{ tonne}$	metre	11.50	220.00	2530.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.059455	92.24	5.48
9999	White lead, hemp, oil etc.	L.S.	13.52	1.73	23.39
9999	Cement, sand and grit etc.	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	1.64	448.00	734.72
0114	Beldar	day	1.64	368.00	603.52
	TOTAL				4067.04
	Add 1 % Water charges				40.67
	TOTAL				4107.71
	Add 15 % Contractor's profit and overheads				616.16
	Cost of 10 metre				4723.87
	Cost of 1 metre				472.38
	Say				472.40

18.11 Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :

18.11.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1545	Details of cost for 10 metre MATERIAL G.I. pipes 15 mm dia Weight for carriage = pipe weight + 15% for fittings = $1.15 * 12.30 = 14.145 \text{ kg} = 0.014145 \text{ tonne}$	metre	11.50	77.00	885.50
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.014145	92.24	1.30
9999	White lead, hemp, oil etc.	L.S.	8.06	1.73	13.94
	Painting G.I. pipe with anti-corrosive bitumastic paint two or more coats				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.40.1	(Rate same as per item no. 18.40.1) Making chases upto 7.5x7.5cm in walls and making good the same	metre	10.00	6.00	60.00(A)
18.78	Rate as per item no. 18.78 Of SH Water Supply LABOUR	metre	10.00	93.85	938.50(A)
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2598.51
	Add 1 % Water charges on all except (A) i.e. on (2598.51 - 998.50) = 1600.01				16.00
	TOTAL				2614.51
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2614.51 - 998.50) = 1616.01				242.40
	Cost of 10 metre				2856.91
	Cost of 1 metre				285.69
	Say				285.70

18.11.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1546	Details of cost for 10 metre MATERIAL G.I. pipes 20 mm dia Weight for carriage = pipe weight + 15% for fittings = 1.15 * 15.90 = 18.285 kg = 0.018285 tonne	metre	11.50	99.00	1138.50
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.018285	92.24	1.69
9999	White lead, hemp, oil etc. Painting G.I. pipe with anti-corrosive bitumastic paint two or more coats	L.S.	8.06	1.73	13.94
18.40.2	(Rate same as per item no. 18.40.2 Of SH Water Supply) Making chases upto 7.5x7.5cm in walls and making good the same	metre	10.00	7.10	71.00(A)
18.78	Rate as per item no. 18.78 Of SH Water Supply LABOUR	metre	10.00	93.85	938.50(A)
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2862.90
	Add 1 % Water charges on all except (A) i.e. on (2862.90 - 1009.50) = 1853.40				18.53
	TOTAL				2881.43
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2881.43 - 1009.50) = 1871.93				280.79
	Cost of 10 metre				3162.22
	Cost of 1 metre				316.22
	Say				316.20

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.

External work

18.12.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1545	Details of cost for 10 metre MATERIAL G.I. pipes 15 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 12.30 = 12.546 \text{ kg} = 0.012546 \text{ tonne}$	metre	10.20	77.00	785.40
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.012546	92.24	1.16
9999	White lead, hemp, oil etc.	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.16	368.00	58.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1379.38
	Add 1 % Water charges				13.79
	TOTAL				1393.17
	Add 15 % Contractor's profit and overheads				208.98
	Cost of 10 metre				1602.15
	Cost of 1 metre				160.21
	Say				160.20

18.12.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1546	Details of cost for 10 metre MATERIAL G.I. pipes 20 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 15.90 = 16.218 \text{ kg} = 0.016218 \text{ tonne}$	metre	10.20	99.00	1009.80
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.016218	92.24	1.50
9999	White lead, hemp, oil etc.	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.16	368.00	58.88
	Trenching and refilling etc.				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1604.12
	Add 1 % Water charges				16.04
	TOTAL				1620.16
	Add 15 % Contractor's profit and overheads				243.02
	Cost of 10 metre				1863.18
	Cost of 1 metre				186.31
	Say				186.30

18.12.3 25 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1547	Details of cost for 10 metre MATERIAL G.I. pipes 25 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 24.60 = 25.092 \text{ kg} = 0.025092 \text{ tonne}$	metre	10.20	110.00	1122.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.025092	92.24	2.31
9999	White lead, hemp, oil etc. LABOUR	L.S.	6.76	1.73	11.69
0116	Fitter (grade 1)	day	0.12	487.00	58.44
0114	Beldar Trenching and refilling etc.	day	0.25	368.00	92.00
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				1772.20
	Add 1 % Water charges				17.72
	TOTAL				1789.92
	Add 15 % Contractor's profit and overheads				268.49
	Cost of 10 metre				2058.41
	Cost of 1 metre				205.84
	Say				205.85

18.12.4 32 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1548	Details of cost for 10 metre MATERIAL G.I. pipes 32 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 31.70 = 32.334 \text{ kg} = 0.032334 \text{ tonne}$	metre	10.20	145.00	1479.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.032334	92.24	2.98
9999	White lead, hemp, oil etc. LABOUR	L.S.	6.76	1.73	11.69
0116	Fitter (grade 1)	day	0.12	487.00	58.44
0114	Beldar Trenching and refilling etc.	day	0.25	368.00	92.00
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2129.87
	Add 1 % Water charges				21.30
	TOTAL				2151.17
	Add 15 % Contractor's profit and overheads				322.68
	Cost of 10 metre				2473.85
	Cost of 1 metre				247.38
	Say				247.40

18.12.5 40 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1549	Details of cost for 10 metre MATERIAL G.I. pipes 40 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 36.50 = 37.23 \text{ kg} = 0.03723 \text{ tonne}$	metre	10.20	185.00	1887.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.03723	92.24	3.43
9999	White lead, hemp, oil etc. LABOUR	L.S.	9.49	1.73	16.42
0116	Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar Trenching and refilling etc.	day	0.33	368.00	121.44
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2591.97
	Add 1 % Water charges				25.92
	TOTAL				2617.89
	Add 15 % Contractor's profit and overheads				392.68
	Cost of 10 metre				3010.57
	Cost of 1 metre				301.05
	Say				301.05

18.12.6 50 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1550	Details of cost for 10 metre MATERIAL G.I. pipes 50 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 51.70 = 52.73 \text{ kg} = 0.05273 \text{ tonne}$	metre	10.20	220.00	2244.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.052734	92.24	4.86
9999	White lead, hemp, oil etc. LABOUR	L.S.	9.49	1.73	16.42
0116	Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar Trenching and refilling etc.	day	0.33	368.00	121.44
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				2950.40
	Add 1 % Water charges				29.50
	TOTAL				2979.90
	Add 15 % Contractor's profit and overheads				446.99
	Cost of 10 metre				3426.89
	Cost of 1 metre				342.68
	Say				342.70

18.12.7 65 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1551	Details of cost for 10 metre MATERIAL G.I. pipes 65 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 66.30 = 67.626 \text{ kg} = 0.067626 \text{ tonne}$	metre	10.20	295.00	3009.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.067626	92.24	6.24
9999	White lead, hemp, oil etc. LABOUR	L.S.	13.52	1.73	23.39
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0114	Beldar Trenching and refilling etc.	day	0.66	368.00	242.88
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				3889.02
	Add 1 % Water charges				38.89
	TOTAL				3927.91
	Add 15 % Contractor's profit and overheads				589.19
	Cost of 10 metre				4517.10
	Cost of 1 metre				451.71
	Say				451.70

18.12.8 80 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1552	Details of cost for 10 metre MATERIAL G.I. pipes 80 mm dia Weight for carriage = pipe weight + 2% for fittings = $1.02 * 86.40 = 88.128 \text{ kg} = 0.088128 \text{ tonne}$	metre	10.20	400.00	4080.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.088128	92.24	8.13
9999	White lead, hemp, oil etc. LABOUR	L.S.	13.52	1.73	23.39
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0114	Beldar Trenching and refilling etc.	day	0.66	368.00	242.88
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.66	368.00	242.88
	TOTAL				4961.91
	Add 1 % Water charges				49.62
	TOTAL				5011.53
	Add 15 % Contractor's profit and overheads				751.73
	Cost of 10 metre				5763.26
	Cost of 1 metre				576.32
	Say				576.30

18.13 Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :

18.13.1 25 to 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection. Take 25mm dia as an average size.				
	MATERIAL				
1608	G.I. tees (equal) 25 mm	each	1.00	40.00	40.00
1555	G.I. back (jam) nuts 25 mm dia	each	1.00	8.00	8.00
9988	Carriage of materials and sundries	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				339.37
	Add 1 % Water charges				3.39
	TOTAL				342.76
	Add 15 % Contractor's profit and overheads				51.41
	Cost of one connection				394.17
	Say				394.15

18.13.2 50 to 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one connection. Take 65mm dia as an average size.				
	MATERIAL				
1612	G.I. tees (equal) 65 mm	each	1.00	250.00	250.00
1559	G.I. back (jam) nuts 65 mm dia	each	1.00	20.00	20.00
9988	Carriage of materials and sundries	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.45	487.00	219.15
0114	Beldar	day	0.45	368.00	165.60
	TOTAL				663.97
	Add 1 % Water charges				6.64
	TOTAL				670.61
	Add 15 % Contractor's profit and overheads				100.59
	Cost of one connection				771.20
	Say				771.20

18.14 Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one meter with stop cock				
	MATERIAL				
1555	G.I. back (jam) nuts 25 mm dia	each	1.00	8.00	8.00
9988	Carriage of materials and sundries	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				299.37
	Add 1 % Water charges				2.99
	TOTAL				302.36
	Add 15 % Contractor's profit and overheads				45.35
	Cost of one metre with stop cock				347.71
	Say				347.70

18.15 Providing and fixing brass bib cock of approved quality :

18.15.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1339	Brass bib-cock 15 mm dia	each	1.00	210.00	210.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				223.94
	Add 1 % Water charges				2.24
	TOTAL				226.18
	Add 15 % Contractor's profit and overheads				33.93
	Cost of one no.				260.11
	Say				260.10

18.15.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1340	Brass bib-cock 20 mm dia	each	1.00	225.00	225.00
9988	Carriage of materials and fixing charges	L.S.	9.49	1.73	16.42
	TOTAL				241.42
	Add 1 % Water charges				2.41
	TOTAL				243.83
	Add 15 % Contractor's profit and overheads				36.57
	Cost of one no.				280.40
	Say				280.40

18.16 Providing and fixing brass stop cock of approved quality :

18.16.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1342	Brass stop-cock 15 mm dia	each	1.00	210.00	210.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				223.94
	Add 1 % Water charges				2.24
	TOTAL				226.18
	Add 15 % Contractor's profit and overheads				33.93
	Cost of one no.				260.11
	Say				260.10

18.16.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1343	Details of cost for one no. MATERIAL				
	Brass stop-cock 20 mm dia	each	1.00	225.00	225.00
9988	Carriage of materials and fixing charges	L.S.	9.49	1.73	16.42
	TOTAL				241.42
	Add 1 % Water charges				2.41
	TOTAL				243.83
	Add 15 % Contractor's profit and overheads				36.57
	Cost of one no.				280.40
	Say				280.40

18.17 Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :**18.17.1 25 mm nominal bore**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1927	Details of cost for one no. MATERIAL				
	Brass full way valve with C.I. wheel (screwed end) 25 mm dia	each	1.00	350.00	350.00
9988	Carriage of materials and fixing charges	L.S.	10.79	1.73	18.67
	TOTAL				368.67
	Add 1 % Water charges				3.69
	TOTAL				372.36
	Add 15 % Contractor's profit and overheads				55.85
	Cost of one no.				428.21
	Say				428.20

18.17.1A 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1926	Details of cost for 1 No. MATERIAL				
	20 mm dia Gunmetal gate valve with wheel	each	1.00	325.00	325.00
9977	Carriage of metrial and fixing charge	L.S.	9.49	1.73	16.42
	TOTAL				341.42
	Add 1 % Water charges				3.41
	TOTAL				344.83
	Add 15 % Contractor's profit and overheads				51.72
	Cost of 1 No.				396.56
	Say				396.55

18.17.2 32 mm nominal bore.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1928	Details of cost for one no. MATERIAL				
	Brass full way valve with C.I. wheel (screwed end) 32 mm dia	each	1.00	410.00	410.00
9988	Carriage of materials and fixing charges	L.S.	12.22	1.73	21.14
	TOTAL				431.14
	Add 1 % Water charges				4.31
	TOTAL				435.45
	Add 15 % Contractor's profit and overheads				65.32
	Cost of one no.				500.77
	Say				500.75

18.17.3 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1929	Details of cost for one no. MATERIAL Brass full way valve with C.I. wheel (screwed end) 40 mm dia	each	1.00	480.00	480.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				503.39
	Add 1 % Water charges				5.03
	TOTAL				508.42
	Add 15 % Contractor's profit and overheads				76.26
	Cost of one no.				584.68
	Say				584.70

18.17.4 50 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1930	Details of cost for one no. MATERIAL Brass full way valve with C.I. wheel (screwed end) 50 mm dia	each	1.00	620.00	620.00
9988	Carriage of materials and fixing charges	L.S.	14.82	1.73	25.64
	TOTAL				645.64
	Add 1 % Water charges				6.46
	TOTAL				652.10
	Add 15 % Contractor's profit and overheads				97.82
	Cost of one no.				749.92
	Say				749.90

18.17.5 65 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1931	Details of cost for one no. MATERIAL Brass full way valve with C.I. wheel (screwed end) 65 mm dia	each	1.00	1080.00	1080.00
9988	Carriage of materials and fixing charges	L.S.	16.12	1.73	27.89
	TOTAL				1107.89
	Add 1 % Water charges				11.08
	TOTAL				1118.97
	Add 15 % Contractor's profit and overheads				167.85
	Cost of one no.				1286.82
	Say				1286.80

18.17.6 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1932	Details of cost for one no. MATERIAL Brass full way valve with C.I. wheel (screwed end) 80 mm dia	each	1.00	1620.00	1620.00
9988	Carriage of materials and fixing charges	L.S.	18.85	1.73	32.61
	TOTAL				1652.61
	Add 1 % Water charges				16.53
	TOTAL				1669.14
	Add 15 % Contractor's profit and overheads				250.37
	Cost of one no.				1919.51
	Say				1919.50

18.18 Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :

18.18.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1922	Details of cost for one no. MATERIAL H.P. or L.P. ball valve with polythene floats: 15 mm dia	each	1.00	210.00	210.00
9988	Carriage of materials and fixing charges	L.S.	21.58	1.73	37.33
	TOTAL				247.33
	Add 1 % Water charges				2.47
	TOTAL				249.80
	Add 15 % Contractor's profit and overheads				37.47
	Cost of one no.				287.27
	Say				287.25

18.18.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1923	Details of cost for one no. MATERIAL H.P. or L.P. ball valve with polythene floats: 20 mm dia	each	1.00	235.00	235.00
9988	Carriage of materials and fixing charges	L.S.	26.91	1.73	46.55
	TOTAL				281.55
	Add 1 % Water charges				2.82
	TOTAL				284.37
	Add 15 % Contractor's profit and overheads				42.66
	Cost of one no.				327.03
	Say				327.05

18.18.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1924	Details of cost for one no. MATERIAL H.P. or L.P. ball valve with polythene floats: 25 mm dia	each	1.00	230.00	230.00
9988	Carriage of materials and fixing charges	L.S.	32.24	1.73	55.78
	TOTAL				285.78
	Add 1 % Water charges				2.86
	TOTAL				288.64
	Add 15 % Contractor's profit and overheads				43.30
	Cost of one no.				331.94
	Say				331.95

18.19 Providing and fixing gun metal non- return valve of approved quality (screwed end) :

18.19.1 25 mm nominal bore

18.19.1.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1933	Details of cost for one no. MATERIAL Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	each	1.00	330.00	330.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				353.39
	Add 1 % Water charges				3.53
	TOTAL				356.92
	Add 15 % Contractor's profit and overheads				53.54
	Cost of one no.				410.46
	Say				410.45

18.19.1.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3080	Details of cost for one no. MATERIAL Gunmetal non-return valve-vertical (screwed end) 25 mm dia	each	1.00	350.00	350.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				373.39
	Add 1 % Water charges				3.73
	TOTAL				377.12
	Add 15 % Contractor's profit and overheads				56.57
	Cost of one no.				433.69
	Say				433.70

18.19.2 32 mm nominal bore

18.19.2.1 Horizontal

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1934	Details of cost for one no. MATERIAL Gunmetal non-return valve-horizontal (screwed end) 32 mm dia	each	1.00	450.00	450.00
9988	Carriage of materials and fixing charges	L.S.	14.82	1.73	25.64
	TOTAL				475.64
	Add 1 % Water charges				4.76
	TOTAL				480.40
	Add 15 % Contractor's profit and overheads				72.06
	Cost of one no.				552.46
	Say				552.45

18.19.2.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3084	Details of cost for one no. MATERIAL Gunmetal non-return valve-vertical (screwed end) 32 mm dia	each	1.00	500.00	500.00
9988	Carriage of materials and fixing charges	L.S.	14.82	1.73	25.64
	TOTAL				525.64
	Add 1 % Water charges				5.26
	TOTAL				530.90
	Add 15 % Contractor's profit and overheads				79.64
	Cost of one no.				610.54
	Say				610.55

18.19.3 40 mm nominal bore**18.19.3.1 Horizontal**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1935	Details of cost for one no. MATERIAL Gunmetal non-return valve-horizontal (screwed end) 40 mm dia	each	1.00	560.00	560.00
9988	Carriage of materials and fixing charges	L.S.	16.12	1.73	27.89
	TOTAL				587.89
	Add 1 % Water charges				5.88
	TOTAL				593.77
	Add 15 % Contractor's profit and overheads				89.07
	Cost of one no.				682.84
	Say				682.85

18.19.3.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3088	Details of cost for one no. MATERIAL Gunmetal non-return valve-vertical (screwed end) 40 mm dia	each	1.00	700.00	700.00
9988	Carriage of materials and fixing charges	L.S.	16.12	1.73	27.89
	TOTAL				727.89
	Add 1 % Water charges				7.28
	TOTAL				735.17
	Add 15 % Contractor's profit and overheads				110.28
	Cost of one no.				845.45
	Say				845.45

18.19.4 50 mm nominal bore**18.19.4.1 Horizontal**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1936	Gunmetal non-return valve-horizontal (screwed end) 50 mm dia	each	1.00	820.00	820.00
9988	Carriage of materials and fixing charges	L.S.	17.55	1.73	30.36
	TOTAL				850.36
	Add 1 % Water charges				8.50
	TOTAL				858.86
	Add 15 % Contractor's profit and overheads				128.83
	Cost of one no.				987.69
	Say				987.70

18.19.4.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
3092	Gunmetal non-return valve-vertical (screwed end) 50 mm dia	each	1.00	900.00	900.00
9988	Carriage of materials and fixing charges	L.S.	17.55	1.73	30.36
	TOTAL				930.36
	Add 1 % Water charges				9.30
	TOTAL				939.66
	Add 15 % Contractor's profit and overheads				140.95
	Cost of one no.				1080.61
	Say				1080.60

18.19.5 65 mm nominal bore**18.19.5.1 Horizontal**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1937	Gunmetal non-return valve-horizontal (screwed end) 65 mm dia	each	1.00	1490.00	1490.00
9988	Carriage of materials and fixing charges	L.S.	18.85	1.73	32.61
	TOTAL				1522.61
	Add 1 % Water charges				15.23
	TOTAL				1537.84
	Add 15 % Contractor's profit and overheads				230.68
	Cost of one no.				1768.52
	Say				1768.50

18.19.5.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3096	Details of cost for one no. MATERIAL Gunmetal non-return valve-vertical (screwed end) 65 mm dia	each	1.00	1500.00	1500.00
9988	Carriage of materials and fixing charges	L.S.	18.85	1.73	32.61
	TOTAL				1532.61
	Add 1 % Water charges				15.33
	TOTAL				1547.94
	Add 15 % Contractor's profit and overheads				232.19
	Cost of one no.				1780.13
	Say				1780.15

18.19.6 80 mm nominal bore**18.19.6.1 Horizontal**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1938	Details of cost for one no. MATERIAL Gunmetal non-return valve-horizontal (screwed end) 80 mm dia	each	1.00	2120.00	2120.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				2155.08
	Add 1 % Water charges				21.55
	TOTAL				2176.63
	Add 15 % Contractor's profit and overheads				326.49
	Cost of one no.				2503.12
	Say				2503.10

18.19.6.2 Vertical

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3300	Details of cost for one no. MATERIAL Gunmetal non-return valve-vertical (screwed end) 80 mm dia	each	1.00	2500.00	2500.00
9988	Carriage of materials and fixing charges	L.S.	20.28	1.73	35.08
	TOTAL				2535.08
	Add 1 % Water charges				25.35
	TOTAL				2560.43
	Add 15 % Contractor's profit and overheads				384.06
	Cost of one no.				2944.49
	Say				2944.50

18.20 Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :

18.20.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1360	C.I.mouth, brass ferrule 15 mm dia	each	1.00	140.00	140.00
9988	Carriage of materials and fixing charges	L.S.	40.30	1.73	69.72
	TOTAL				209.72
	Add 1 % Water charges				2.10
	TOTAL				211.82
	Add 15 % Contractor's profit and overheads				31.77
	Cost of one no.				243.59
	Say				243.60

18.20.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1361	C.I.mouth, brass ferrule 20 mm dia	each	1.00	160.00	160.00
9988	Carriage of materials and fixing charges	L.S.	47.19	1.73	81.64
	TOTAL				241.64
	Add 1 % Water charges				2.42
	TOTAL				244.06
	Add 15 % Contractor's profit and overheads				36.61
	Cost of one no.				280.67
	Say				280.65

18.20.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1362	C.I.mouth, brass ferrule 25 mm dia	each	1.00	220.00	220.00
9988	Carriage of materials and fixing charges	L.S.	53.82	1.73	93.11
	TOTAL				313.11
	Add 1 % Water charges				3.13
	TOTAL				316.24
	Add 15 % Contractor's profit and overheads				47.44
	Cost of one no.				363.68
	Say				363.70

18.21 Providing and fixing unplasticised PVC connection pipe with brass unions :**18.21.1 30 cm length****18.21.1.1 15 mm nominal bore**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1687	Unplasticised P.V.C.connection pipe with brass union 30 cm long 15 mm bore	each	1.00	30.00	30.00
9988	Carriage of materials and fixing charges	L.S.	12.22	1.73	21.14
	TOTAL				51.14
	Add 1 % Water charges				0.51
	TOTAL				51.65
	Add 15 % Contractor's profit and overheads				7.75
	Cost of one no.				59.40
	Say				59.40

18.21.1.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1688	Unplasticised P.V.C.connection pipe with brass union 30 cm long 20 mm bore	each	1.00	35.00	35.00
9988	Carriage of materials and fixing charges	L.S.	12.22	1.73	21.14
	TOTAL				56.14
	Add 1 % Water charges				0.56
	TOTAL				56.70
	Add 15 % Contractor's profit and overheads				8.51
	Cost of one no.				65.21
	Say				65.20

18.21.2 45 cm length**18.21.2.1 15 mm nominal bore**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
1689	Unplasticised P.V.C.connection pipe with brass union 45 cm long 15 mm bore	each	1.00	35.00	35.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				58.39
	Add 1 % Water charges				0.58
	TOTAL				58.97
	Add 15 % Contractor's profit and overheads				8.85
	Cost of one no.				67.82
	Say				67.80

18.21.2.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1690	Unplasticised P.V.C.connection pipe with brass union 45 cm long 20 mm bore	each	1.00	48.00	48.00
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				71.39
	Add 1 % Water charges				0.71
	TOTAL				72.10
	Add 15 % Contractor's profit and overheads				10.82
	Cost of one no.				82.92
	Say				82.90

18.22 Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :**18.22.1 100 mm diameter**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1878	Shower rose C.P.brass for 15 to 20 mm inlet 100 mm dia	each	1.00	50.00	50.00
9988	Carriage of materials and fixing charges	L.S.	6.76	1.73	11.69
	TOTAL				61.69
	Add 1 % Water charges				0.62
	TOTAL				62.31
	Add 15 % Contractor's profit and overheads				9.35
	Cost of one no.				71.66
	Say				71.65

18.22.2 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1879	Shower rose C.P.brass for 15 to 20 mm inlet 150 mm dia	each	1.00	60.00	60.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				73.94
	Add 1 % Water charges				0.74
	TOTAL				74.68
	Add 15 % Contractor's profit and overheads				11.20
	Cost of one no.				85.88
	Say				85.90

18.23 Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5.14 quintal 10 m of 200 mm dia C.I. pipe class 'A' Weight = (2x257) = 514kg = 5.14 quintal LABOUR for laying pipe				
0116	Fitter (grade 1)	day	0.17	487.00	82.79
0117	Assistant Fitter or 2nd class Fitter	day	0.17	448.00	76.16
0114	Beldar	day	1.33	368.00	489.44
9999	Sundries	L.S.	16.12	1.73	27.89
	TOTAL				676.28
	Add 1 % Water charges				6.76
	TOTAL				683.04
	Add 15 % Contractor's profit and overheads				102.46
	Cost of 5.14 quintal				785.50
	Cost of one quintal				152.82
	Say				152.80

18.24 Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc.(excluding cost of specials).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7 quintal 10 Nos. Tee 200x150mm Weight = 70x10 = 700kg. LABOUR for laying tee-				
0116	Fitter (grade 1)	day	0.93	487.00	452.91
0117	Assistant Fitter or 2nd class Fitter	day	0.62	448.00	277.76
0114	Beldar	day	2.48	368.00	912.64
9999	Sundries	L.S.	40.17	1.73	69.49
	TOTAL				1712.80
	Add 1 % Water charges				17.13
	TOTAL				1729.93
	Add 15 % Contractor's profit and overheads				259.49
	Cost of 7 quintal				1989.42
	Cost of one quintal				284.20
	Say				284.20

18.25 Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class):

18.25.1 Up to 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal MATERIAL				
1464	S & S.C.I. standard specials upto 300 mm dia (heavy class)	quintal	1.00	3600.00	3600.00
2309	Carriage of Cast iron fittings	tonne	0.10	92.24	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.24	LABOUR Rate as per item No. 18.24 Of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (3893.42 - 284.20) = 3609.22 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3929.51 - 284.20) = 3645.31 Cost of one quintal Say	quintal	1.00	284.20	284.20(A) 3893.42 36.09 3929.51 546.80 4476.31 4476.30

18.25.2 Over 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1466	Details of cost for 1 quintal MATERIAL S & S.C.I. standard specials over 300 mm dia (heavy class)	quintal	1.00	3700.00	3700.00
2309	Carriage of Cast iron fittings	tonne	0.10	92.24	9.22
18.24	LABOUR For laying Rate as per item No. 18.24 Of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (3993.42 - 284.20) = 3709.22 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4030.51 - 284.20) = 3746.31 Cost of one quintal Say	quintal	1.00	284.20	284.20(A) 3993.42 37.09 4030.51 561.95 4592.46 4592.45

18.26 Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :

18.26.1 Up to 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1468	Details of cost for 1 quintal MATERIAL Flanged C.I. standard specials upto 300 mm dia (heavy class)	quintal	1.00	5500.00	5500.00
2309	Carriage of Cast iron fittings LABOUR For laying	tonne	0.10	92.24	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.24	Rate as per item No. 18.24 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (5793.42 - 284.20) = 5509.22 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (5848.51 - 284.20) = 5564.31 Cost of one quintal Say	quintal	1.00	284.20	284.20(A) 5793.42 55.09 5848.51 834.65 6683.16 6683.15

18.26.2 Over 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1470	Details of cost for 1 quintal MATERIAL Flanged C.I. standard specials over 300 mm dia(heavy class)	quintal	1.00	5500.00	5500.00
2309	Carriage of Cast iron fittings LABOUR For laying	tonne	0.10	92.24	9.22
18.24	Rate as per item No. 18.24 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (5793.42 - 284.20) = 5509.22 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (5848.51 - 284.20) = 5564.31 Cost of one quintal Say	quintal	1.00	284.20	284.20(A) 5793.42 55.09 5848.51 834.65 6683.16 6683.15

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :

18.27.1 100 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7697	Details of cost for 10 metre MATERIAL 100mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 19.820 Kg Weight of 10m pipes 19.820x10 = 198.20 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 100mm dia	metre	10.00	900.00	9000.00
2319	Carriage of Spun iron S & S pipes 100 mm dia Labour for laying	100 metre	0.10	226.82	22.68

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (9325.22 - 302.54) = 9022.68 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9415.45 - 302.54) = 9112.91 Cost of 10 metre Cost of one metre Say	quintal	1.98	152.80	302.54(A) 9325.22 90.23 9415.45 1366.94 10782.39 1078.23 1078.25

18.27.2 125 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7698	Details of cost for 10 metre MATERIAL 125mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 25.820 Kg Weight of 10m pipes 25.820x10 = 258.20 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 125mm dia	metre	10.00	1120.00	11200.00
2320	Carriage of Spun iron S & S pipes 125 mm dia	100 metre	0.10	302.97	30.30
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (11624.52 - 394.22) = 11230.30 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11736.82 - 394.22) = 11342.60 Cost of 10 metre Cost of one metre Say	quintal	2.58	152.80	394.22(A) 11624.52 112.30 11736.82 1701.39 13438.21 1343.82 1343.80

18.27.3 150 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7699	Details of cost for 10 metre MATERIAL 150mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 32.180 Kg Weight of 10m pipes 32.180x10 = 321.80 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 150mm dia	metre	10.00	1350.00	13500.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.10	378.03	37.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (14029.82 - 492.02) = 13537.80 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (14165.20 - 492.02) = 13673.18 Cost of 10 metre Cost of one metre Say	quintal	3.22	152.80	492.02(A) 14029.82 135.38 14165.20 2050.98 16216.18 1621.61 1621.60

18.27.4 200 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7700	Details of cost for 10 metre MATERIAL 200mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 47.090 Kg Weight of 10m pipes 47.090x10 = 470.90 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 200mm dia	metre	10.00	2300.00	23000.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	0.10	614.93	61.49
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (23781.18 - 719.69) = 23061.49 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (24011.79 - 719.69) = 23292.10 Cost of 10 metre Cost of one metre Say	quintal	4.71	152.80	719.69(A) 23781.18 23061.49 24011.79 3493.82 27505.61 2750.56 2750.55

18.27.5 250 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7701	Details of cost for 10 metre MATERIALS 250mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 63.450 Kg Weight of 10m pipes 63.450x10 = 634.50 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 250mm dia	metre	10.00	3000.00	30000.00
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	0.10	873.84	87.38

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (31057.66 - 970.28) = 30087.38 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (31358.53 - 970.28) = 30388.25 Cost of 10 metre Cost of one metre Say	quintal	6.35	152.80	970.28(A) 31057.66 300.87 31358.53 4558.24 35916.77 3591.67 3591.65

18.27.6 300 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7702	Details of cost for 10 metre MATERIAL 300mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 81.820 Kg Weight of 10m pipes 81.820x10 = 818.20 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 300mm dia	metre	10.00	4050.00	40500.00
2324	Carriage of Spun iron S & S pipes 300 mm dia	100 metre	0.10	1080.08	108.01
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (41857.91 - 1249.90) = 40608.01 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (42263.99 - 1249.90) = 41014.09 Cost of 10 metre Cost of one metre Say	quintal	8.18	152.80	1249.90(A) 41857.91 406.08 42263.99 6152.11 48416.10 4841.61 4841.60

18.27.7 350 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7703	Details of cost for 10 metre MATERIAL 350mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 103.10 Kg Weight of 10m pipes 103.10x10 = 1031.00 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 350mm dia	metre	10.00	4850.00	48500.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	0.10	1512.11	151.21
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	10.31	152.80	1575.37(A)
	TOTAL				50226.58
	Add 1 % Water charges on all except (A) i.e. on (50226.58 - 1575.37) = 48651.21				486.51
	TOTAL				50713.09
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (50713.09 - 1575.37) = 49137.72				7370.66
	Cost of 10 metre				58083.75
	Cost of one metre				5808.37
	Say				5808.35

18.27.8 400 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7704	Details of cost for 10 metre MATERIAL 400mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 125.45 Kg Weight of 10m pipes 125.45x10 = 1254.50 Kg S&S Centrifugally (Spun) C.I. Pipe class LA 400mm dia	metre	10.00	6400.00	64000.00
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	0.10	2061.97	206.20
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	12.55	152.80	1917.64(A)
	TOTAL				66123.84
	Add 1 % Water charges on all except (A) i.e. on (66123.84 - 1917.64) = 64206.20				642.06
	TOTAL				66765.90
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (66765.90 - 1917.64) = 64848.26				9727.24
	Cost of 10 metre				76493.14
	Cost of one metre				7649.31
	Say				7649.30

18.27.9 450 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 450mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 151.270 Kg Weight of 10m pipes 151.270x10 = 1512.70 Kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7705	S&S Centrifugally (Spun) C.I. Pipe class LA 450mm dia	metre	10.00	7750.00	77500.00
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	0.10	2520.19	252.02
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	15.13	152.80	2311.86(A)
	TOTAL				80063.88
	Add 1 % Water charges on all except (A) i.e. on (80063.88 - 2311.86) = 77752.02				777.52
	TOTAL				80841.40
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (80841.40 - 2311.86) = 78529.54				11779.43
	Cost for 10 metre				92620.83
	Cost of one metre				9262.08
	Say				9262.10

18.27.10 500 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 500mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 177.090 Kg Weight of 10m pipes 177.090x10 = 1770.90 Kg				
7706	S&S Centrifugally (Spun) C.I. Pipe class LA 500mm dia	metre	10.00	9000.00	90000.00
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	0.10	2520.19	252.02
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	17.71	152.80	2706.09(A)
	TOTAL				92958.11
	Add 1 % Water charges on all except (A) i.e. on (92958.11 - 2706.09) = 90252.02				902.52
	TOTAL				93860.63
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (93860.63 - 2706.09) = 91154.54				13673.18
	Cost of 10 metre				107533.81
	Cost of one metre				10753.38
	Say				10753.40

18.27.11 600 mm dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 600mm dia. spun iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 236.000 Kg Weight of 10m pipes 236.000x10 = 2360.00 Kg				
7707	S&S Centrifugally (Spun) C.I. Pipe class LA 600mm dia	metre	10.00	12595.00	125950.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	0.10	3780.28	378.03
18.23	LABOUR for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	23.60	152.80	3606.08(A)
	TOTAL				129934.11
	Add 1 % Water charges on all except (A) i.e. on (129934.11 - 3606.08) = 126328.03				1263.28
	TOTAL				131197.39
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (131197.39 - 3606.08) = 127591.31				19138.70
	Cost of 10 metre				150336.09
	Cost of 1 metre				15033.60
	Say				15033.60

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials, including testing of joints but excluding the cost of pig lead :
18.28.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints MATERIAL				
1881	Spun yarn 0.17x 10 =1.70 kg	kilogram	1.70	50.00	85.00
0761	Fuel wood	quintal	0.28	500.00	140.00
0771	Kerosene oil	litre	0.38	45.00	17.10
9999	Sundries	L.S.	6.76	1.73	11.69
9977	Carriage of materials	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0117	Assistant Fitter or 2nd class Fitter	day	1.00	448.00	448.00
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				1934.01
	Add 1 % Water charges				19.34
	TOTAL				1953.35
	Add 15 % Contractor's profit and overheads				293.00
	Cost of 10 joints				2246.35
	Cost of one joint				224.63
	Say				224.65

18.28.2 125 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn 0.20x10=2.00 kg	kilogram	2.00	50.00	100.00
0761	Fuel wood	quintal	0.37	500.00	185.00
0771	Kerosene oil	litre	0.76	45.00	34.20
9999	Sundries	L.S.	9.49	1.73	16.42
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	LABOUR				
0116	Fitter (grade 1)	day	1.50	487.00	730.50
0117	Assistant Fitter or 2nd class Fitter	day	1.50	448.00	672.00
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				2858.54
	Add 1 % Water charges				28.59
	TOTAL				2887.13
	Add 15 % Contractor's profit and overheads				433.07
	Cost of 10 joints				3320.20
	Cost of one joint				332.02
	Say				332.00

18.28.3 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn 0.23x10=2.30 kg	kilogram	2.30	50.00	115.00
0761	Fuel wood	quintal	0.42	500.00	210.00
0771	Kerosene oil	litre	0.76	45.00	34.20
9999	Sundries	L.S.	10.79	1.73	18.67
9977	Carriage of materials	L.S.	10.79	1.73	18.67
	LABOUR				
0116	Fitter (grade 1)	day	1.50	487.00	730.50
0117	Assistant Fitter or 2nd class Fitter	day	1.50	448.00	672.00
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				2903.04
	Add 1 % Water charges				29.03
	TOTAL				2932.07
	Add 15 % Contractor's profit and overheads				439.81
	Cost of 10 joints				3371.88
	Cost of one joint				337.18
	Say				337.20

18.28.4 200 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn 0.3x10=3.00 kg	kilogram	3.00	50.00	150.00
0761	Fuel wood	quintal	0.56	500.00	280.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0771	Kerosene oil	litre	0.76	45.00	34.20
9999	Sundries	L.S.	13.52	1.73	23.39
9977	Carriage of materials	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0117	Assistant Fitter or 2nd class Fitter	day	2.00	448.00	896.00
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				3852.98
	Add 1 % Water charges				38.53
	TOTAL				3891.51
	Add 15 % Contractor's profit and overheads				583.73
	Cost of 10 joints				4475.24
	Cost of one joint				447.52
	Say				447.50

18.28.5 250 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn 0.4x10=4 00 kg	kilogram	4.00	50.00	200.00
0761	Fuel wood	quintal	0.65	500.00	325.00
0771	Kerosene oil	litre	1.14	45.00	51.30
9999	Sundries	L.S.	17.55	1.73	30.36
9977	Carriage of materials	L.S.	17.55	1.73	30.36
	LABOUR				
0116	Fitter (grade 1)	day	2.50	487.00	1217.50
0117	Assistant Fitter or 2nd class Fitter	day	2.50	448.00	1120.00
0114	Beldar	day	5.00	368.00	1840.00
	TOTAL				4814.52
	Add 1 % Water charges				48.15
	TOTAL				4862.67
	Add 15 % Contractor's profit and overheads				729.40
	Cost of 10 joints				5592.07
	Cost of one joint				559.20
	Say				559.20

18.28.6 300 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn 0.54x10 =5.40 kg	kilogram	5.40	50.00	270.00
0761	Fuel wood	quintal	0.75	500.00	375.00
0771	Kerosene oil	litre	1.52	45.00	68.40
9999	Sundries	L.S.	20.28	1.73	35.08
9977	Carriage of materials	L.S.	20.28	1.73	35.08

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	448.00	1344.00
0114	Beldar	day	6.00	368.00	2208.00
	TOTAL				5796.56
	Add 1 % Water charges				57.97
	TOTAL				5854.53
	Add 15 % Contractor's profit and overheads				878.18
	Cost of 10 joints				6732.71
	Cost of one joint				673.27
	Say				673.25

18.28.7 350 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn	kilogram	6.20	50.00	310.00
	0.62x10=6.20 kg				
0761	Fuel wood	quintal	0.93	500.00	465.00
0771	Kerosene oil	litre	1.70	45.00	76.50
9999	Sundries	L.S.	24.18	1.73	41.83
9977	Carriage of materials	L.S.	24.18	1.73	41.83
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	448.00	1344.00
0114	Beldar	day	6.00	368.00	2208.00
	TOTAL				5948.16
	Add 1 % Water charges				59.48
	TOTAL				6007.64
	Add 15 % Contractor's profit and overheads				901.15
	Cost of 10 joints				6908.79
	Cost of one joint				690.87
	Say				690.85

18.28.8 400 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn	kilogram	7.40	50.00	370.00
0761	Fuel wood	quintal	1.12	500.00	560.00
	0.74x10=7.40 kg				
0771	Kerosene oil	litre	1.70	45.00	76.50
9999	Sundries	L.S.	26.91	1.73	46.55
9977	Carriage of materials	L.S.	26.91	1.73	46.55
	LABOUR				
0116	Fitter (grade 1)	day	4.00	487.00	1948.00
0117	Assistant Fitter or 2nd class Fitter	day	4.00	448.00	1792.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	8.00	368.00	2944.00
	TOTAL				7783.60
	Add 1 % Water charges				77.84
	TOTAL				7861.44
	Add 15 % Contractor's profit and overheads				1179.22
	Cost of 10 joints				9040.66
	Cost of one joint				904.06
	Say				904.05

18.28.9 450 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn	kilogram	7.90	50.00	395.00
	0.79x10=7.90 kg				
0761	Fuel wood	quintal	1.21	500.00	605.00
0771	Kerosene oil	litre	2.27	45.00	102.15
9999	Sundries	L.S.	31.07	1.73	53.75
9977	Carriage of materials	L.S.	31.07	1.73	53.75
	LABOUR				
0116	Fitter (grade 1)	day	4.50	487.00	2191.50
0117	Assistant Fitter or 2nd class Fitter	day	4.50	448.00	2016.00
0114	Beldar	day	9.00	368.00	3312.00
	TOTAL				8729.15
	Add 1 % Water charges				87.29
	TOTAL				8816.44
	Add 15 % Contractor's profit and overheads				1322.47
	Cost of 10 joints				10138.91
	Cost of one joint				1013.89
	Say				1013.90

18.28.10 500 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn	kilogram	8.50	50.00	425.00
	0.85x10=8.50 kg				
0761	Fuel wood	quintal	1.31	500.00	655.00
0771	Kerosene oil	litre	2.27	45.00	102.15
9999	Sundries	L.S.	33.67	1.73	58.25
9977	Carriage of materials	L.S.	33.67	1.73	58.25
	LABOUR				
0116	Fitter (grade 1)	day	4.75	487.00	2313.25
0117	Assistant Fitter or 2nd class Fitter	day	4.75	448.00	2128.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	9.50	368.00	3496.00
	TOTAL				9235.90
	Add 1 % Water charges				92.36
	TOTAL				9328.26
	Add 15 % Contractor's profit and overheads				1399.24
	Cost of 10 joints				10727.50
	Cost of one joint				1072.75
	Say				1072.75

18.28.11 600 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1881	Spun yarn	kilogram	10.20	50.00	510.00
	1.02x10=10.20 kg				
0761	Fuel wood	quintal	1.68	500.00	840.00
0771	Kerosene oil	litre	2.84	45.00	127.80
9999	Sundries	L.S.	40.30	1.73	69.72
9977	Carriage of materials	L.S.	40.30	1.73	69.72
	LABOUR				
0116	Fitter (grade 1)	day	6.50	487.00	3165.50
0117	Assistant Fitter or 2nd class Fitter	day	6.50	448.00	2912.00
0114	Beldar	day	13.00	368.00	4784.00
	TOTAL				12478.74
	Add 1 % Water charges				124.79
	TOTAL				12603.53
	Add 15 % Contractor's profit and overheads				1890.53
	Cost of 10 joints				14494.06
	Cost of one joint				1449.40
	Say				1449.40

18.29 Supplying pig lead at site of work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL				
1397	Pig lead	kilogram	100.00	138.00	13800.00
2341	Carriage of Pig lead	tonne	0.10	92.24	9.22
	TOTAL				13809.22
	Add 1 % Water charges				138.09
	TOTAL				13947.31
	Add 15 % Contractor's profit and overheads				2092.10
	Cost of one quintal				16039.41
	Say				16039.40

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials, including testing of joints :

18.30.1 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1373	Rubber insertions for 80 mm dia pipe joints	each	10.00	15.00	150.00
1956	Bolts and nuts 16 mm dia 60 mm long	each	40.00	11.00	440.00
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	LABOUR				
0116	Fitter (grade 1)	day	0.15	487.00	73.05
0117	Assistant Fitter or 2nd class Fitter	day	0.15	448.00	67.20
0114	Beldar	day	0.80	368.00	294.40
	TOTAL				1029.37
	Add 1 % Water charges				10.29
	TOTAL				1039.66
	Add 15 % Contractor's profit and overheads				155.95
	Cost for 10 joints				1195.61
	Cost for one joint				119.56
	Say				119.55

18.30.2 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1374	Rubber insertions for 100 mm dia pipe joints	each	10.00	18.00	180.00
1956	Bolts and nuts 16 mm dia 60 mm long	each	80.00	11.00	880.00
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0117	Assistant Fitter or 2nd class Fitter	day	0.25	448.00	112.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				1668.95
	Add 1 % Water charges				16.69
	TOTAL				1685.64
	Add 15 % Contractor's profit and overheads				252.85
	Cost for 10 joints				1938.49
	Cost for one joint				193.84
	Say				193.85

18.30.3 125 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1375	Rubber insertions for 125 mm dia pipe joints	each	10.00	20.00	200.00
1957	Bolts and nuts 16 mm dia 65 mm long	each	80.00	12.00	960.00
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0117	Assistant Fitter or 2nd class Fitter	day	0.25	448.00	112.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				1768.95
	Add 1 % Water charges				17.69
	TOTAL				1786.64
	Add 15 % Contractor's profit and overheads				268.00
	Cost for 10 joints				2054.64
	Cost for one joint				205.46
	Say				205.45

18.30.4 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1376	Rubber insertions for 150 mm dia pipe joints	each	10.00	20.00	200.00
1958	Bolts and nuts 20 mm dia 65 mm long	each	80.00	15.00	1200.00
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0117	Assistant Fitter or 2nd class Fitter	day	0.30	448.00	134.40
0114	Beldar	day	1.10	368.00	404.80
	TOTAL				2092.50
	Add 1 % Water charges				20.93
	TOTAL				2113.43
	Add 15 % Contractor's profit and overheads				317.01
	Cost for 10 joints				2430.44
	Cost for one joint				243.04
	Say				243.05

18.30.5 200 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1377	Rubber insertions for 200 mm dia pipe joints	each	10.00	25.00	250.00
1959	Bolts and nuts 20 mm dia 70 mm long	each	80.00	17.00	1360.00
9977	Carriage of materials	L.S.	4.16	1.73	7.20
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0117	Assistant Fitter or 2nd class Fitter	day	0.30	448.00	134.40
0114	Beldar	day	1.10	368.00	404.80
	TOTAL				2302.50
	Add 1 % Water charges				23.03
	TOTAL				2325.53
	Add 15 % Contractor's profit and overheads				348.83
	Cost for 10 joints				2674.36
	Cost for one joint				267.43
	Say				267.45

18.30.6 250 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1378	Rubber insertions for 250 mm dia pipe joints	each	10.00	40.00	400.00
1960	Bolts and nuts 20 mm dia 75 mm long	each	120.00	16.00	1920.00
9977	Carriage of materials	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.40	487.00	194.80
0117	Assistant Fitter or 2nd class Fitter	day	0.40	448.00	179.20
0114	Beldar	day	1.30	368.00	478.40
	TOTAL				3181.62
	Add 1 % Water charges				31.82
	TOTAL				3213.44
	Add 15 % Contractor's profit and overheads				482.02
	Cost for 10 joints				3695.46
	Cost for one joint				369.54
	Say				369.55

18.30.7 300 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1379	Rubber insertions for 300 mm dia pipe joints	each	10.00	45.00	450.00
1960	Bolts and nuts 20 mm dia 75 mm long	each	120.00	16.00	1920.00
9977	Carriage of materials	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.40	487.00	194.80
0117	Assistant Fitter or 2nd class Fitter	day	0.40	448.00	179.20
0114	Beldar	day	1.30	368.00	478.40
	TOTAL				3231.62
	Add 1 % Water charges				32.32
	TOTAL				3263.94
	Add 15 % Contractor's profit and overheads				489.59
	Cost for 10 joints				3753.53
	Cost for one joint				375.35
	Say				375.35

18.30.8 350 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1380	Rubber insertions for 350 mm dia pipe joints	each	10.00	50.00	500.00
1961	Bolts and nuts 20 mm dia 80 mm long	each	160.00	18.00	2880.00
9977	Carriage of materials	L.S.	5.33	1.73	9.22
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0117	Assistant Fitter or 2nd class Fitter	day	0.50	448.00	224.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.50	368.00	552.00
	TOTAL				4408.72
	Add 1 % Water charges				44.09
	TOTAL				4452.81
	Add 15 % Contractor's profit and overheads				667.92
	Cost for 10 joints				5120.73
	Cost for one joint				512.07
	Say				512.05

18.30.9 400 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1381	Rubber insertions for 400 mm dia pipe joints	each	10.00	73.00	730.00
1962	Bolts and nuts 24 mm dia 85 mm long	each	160.00	28.00	4480.00
9977	Carriage of materials	L.S.	8.06	1.73	13.94
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0117	Assistant Fitter or 2nd class Fitter	day	0.50	448.00	224.00
0114	Beldar	day	1.50	368.00	552.00
	TOTAL				6243.44
	Add 1 % Water charges				62.43
	TOTAL				6305.87
	Add 15 % Contractor's profit and overheads				945.88
	Cost for 10 joints				7251.75
	Cost for one joint				725.17
	Say				725.15

18.30.10 450 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1382	Rubber insertions for 450 mm dia pipe joints	each	10.00	92.00	920.00
1962	Bolts and nuts 24 mm dia 85 mm long	each	200.00	28.00	5600.00
9977	Carriage of materials	L.S.	8.06	1.73	13.94
	LABOUR				
0116	Fitter (grade 1)	day	0.60	487.00	292.20
0117	Assistant Fitter or 2nd class Fitter	day	0.60	448.00	268.80
0114	Beldar	day	1.70	368.00	625.60
	TOTAL				7720.54
	Add 1 % Water charges				77.21
	TOTAL				7797.75
	Add 15 % Contractor's profit and overheads				1169.66
	Cost for 10 joints				8967.41
	Cost for one joint				896.74
	Say				896.75

18.30.11 500 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1383	Rubber insertions for 500 mm dia pipe joints	each	10.00	110.00	1100.00
1963	Bolts and nuts 24 mm dia 90 mm long	each	200.00	32.00	6400.00
9977	Carriage of materials	L.S.	8.06	1.73	13.94
	LABOUR				
0116	Fitter (grade 1)	day	0.65	487.00	316.55
0117	Assistant Fitter or 2nd class Fitter	day	0.65	448.00	291.20
0114	Beldar	day	1.80	368.00	662.40
	TOTAL				8784.09
	Add 1 % Water charges				87.84
	TOTAL				8871.93
	Add 15 % Contractor's profit and overheads				1330.79
	Cost of 10 joints				10202.72
	Cost for one joint				1020.27
	Say				1020.25

18.30.12 600 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 joints				
	MATERIAL				
1384	Rubber insertions for 600 mm dia pipe joints	each	10.00	125.00	1250.00
1964	Bolts and nuts 27 mm dia 100 mm long	each	200.00	38.00	7600.00
9977	Carriage of materials	L.S.	9.49	1.73	16.42
	LABOUR				
0116	Fitter (grade 1)	day	0.75	487.00	365.25
0117	Assistant Fitter or 2nd class Fitter	day	0.75	448.00	336.00
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				10303.67
	Add 1 % Water charges				103.04
	TOTAL				10406.71
	Add 15 % Contractor's profit and overheads				1561.01
	Cost for 10 joints				11967.72
	Cost for one joint				1196.77
	Say				1196.75

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :**18.31.1 100 mm diameter****18.31.1.1 Class I**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sluice valves				
	MATERIAL				
1940	C.I.slauce valve (with caps) class I : 100 mm dia	each	10.00	2410.00	24100.00
	Carriage of sluice valves wt.= 44.3x10=443kg= 0.443t. say 0.44t				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2309	Carriage of Cast iron fittings	tonne	0.44	92.24	40.59
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	4.43	284.20	1259.01(A)
18.30.2	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.2 Of SH: Water Supply)	each	20.00	193.85	3877.00(A)
	TOTAL				29276.60
	Add 1 % Water charges on all except (A) i.e. on (29276.60 - 5136.01) = 24140.59				241.41
	TOTAL				29518.01
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (29518.01 - 5136.01) = 24382.00				3657.30
	Cost of 10 valves				33175.31
	Cost of 1 valve				3317.53
	Say				3317.55

18.31.1.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3311	Details of cost for 10 sluice valves MATERIAL C.I.slucice valve (with caps) class II : 100 mm dia	each	10.00	2700.00	27000.00
2309	Carriage of sluice valves 56.3x10=563kg= 0.563t=0.56t	tonne	0.56	92.24	51.65
18.24	Carriage of Cast iron fittings LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	5.63	284.20	1600.05(A)
18.30.2	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.2 Of SH: Water Supply)	each	20.00	193.85	3877.00(A)
	TOTAL				32528.70
	Add 1 % Water charges on all except (A) i.e. on (32528.70 - 5477.05) = 27051.65				270.52
	TOTAL				32799.22
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (32799.22 - 5477.05) = 27322.17				4098.33
	Cost of 10 valves				36897.55
	Cost of 1 valve				3689.75
	Say				3689.75

18.31.2 125 mm diameter**18.31.2.1 Class I**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1941	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class I : 125 mm dia	each	10.00	2600.00	26000.00
2309	Carriage of sluice valves wt. = 56.3x10=563kg = 0.563t. say 0.56t Carriage of Cast iron fittings	tonne	0.56	92.24	51.65
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	5.63	284.20	1600.05(A)
18.30.3	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.3 Of SH: Water Supply)	each	20.00	205.45	4109.00(A)
	TOTAL				31760.70
	Add 1 % Water charges on all except (A) i.e. on (31760.70 - 5709.05) = 26051.65				260.52
	TOTAL				32021.22
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (32021.22 - 5709.05) = 26312.17				3946.83
	Cost of 10 valves				35968.05
	Cost of 1 valve				3596.80
	Say				3596.80

18.31.2.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3314	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class II : 125 mm dia	each	10.00	3200.00	32000.00
2309	Carriage of sluice valves wt. = 68.3x10=683kg = 0.68t say 0.68t Carriage of Cast iron fittings	tonne	0.68	92.24	62.72
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	6.83	284.20	1941.09(A)
18.30.3	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.3 Of SH: Water Supply)	each	20.00	205.45	4109.00(A)
	TOTAL				38112.81
	Add 1 % Water charges on all except (A) i.e. on (38112.81 - 6050.09) = 32062.72				320.63
	TOTAL				38433.44
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (38433.44 - 6050.09) = 32383.35				4857.50
	Cost of 10 valves				43290.94
	Cost of 1 valve				4329.09
	Say				4329.10

18.31.3 150 mm diameter

18.31.3.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1942	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class I : 150 mm dia	each	10.00	3600.00	36000.00
2309	Carriage of sluice valves wt. = 72.5x10=725kg = 0.725t. say 0.72t Carriage of Cast iron fittings	tonne	0.72	92.24	66.41
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	7.25	284.20	2060.45(A)
18.30.4	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.4 Of SH: Water Supply)	each	20.00	243.05	4861.00(A)
	TOTAL				42987.86
	Add 1 % Water charges on all except (A) i.e. on (42987.86 - 6921.45) = 36066.41				360.66
	TOTAL				43348.52
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (43348.52 - 6921.45) = 36427.07				5464.06
	Cost of 10 valves				48812.58
	Cost of 1 valve				4881.25
	Say				4881.25

18.31.3.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3317	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class II : 150 mm dia	each	10.00	4000.00	40000.00
2309	Carriage of sluice valves wt. = 86.5x10=865kg = 0.865t. say 0.865t Carriage of Cast iron fittings	tonne	0.87	92.24	79.79
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	8.65	284.20	2458.33(A)
18.30.4	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.4 Of SH: Water Supply)	each	20.00	243.05	4861.00(A)
	TOTAL				47399.12
	Add 1 % Water charges on all except (A) i.e. on (47399.12 - 7319.33) = 40079.79				400.80
	TOTAL				47799.92
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (47799.92 - 7319.33) = 40480.59				6072.09
	Cost of 10 valves				53872.01
	Cost of 1 valve				5387.20
	Say				5387.20

18.31.4 200 mm diameter**18.31.4.1 Class I**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1943	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class I : 200 mm dia	each	10.00	7500.00	75000.00
2309	Carriage of sluice valves wt. = 121.5x10=1215kg = 1.215t. say 1.22t	tonne	1.22	92.24	112.53
18.24	Carriage of Cast iron fittings LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	12.15	284.20	3453.03(A)
18.30.5	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.5 Of SH: Water Supply)	each	20.00	267.45	5349.00(A)
	TOTAL				83914.56
	Add 1 % Water charges on all except (A) i.e. on (83914.56 - 8802.03) = 75112.53				751.13
	TOTAL				84665.69
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (84665.69 - 8802.03) = 75863.66				11379.55
	Cost of 10 valves				96045.24
	Cost of 1 valve				9604.52
	Say				9604.50

18.31.4.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3320	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class II : 200 mm dia	each	10.00	8900.00	89000.00
2309	Carriage of sluice valves wt. = 150.5x10=1505 kg = 1.5 t. say 1.5 t	tonne	1.50	92.24	138.36
18.24	Carriage of Cast iron fittings LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	15.05	284.20	4277.21(A)
18.30.5	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.20.5 Of SH: Water Supply)	each	20.00	267.45	5349.00(A)
	TOTAL				98764.57
	Add 1 % Water charges on all except (A) i.e. on (98764.57 - 9626.21) = 89138.36				891.38
	TOTAL				99655.95
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (99655.95 - 9626.21) = 90029.74				13504.46
	Cost of 10 valves				113160.41
	Cost of 1 valve				11316.04
	Say				11316.05

18.31.5 250 mm diameter**18.31.5.1 Class I**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1944	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class I : 250 mm dia	each	10.00	10980.00	109800.00
2309	Carriage of sluice valves wt. = 179.9x10=1799kg = 1.799t. say 1.80t Carriage of Cast iron fittings	tonne	1.80	92.24	166.03
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	17.99	284.20	5112.76(A)
18.30.6	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.6 Of SH: Water Supply)	each	20.00	369.55	7391.00(A)
	TOTAL				122469.79
	Add 1 % Water charges on all except (A) i.e. on (122469.79 - 12503.76) = 109966.03				1099.66
	TOTAL				123569.45
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (123569.45 - 12503.76) = 111065.69				16659.85
	Cost of 10 valves				140229.30
	Cost of 1 valve				14022.93
	Say				14022.95

18.31.5.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3321	Details of cost for 10 sluice valves MATERIAL C.I.slauce valve (with caps) class II : 250 mm dia	each	10.00	14500.00	145000.00
2309	Carriage of sluice valves wt. = 229.9x10=2299kg = 2299t. say 2.30t Carriage of Cast iron fittings	tonne	2.30	92.24	212.15
18.24	LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	22.99	284.20	6533.76(A)
18.30.6	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.6 Of SH: Water Supply)	each	20.00	369.55	7391.00(A)
	TOTAL				159136.91
	Add 1 % Water charges on all except (A) i.e. on (159136.91 - 13924.76) = 145212.15				1452.12
	TOTAL				160589.03
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (160589.03 - 13924.76) = 146664.27				21999.64
	Cost of 10 valves				182588.67
	Cost of 1 valve				18258.86
	Say				18258.85

18.31.6 300 mm diameter

18.31.6.1 Class I

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1945	Details of cost for 10 sluice valves MATERIAL C.I.sluice valve (with caps) class I : 300 mm dia	each	10.00	15500.00	155000.00
2309	Carriage of sluice valves wt. = 242.4x10=2424kg = 2.424t. say 2.42t	tonne	2.42	92.24	223.22
18.24	Carriage of Cast iron fittings LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	24.24	284.20	6889.01(A)
18.30.7	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.7 Of SH: Water Supply)	each	20.00	375.35	7507.00(A)
	TOTAL				169619.23
	Add 1 % Water charges on all except (A) i.e. on (169619.23 - 14396.01) = 155223.22				1552.23
	TOTAL				171171.46
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (171171.46 - 14396.01) = 156775.45				23516.32
	Cost of 10 valves				194687.78
	Cost of 1 valve				19468.77
	Say				19468.75

18.31.6.2 Class II

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3326	Details of cost for 10 sluice valves MATERIAL C.I.sluice valve (with caps) class II : 300 mm dia	each	10.00	18200.00	182000.00
2309	Carriage of sluice valves wt. = 303.4x10=3034kg = 3.304t.	tonne	3.03	92.24	279.85
18.24	Carriage of Cast iron fittings LABOUR for laying sluice valve (Rate as per item No. 18.24 Of SH: Water Supply)	quintal	30.34	284.20	8622.63(A)
18.30.7	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc. (Rate as per item No.18.30.7 Of SH: Water Supply)	each	20.00	375.35	7507.00(A)
	TOTAL				198409.48
	Add 1 % Water charges on all except (A) i.e. on (198409.48 - 16129.63) = 182279.85				1822.80
	TOTAL				200232.28
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (200232.28 - 16129.63) = 184102.65				27615.40
	Cost of 10 valves				227847.68
	Cost of 1 valve				22784.76
	Say				22784.75

18.32 Constructing masonry Chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick, finished with a floating coat of neat cement complete as per standard design :

18.32.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL				
2.8.1	(i) Earth work in excavation including refilling and disposal of surplus earth 0.68x0.68x0.65m=0.301cum. (Rate as per item no. 2.8.1 of SH: Earth work)	cum	0.30	166.40	49.92(A)
2.25	Rate as per item No.2.25	cum	0.30	125.75	37.73(A)
4.1.11	(ii) Cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) 0.68x0.68x0.075m=0.035cum. Say 0.04 cum. Rate as per item no 4.1.11 of SH : Concrete work	cum	0.04	3959.70	158.39(A)
6.1.1	(iii) Second class brick work in cement mortar 1:4 (1 Cement : 4 coarse sand) in foundations and plinth 1.66mx0.115x0.50m=0.095cum. Say 0.10 cum. Rate as per item no 6.1.1 of SH : Brick Work	cum	0.10	4970.30	497.03(A)
13.9.1	(iv) 12mm cement plaster 1:3 (1 Cement : 3 Coarse sand) finished with a floating coat of neat cement. 1.20x0.50=0.60sqm 0.30x0.30=0.09sqm. Total =0.69sqm. Say 0.70sqm.	sqm	0.70	234.70	164.29(A)
1304	Surface box for stop cock	each	1.00	125.00	125.00
9977	(vi) Carriage of C.I. surface box	L.S.	1.43	1.73	2.47
5.3	(vii) Cement concrete 1:2:4 (1 Cement : 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 0.53mx0.53mx0.075m = 0.02107cum. Less surface box 0.112x0.112x0.076 =(-)0.00094 cum. = 0.0201 cum. Say 0.02cum. Rate as per item No.5.3 SH : R.C.C	cum	0.02	7390.80	147.82(A)
0115	(viii) Less labour for not lifting the materilas upto floor five level Coolie (ix)	day	-0.04	368.00	-13.98

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	4.16	1.73	7.20
	TOTAL				1175.87
	Add 1 % Water charges on all except (A) i.e. on (1175.87 - 1055.18) = 120.69				1.21
	TOTAL				1177.08
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1177.08 - 1055.18) = 121.90				18.29
	Cost of one manhole				1195.37
	Say				1195.35

18.33 Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.33.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL				
	(i) Earth work in excavation including refilling and disposal of surplus earth 1.21x1.21x1.00m=1.464cum. Say 1.46 cum.				
2.8.1	Rate as per item no. 2.8.1 of SH: Earth work	cum	1.46	166.40	242.94(A)
2.25	Rate as per item No.2.25 of SH: Earth Work	cum	1.46	125.75	183.60(A)
	(ii) Cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.21x1.21x0.1m=0.146cum. Say 0.15 cum.				
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.15	3959.70	593.96(A)
	(iii) Second class brick work in cement mortar 1: 4(1 Cement : 4coarse sand) in foundations and plinth 3.32mx0.23mx0.75m=0.573cum. Say 0.57 cum.				
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.57	4970.30	2833.07(A)
	(iv) 12mm cement plaster 1:3 (1 Cement : 3 Coarse sand) finished with a floating coat of neat cement. 2.40x0.75=1.80sqm. 0.60x0.60=0.36sqm. Total = 2.16sqm.				
13.9.1	Rate as per item no 13.9.1 of SH : Finishing (v) C.I. surface box with hinged cover 100x100x75mm (inside)	sqm	2.16	234.70	506.95(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1305	Surface box for sluice valve (vi)	each	1.00	210.00	210.00
9977	Carriage of C.I. surface box (vii) Cement concrete 1:2:4 (1 Cement : 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.06mx1.06mx0.15m = 0.1685 cum. Less surface box 3.142/4xd2x0.18m -- 0.7854x0.156mx0.156mx0.18 = (-)0.0034 cum. = 0.1651 cum. Say 0.17 cum.	L.S.	8.06	1.73	13.94
5.3	Rate as per item No.5.3 Of SH: RCC (viii) Less labour for not lifting the materilas upto floor five level	cum	0.17	7390.80	1256.44(A)
0115	Coolie (ix) Mild steel reinforcement for RCC work etc. 0.165cum.x80kg/cum. = 13.2kg	day	-0.32	368.00	-117.76
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work (x) Form work 0.60mx0.60m=0.36sqm.+ 3.32mx0.15m=0.50sqm. = 0.86 sqm.	kg	13.20	55.30	729.96(A)
5.9.3	Rate as per item No.5.9.3 Of SH: RCC (xi)	sqm	0.86	422.30	363.18(A)
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				6830.22
	Add 1 % Water charges on all except (A) i.e. on (6830.22 - 6710.10) = 120.12				1.20
	TOTAL				6831.42
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6831.42 - 6710.10) = 121.32				18.20
	Cost of one manhole				6849.62
	Say				6849.60

18.34 Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.34.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL (i) Earth work in excavation including refilling and disposal of surplus earth				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	1.51X1.51X1.25M = 2.85cum.				
2.8.1	Rate as per item no. 2.8.1 of SH: Earth work	cum	2.85	166.40	474.24(A)
2.25	Rate as per item No.2.25 of SH: Earth work	cum	2.85	125.75	358.39(A)
	(ii) Cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
4.1.11	1.51x1.51x0.1m=0.228cum. Say 0.23 cum. Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.23	3959.70	910.73(A)
	(iii) Second class brick work in cement mortar 1:4 (1 Cement : 4coarse sand) in foundations and plinth				
6.1.1	4.52mx0.23mx1.00m=1.04cum. Rate as per item no 6.1.1 of SH : Brick Work	cum	1.04	4970.30	5169.11(A)
	(iv) 12mm cement plaster 1:3 (1 Cement : 3 Coarse sand) finished with a floating coat of neat cement.				
	3.60mx1.00m=3.60sqm."0.90mx0.90m =0.81sqm. Total=4.41sqm.				
13.9.1	Rate as per item no 13.9.1 of SH : Finishing	sqm	4.41	234.70	1035.03(A)
	(v) C.I. surface box with chained lid.				
1305	Surface box for sluice valve	each	1.00	210.00	210.00
9977	(vi) Carriage of C.I. surface box	L.S.	8.06	1.73	13.94
	(vii) Cement concrete 1:2:4 (1 Cement : 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size)				
	in slab = 1.36mx1.36mx0.15m = 0.2774 cum. Less surface box 0.7854x0.156mx0.156mx 0.18m = (-)0.0034 cum. = 0.2740 cum. Say 0.27 cum.				
5.3	Rate as per item No.5.3 Of SH: RCC	cum	0.27	7390.80	1995.52(A)
	(viii) Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.51	368.00	-187.68
	(ix) Mild steel reinforcement for RCC work etc.				
5.22.1	0.274cum.x80kg/cum. = 21.92 kg. Rate as per item no. 5.22.1 of SH : RCC work	kg	21.92	55.30	1212.18(A)
	(x) Form work 0.90mx0.90m=0.81sqm.+ 4.52mx0.15m = 0.68 sqm. Total= 1.49 sqm.				
5.9.3	Rate as per item No.5.9.3 Of SH: RCC	sqm	1.49	422.30	629.23(A)
	(xi)				
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				11834.63
	Add 1 % Water charges on all except (A) i.e. on (11834.63 - 11784.43) = 50.20				0.50
	TOTAL				11835.13
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11835.13 - 11784.43) = 50.70				7.61
	Cost of one manhole				11842.74
	Say				11842.75

18.35 Constructing masonry Chamber 120x120x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.35.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL				
	(i) Earth work in excavation including refilling and disposal of surplus earth 1.81X1.81X1.25M				
2.8.1	Rate as per item no. 2.8.1 of SH: Earth work	cum	4.10	166.40	682.24(A)
2.25	Rate as per item No.2.25 of SH: Earth work	cum	4.10	125.75	515.58(A)
	(ii) Cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.81x1.81x0.1m=0.328cum. Say 0.33 cum.				
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.33	3959.70	1306.70(A)
	(iii) Second class brick work in cement mortar 1:4 (1 Cement : 4coarse sand) in foundations and plinth 5.72mx0.23mx1.00m=1.316cum. Say 1.32 cum.				
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work	cum	1.32	4970.30	6560.80(A)
	(iv) 12mm cement plaster 1:3 (1 Cement : 3 Coarse sand) finished with a floating coat of neat cement. 4.80mx1.00m=4.80sqm. 1.20mx1.20m=1.44sqm. Total=6.42sqm.				
13.9.1	Rate as per item no 13.9.1 of SH : Finishing	sqm	6.42	234.70	1506.77(A)
1305	(v) C.I. surface box with chained lid Surface box for sluice valve	each	1.00	210.00	210.00
9977	(vi) Carriage of C.I. surface box	L.S.	8.06	1.73	13.94
	(vii) Cement concrete 1:2:4 (1 Cement : 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.66mx1.66mx0.15m = 0.4133 cum. Less surface box 0.7854x0.156mx 0.156mx0.18m = (-)0.0034 cum. Total= 0.4099 cum. Say 0.41 cum.				
5.3	Rate as per item No.5.3 Of SH: RCC	cum	0.41	7390.80	3030.23(A)
	(viii) Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.77	368.00	-283.36
	(ix) Mild steel reinforcement for RCC slab steel @ 80kg/cum. 0.41cum.x80kg/cum. = 32.80kg.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work (x) Form work 1.20m x 1.20m = 1.44sqm. + 5.72m x 0.15m = 0.86 sqm. Total = 2.30sqm.	kg	32.80	55.30	1813.84(A)
5.9.3	Rate as per item No.5.9.3 Of SH: RCC (xi)	sqm	2.30	422.30	971.29(A)
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				16341.97
	Add 1 % Water charges on all except (A) i.e. on (16341.97 - 16387.45) = -45.48				-0.45
	TOTAL				16341.52
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (16341.52 - 16387.45) = -45.93				-6.89
	Cost of one manhole				16334.63
	Say				16334.65

18.36 Constructing masonry Chamber 60x60x75 cm, inside in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm top and 165 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.36.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL				
	(i) Earth work in excavation including refilling and disposal of surplus earth 1.21X1.21X1.00M = 1.464cum. Say 1.46cum.				
2.8.1	Rate as per item no. 2.8.1 of SH: Earth work	cum	1.46	166.40	242.94(A)
2.25	Rate as per item No.2.25 of SH: Earth work	cum	1.46	125.75	183.60(A)
	(ii) Cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.21x1.21x0.1m=0.146cum. Say 0.15 cum.				
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.15	3959.70	593.96(A)
	(iii) Second class brick work in cement mortar 1:4 (1 Cement : 4 coarse sand) in foundations and plinth 3.32mx0.23mx0.75m=0.573cum. Say 0.57 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work (iv) 12mm cement plaster 1:3 (1 Cement : 3 Coarse sand) finished with a floating coat of neat cement. 2.40mx0.75m=1.80sqm."0.90mx0.90m =0.36sqm." Total=2.16sqm.	cum	0.57	4970.30	2833.07(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing (v) C.I. surface box with chained lid	sqm	2.16	234.70	506.95(A)
1305	Surface box for sluice valve	each	1.00	210.00	210.00
9977	(vi) Carriage of C.I. surface box	L.S.	53.82	1.73	93.11
	(vii) Cement concrete 1:2:4 (1 Cement : 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.06mx1.06mx0.15m = 0.1685 cum. Less surface box 0.61x0.41mx0.15m= (-)0.0375 cum. = 0.131 cum. Say 0.13 cum.				
5.3	Rate as per item No.5.3 Of SH: RCC (viii) Less labour for not lifting the materilas upto floor five level	cum	0.13	7390.80	960.80(A)
0115	Coolie (ix) Mild steel reinforcement for RCC work etc. 0.131cumx80kg/cum. = 10.48kg.	day	-0.24	368.00	-88.32
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work (x) Form work 0.60mx0.60m=0.36sqm.+ 3.32mx0.15m = 0.50 sqm. Total =0.86 sqm.	kg	10.48	55.30	579.54(A)
5.9.3	Rate as per item No.5.9.3 Of SH: RCC (xi)	sqm	0.86	422.30	363.18(A)
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				6492.77
	Add 1 % Water charges on all except (A) i.e. on (6492.77 - 6264.04) = 228.73				2.29
	TOTAL				6495.06
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6495.06 - 6264.04) = 231.02				34.65
	Cost of one manhole				6529.71
	Say				6529.70

18.37 Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :

18.37.1 With common burnt clay F.P.S.(non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL				
	(i) Earth work in excavation including refilling and disposal of surplus earth 1.21X1.06X0.85M = 1.09cum.				
2.8.1	Rate as per item no. 2.8.1 of SH: Earth work	cum	1.09	166.40	181.38(A)
2.25	Rate as per item No.2.25 of SH: Earth work	cum	1.09	125.75	137.07(A)
	(ii) Cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) 1.21x1.06x0.1m=0.128cum. Say 0.13 cum.				
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.13	3959.70	514.76(A)
	(iii) Second class brick work in cement mortar 1:4 (1 Cement : 4 coarse sand) in foundations and plinth 3.02mx0.23mx0.50m=0.347cum. Say 0.35 cum.				
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.35	4970.30	1739.61(A)
	(iv) 12mm cement plaster 1:3 (1 Cement : 3 Coarse sand) finished with a floating coat of neat cement. 2.10mx0.50m=1.05sqm. 0.60mx0.45m=0.27sqm. Total=1.32sq				
13.9.1	Rate as per item no 13.9.1 of SH : Finishing	sqm	1.32	234.70	309.80(A)
	(v) C.I. surface box 400x200x200mm (inside) with locking arrangement				
1307	Surface box for water meter	each	1.00	250.00	250.00
9977	(vi) Carriage of C.I. surface box	L.S.	13.52	1.73	23.39
	(vii) Cement concrete 1:2:4 (1 Cement : 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size) in slab = 1.06mx0.91mx0.25m = 0.241 cum. Less surface box 0.42x0.22mx0.2m = (-)0.018 cum. = 0.223 cum. Say 0.22 cum.				
5.3	Rate as per item No.5.3 Of SH: RCC	cum	0.22	7390.80	1625.98(A)
	(viii) Less labour for not lifting the materilas upto floor five level				
0115	Coolie	day	-0.41	368.00	-150.88
	(ix) Mild steel reinforcement for RCC work steel @ 80kg/cum. 0.223cum.x80kg/cum. = 17.84 kg.				
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work	kg	17.84	55.30	986.55(A)
	(x) Form work 0.60mx0.45m=0.27sqm.+ 3.02mx0.25m=0.76sqm. Total = 1.03sqm.				
5.9.3	Rate as per item No.5.9.3 Of SH: RCC	sqm	1.03	422.30	434.97(A)
	(xi)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				6066.57
	Add 1 % Water charges on all except (A) i.e. on (6066.57 - 5930.12) = 136.45				1.36
	TOTAL				6067.93
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6067.93 - 5930.12) = 137.81				20.67
	Cost of one manhole				6088.60
	Say				6088.60

18.38 Painting G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work :

18.38.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.3	Details of cost for 10 metre Perimeter = 0.0673 metre Area=10x0.0673m = 0.673sqm. Priming coat- Rate as per item no 13.50.3 of SH : Finishing Painting two coats excluding priming coat with white paint on new work.	sqm	0.673	29.10	19.58(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	0.673	78.40	52.76(A)
9999	Add for delay	L.S.	13.52	1.73	23.39
	TOTAL				95.73
	Add 1 % Water charges on all except (A) i.e. on (95.73 - 72.34) = 23.39				0.23
	TOTAL				95.96
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (95.96 - 72.34) = 23.62				3.54
	Cost of 10 metre				99.50
	Cost of one metre				9.95
	Say				9.95

18.38.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.3	Details of cost for 10 metre Perimeter = 0.0845 metre Area = 10x0.0845 sqm. = 0.845 sqm. Priming coat- Rate as per item no 13.50.3 of SH : Finishing Painting two coats excluding priming coat with white paint on new work.	sqm	0.845	29.10	24.59(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	0.845	78.40	66.25(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	13.52	1.73	23.39
	TOTAL				114.23
	Add 1 % Water charges on all except (A) i.e. on (114.23 - 90.84) = 23.39				0.23
	TOTAL				114.46
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (114.46 - 90.84) = 23.62				3.54
	Cost of 10 metre				118.00
	Cost of one metre				11.80
	Say				11.80

18.38.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.3	Details of cost for 10 metre Perimeter = 0.1061 metre Area = 10x0.1061 sqm. = 1.061 sqm. Priming coat- Rate as per item no 13.50.3 of SH : Finishing Painting two coats excluding priming coat with white paint on new work.	sqm	1.061	29.10	30.88(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	1.061	78.40	83.18(A)
9999	Add for delay	L.S.	20.28	1.73	35.08
	TOTAL				149.14
	Add 1 % Water charges on all except (A) i.e. on (149.14 - 114.06) = 35.08				0.35
	TOTAL				149.49
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (149.49 - 114.06) = 35.43				5.31
	Cost of 10 metre				154.80
	Cost of one metre				15.48
	Say				15.50

18.38.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.3	Details of cost for 10 metre Perimeter = 0.1334 metre Area = 10x0.1334 sqm. = 1.334 sqm. Priming coat- Rate as per item no 13.50.3 of SH : Finishing Painting two coats excluding priming coat with white paint on new work.	sqm	1.334	29.10	38.82(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	1.334	78.40	104.59(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	20.28	1.73	35.08
	TOTAL				178.49
	Add 1 % Water charges on all except (A) i.e. on (178.49 - 143.41) = 35.08				0.35
	TOTAL				178.84
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (178.84 - 143.41) = 35.43				5.31
	Cost of 10 metre				184.15
	Cost of one metre				18.41
	Say				18.40

18.38.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.3	Details of cost for 10 metre Perimeter = 0.1520 metre Area = 10x0.1520 sqm. = 1.520 sqm. Priming coat- Rate as per item no 13.50.3 of SH : Finishing Painting two coats excluding priming coat with white paint on new work.	sqm	1.52	29.10	44.23(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	1.52	78.40	119.17(A)
9999	Add for delay	L.S.	26.91	1.73	46.55
	TOTAL				209.95
	Add 1 % Water charges on all except (A) i.e. on (209.95 - 163.40) = 46.55				0.47
	TOTAL				210.42
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (210.42 - 163.40) = 47.02				7.05
	Cost of 10 metre				217.47
	Cost of one metre				21.74
	Say				21.75

18.38.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.50.3	Details of cost for 10 metre Perimeter = 0.1894 metre Area = 10x0.1894 sqm. = 1.894 sqm. Priming coat- Rate as per item no 13.50.3 of SH : Finishing Painting two coats excluding priming coat with white paint on new work.	sqm	1.894	29.10	55.12(A)
13.61.1	Rate as per item no 13.61.1 of SH : Finishing	sqm	1.894	78.40	148.49(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	26.91	1.73	46.55
	TOTAL				250.16
	Add 1 % Water charges on all except (A) i.e. on (250.16 - 203.61) = 46.55				0.47
	TOTAL				250.63
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (250.63 - 203.61) = 47.02				7.05
	Cost of 10 metre				257.68
	Cost of one metre				25.76
	Say				25.75

18.39 Repainting G.I. pipes and fittings with synthetic enamel white paint with one coat of approved quality :

18.39.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metre Painting one coat with white paint on old work. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	0.673	51.30	34.52(A)
9999	Add for delay	L.S.	8.06	1.73	13.94
	TOTAL				48.46
	Add 1 % Water charges on all except (A) i.e. on (48.46 - 34.52) = 13.94				0.14
	TOTAL				48.60
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (48.60 - 34.52) = 14.08				2.11
	Cost of 10 metre				50.71
	Cost of one metre				5.07
	Say				5.05

18.39.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metre Painting one coat with white paint on old work. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	0.845	51.30	43.35(A)
9999	Add for delay	L.S.	8.06	1.73	13.94
	TOTAL				57.29
	Add 1 % Water charges on all except (A) i.e. on (57.29 - 43.35) = 13.94				0.14
	TOTAL				57.43
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (57.43 - 43.35) = 14.08				2.11
	Cost of 10 metre				59.54
	Cost of one metre				5.95
	Say				5.95

18.39.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metre Painting one coat with white paint on old work. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	1.061	51.30	54.43(A)
9999	Add for delay	L.S.	10.79	1.73	18.67
	TOTAL				73.10
	Add 1 % Water charges on all except (A) i.e. on (73.10 - 54.43) = 18.67				0.19
	TOTAL				73.29
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (73.29 - 54.43) = 18.86				2.83
	Cost of 10 metre				76.12
	Cost of one metre				7.61
	Say				7.60

18.39.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metre Painting one coat with white paint on old work. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	1.334	51.30	68.43(A)
9999	Add for delay	L.S.	10.92	1.73	18.89
	TOTAL				87.32
	Add 1 % Water charges on all except (A) i.e. on (87.32 - 68.43) = 18.89				0.19
	TOTAL				87.51
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (87.51 - 68.43) = 19.08				2.86
	Cost of 10 metre				90.37
	Cost of one metre				9.03
	Say				9.05

18.39.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metre Painting one coat with white paint on old work. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	1.52	51.30	77.98(A)
9999	Add for delay	L.S.	13.52	1.73	23.39
	TOTAL				101.37
	Add 1 % Water charges on all except (A) i.e. on (101.37 - 77.98) = 23.39				0.23
	TOTAL				101.60
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (101.60 - 77.98) = 23.62				3.54
	Cost of 10 metre				105.14
	Cost of one metre				10.51
	Say				10.50

18.39.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.54.1	Details of cost for 10 metre Painting one coat with white paint on old work. (Rate as per item no 14.54.1 of S.H. Repair to Building)	sqm	1.894	51.30	97.16(A)
9999	Add for delay	L.S.	13.52	1.73	23.39
	TOTAL				120.55
	Add 1 % Water charges on all except (A) i.e. on (120.55 - 97.16) = 23.39				0.23
	TOTAL				120.78
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (120.78 - 97.16) = 23.62				3.54
	Cost of 10 metre				124.32
	Cost of one metre				12.43
	Say				12.45

18.40 Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :**18.40.1 15 mm diameter pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	0.673	65.20	43.88(A)
9999	Add for delay	L.S.	8.06	1.73	13.94
	TOTAL				57.82
	Add 1 % Water charges on all except (A) i.e. on (57.82 - 43.88) = 13.94				0.14
	TOTAL				57.96
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (57.96 - 43.88) = 14.08				2.11
	Cost of 10 metre				60.07
	Cost of one metre				6.00
	Say				6.00

18.40.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	0.845	65.20	55.09(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	8.06	1.73	13.94
	TOTAL				69.03
	Add 1 % Water charges on all except (A) i.e. on (69.03 - 55.09) = 13.94				0.14
	TOTAL				69.17
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (69.17 - 55.09) = 14.08				2.11
	Cost of 10 metre				71.28
	Cost of one metre				7.12
	Say				7.10

18.40.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	1.061	65.20	69.18(A)
9999	Add for delay	L.S.	10.79	1.73	18.67
	TOTAL				87.85
	Add 1 % Water charges on all except (A) i.e. on (87.85 - 69.18) = 18.67				0.19
	TOTAL				88.04
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (88.04 - 69.18) = 18.86				2.83
	Cost of 10 metre				90.87
	Cost of one metre				9.08
	Say				9.10

18.40.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	1.334	65.20	86.98(A)
9999	Add for delay	L.S.	10.79	1.73	18.67
	TOTAL				105.65
	Add 1 % Water charges on all except (A) i.e. on (105.65 - 86.98) = 18.67				0.19
	TOTAL				105.84
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (105.84 - 86.98) = 18.86				2.83
	Cost of 10 metre				108.67
	Cost of one metre				10.86
	Say				10.85

18.40.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	1.52	65.20	99.10(A)
9999	Add for delay	L.S.	12.22	1.73	21.14
	TOTAL				120.24
	Add 1 % Water charges on all except (A) i.e. on (120.24 - 99.10) = 21.14				0.21
	TOTAL				120.45
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (120.45 - 99.10) = 21.35				3.20
	Cost of 10 metre				123.65
	Cost of one metre				12.36
	Say				12.35

18.40.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	1.894	65.20	123.49(A)
9999	Add for delay	L.S.	12.22	1.73	21.14
	TOTAL				144.63
	Add 1 % Water charges on all except (A) i.e. on (144.63 - 123.49) = 21.14				0.21
	TOTAL				144.84
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (144.84 - 123.49) = 21.35				3.20
	Cost of 10 metre				148.04
	Cost of one metre				14.80
	Say				14.80

18.40.7 65 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	2.387	65.20	155.63(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay	L.S.	13.52	1.73	23.39
	TOTAL				179.02
	Add 1 % Water charges on all except (A) i.e. on (179.02 - 155.63) = 23.39				0.23
	TOTAL				179.25
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (179.25 - 155.63) = 23.62				3.54
	Cost of 10 metre				182.79
	Cost of one metre				18.27
	Say				18.25

18.40.8 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.65.1	Details of cost for 10 metre Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-heads finishing)	sqm	2.796	65.20	182.30(A)
9999	Add for delay	L.S.	14.82	1.73	25.64
	TOTAL				207.94
	Add 1 % Water charges on all except (A) i.e. on (207.94 - 182.30) = 25.64				0.26
	TOTAL				208.20
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (208.20 - 182.30) = 25.90				3.89
	Cost of 10 metre				212.09
	Cost of one metre				21.20
	Say				21.20

18.41 Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :

18.41.1 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of sand filling allround 15mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 21.8mm = 246.8mm say 247mm Quantity of sand = $10 \times 0.30 \times 0.247 =$ 0.744 cum. Less for pipe = $3.142/4(21.8)^2 \times 10 =$ (-)0.004 cum. = 0.74 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Rate as per Item Number 18.41.1A of SH:Water supply	cum	0.74	902.90	668.15
	TOTAL				668.15
	Cost of 10 metre				668.15
	Cost of one metre				66.81
	Say				66.80

18.41.1A Sub analysis item for sand filling component

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Sub analysis item for sand filling component				
	MATERIAL				
6501	Sand zone V (Jamuna)	cum	1.00	600.00	600.00
2335	Carriage of Jamuna sand	cum	1.00	103.77	103.77
	Labour:				
0114	Beldar	day	0.09	368.00	33.12
0115	Coolie	day	0.11	368.00	40.48
	TOTAL				777.37
	Add 1 % Water charges				7.77
	TOTAL				785.14
	Add 15 % Contractor's profit and overheads				117.77
	Cost of one cum.				902.91
	Say				902.90

18.41.2 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of sand filling around 20mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 27.3mm = 252.3 Say 252mm Quantity of sand = $10 \times 0.30 \times 0.252 = 0.756$ cum.+ Less for pipe = $3.142/4(27.3)^2 \times 10 = (-)0.006$ cum. = 0.750 cum				
18.41.1A	Rate as per Item Number 18.41.1A of SH:Water supply	cum	0.75	902.90	677.18(A)
	TOTAL				677.18
	Cost of 10 metre				677.18
	Cost of one metre				67.71
	Say				67.70

18.41.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	<p>Details of cost of sand filling around 25mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 34.2mm = 259.2 Say 259mm Quantity of sand = $10 \times 0.30 \times 0.259 = 0.777$ cum.+ Less for pipe $3.142/4(34.2)^2 \times 10 = (-)0.009$ cum. = 0.768 Say 0.77 cum. Rate as per Item Number 18.41.1A of SH:Water supply TOTAL Cost of 10 metre Cost of one metre Say</p>	cum	0.77	902.90	695.23(A) 695.23 695.23 69.52 69.50

18.41.4 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	<p>Details of cost of sand filling around 32mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 42.9mm = 267.9 Say 268mm Quantity of sand = $10 \times 0.30 \times 0.268 = 0.804$ cum.+ Less for pipe $3.142/4(42.9)^2 \times 10 = (-)0.014$ cum. = 0.790 Say 0.79 cum. Rate as per Item Number 18.41.1A of SH:Water supply TOTAL Cost of 10 metre Cost of one metre Say</p>	cum	0.79	902.90	713.29(A) 713.29 713.29 71.32 71.30

18.41.5 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	<p>Details of cost of sand filling around 40mm dia. pipe 10 metre long. Width of sand filling = 300mm</p>				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 48.8mm = 273.8 Say 274mm Quantity of sand = $10 \times 0.30 \times 0.274 = 0.82$ cum.+ Less for pipe $3.142/4(48.8)^2 \times 10 = (-)0.014$ cum. = 0.801 Say 0.80 cum. Rate as per Item Number 18.41.1A of SH:Water supply TOTAL Cost of 10 metre Cost of one metre Say	cum	0.8	902.90	722.32(A) 722.32 722.32 72.23 72.25

18.41.6 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Details of cost of sand filling around 50mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 60.8mm = 285.8 Say 286mm Quantity of sand = $10 \times 0.30 \times 0.286 = 0.858$ cum.+ Less for pipe $3.142/4(60.8)^2 \times 10 = (-)0.029$ cum. = 0.829 Say 0.83 cum. Rate as per Item Number 18.41.1A of SH:Water supply TOTAL Cost of 10 metre Cost of one metre Say	cum	0.83	902.90	749.41(A) 749.41 749.41 74.94 74.95

18.41.7 65 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of sand filling around 65mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Max. external dia of pipe = 76.6mm = 301.6 Say 302mm Quantity of sand = $10 \times 0.45 \times 0.302 = 1.359$ cum.+ Less for pipe $3.142/4(76.6)^2 \times 10 = (-)0.046$ cum. = 1.313 Say 1.31 cum. Rate as per Item Number 18.41.1A of SH:Water supply TOTAL Cost of 10 metre Cost of one metre Say	cum	1.31	902.90	1182.80(A) 1182.80 1182.80 118.28 118.30

18.41.8 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Details of cost of sand filling around 80mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 89.9mm = 314.9 Say 315mm Quantity of sand = $10 \times 0.45 \times 0.315 = 1.418$ cum.+ Less for pipe $3.142/4(89.9)^2 \times 10 = (-)0.0640$ cum. = 1.354 Say 1.35 cum. Rate as per Item Number 18.41.1A of SH:Water supply TOTAL Cost of 10 metre Cost of one metre Say	cum	1.35	902.90	1218.92(A) 1218.92 1218.92 121.89 121.90

18.41.9 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of sand filling around 100mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 115mm = 340mm Quantity of sand = $10 \times 0.45 \times 0.34 = 1.53$ cum.+ Less for pipe $3.142/4(0.115)^2 \times 10 = (-)0.10$ cum. = 1.43 cum.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	Rate as per Item Number 18.41.1A of SH:Water supply	cum	1.43	902.90	1291.15(A)
	TOTAL				1291.15
	Cost of 10 metre				1291.15
	Cost of one metre				129.11
	Say				129.10

18.41.10 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.41.1A	<p>Details of cost of sand filling around 150mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling Under the pipe = 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 166.5mm = 391.50mm Say 0.392m Quantity of sand = $10 \times 0.60 \times 0.392 = 2.35$ cum.+ Less for pipe $3.142/4(0.167)^2 \times 10 = (-)0.22$ cum. = 2.13 cum.</p>	cum	2.13	902.90	1923.18(A)
	Rate as per Item Number 18.41.1A of SH:Water supply				1923.18
	TOTAL				1923.18
	Cost of 10 metre				192.31
	Cost of one metre				192.30
	Say				

18.42 Boring with 100 mm diameter casing pipe for hand pump / tubewell, in all soils except ordinary hard rocks requiring blasting, including removing the casing pipe after the hand pump / tube well is lowered and tested :

18.42.1 Up to 6 metres depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR For boring and removing the pipe-Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	3.00	368.00	1104.00
0010	Hire charges of Derrick monkey rope and other accessories	day	0.50	800.00	400.00
	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre				
1472	Casing pipe 100 mm dia	metre	0.12	335.00	40.20
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				1811.09
	Add 1 % Water charges				18.11
	TOTAL				1829.20
	Add 15 % Contractor's profit and overheads				274.38
	Cost of 6 metre				2103.58
	Cost of one metre				350.59
	Say				350.60

18.42.2 Beyond 6 m and up to 12 m depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6m depth				
0116	LABOUR for boring and removing the pipe-Fitter (grade 1)	day	0.62	487.00	301.94
0114	Beldar	day	3.50	368.00	1288.00
0010	Hire charges of Derrick monkey rope and other accessories	day	0.62	800.00	496.00
	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre				
1472	Casing pipe 100 mm dia	metre	0.12	335.00	40.20
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				2149.53
	Add 1 % Water charges				21.50
	TOTAL				2171.03
	Add 15 % Contractor's profit and overheads				325.65
	Cost of 6 metre				2496.68
	Cost of one metre				416.11
	Say				416.10

18.42.3 Beyond 12 m and up to 18 m depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6m depth				
	LABOUR				
	For boring and removing the pipe-				
0116	Fitter (grade 1)	day	0.75	487.00	365.25
0114	Beldar	day	4.00	368.00	1472.00
0010	Hire charges of Derrickmonkey rope and other accessories	day	0.75	800.00	600.00
	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre				
1472	Casing pipe 100 mm dia	metre	0.12	335.00	40.20
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				2500.84
	Add 1 % Water charges				25.01
	TOTAL				2525.85
	Add 15 % Contractor's profit and overheads				378.88
	Cost of 6 metre				2904.73
	Cost of one metre				484.12
	Say				484.10

18.43 Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one strainer 1.5 long				
	MATERIAL				
1882	Strainer brass 40 mm dia 1.5 metre long	each	1.00	600.00	600.00
9977	Carriage to site	L.S.	13.52	1.73	23.39

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	0.17	487.00	82.79
0114	Beldar	day	0.17	368.00	62.56
9999	Sundries including hamp white lead etc.	L.S.	7.15	1.73	12.37
	TOTAL				781.11
	Add 1 % Water charges				7.81
	TOTAL				788.92
	Add 15 % Contractor's profit and overheads				118.34
	Cost of 1.5 metre				907.26
	Cost of one metre				604.84
	Say				604.85

18.44 Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for a depth of 10 metre				
	MATERIAL				
1549	G.I. pipes 40 mm dia	metre	10.20	185.00	1887.00
	Carriage of 40mm pipe(36.5kg)				
	Added 2% wastage and fitting				
2271	Carriage of G.I. pipes below 100 mm dia	tonne	0.03723	92.24	3.43
9999	White lead, hamp and oil etc.	L.S.	6.76	1.73	11.69
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.75	368.00	276.00
9999	Sundries	L.S.	7.25	1.73	12.54
	TOTAL				2351.37
	Add 1 % Water charges				23.51
	TOTAL				2374.88
	Add 15 % Contractor's profit and overheads				356.23
	Cost for 10 metre				2731.11
	Cost of one metre				273.11
	Say				273.10

18.45 Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one pump				
	MATERIAL				
1693	S.C.I. hand pump	each	1.00	670.00	670.00
9977	Carriage	L.S.	13.52	1.73	23.39
	LABOUR				
0116	Fitter (grade 1)	day	0.10	487.00	48.70
0114	Beldar	day	0.10	368.00	36.80
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				786.54
	Add 1 % Water charges				7.87
	TOTAL				794.41
	Add 15 % Contractor's profit and overheads				119.16
	Cost for one hand pump				913.57
	Say				913.55

18.46 Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :

18.46.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1641	G.I. Union 15 mm nominal bore	each	1.00	30.00	30.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.11	368.00	40.48
	TOTAL				127.20
	Add 1 % Water charges				1.27
	TOTAL				128.47
	Add 15 % Contractor's profit and overheads				19.27
	Cost for one no.				147.74
	Say				147.75

18.46.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1642	G.I. Union 20 mm nominal bore	each	1.00	50.00	50.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.11	368.00	40.48
	TOTAL				147.20
	Add 1 % Water charges				1.47
	TOTAL				148.67
	Add 15 % Contractor's profit and overheads				22.30
	Cost for one no.				170.97
	Say				170.95

18.46.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1643	G.I. Union 25 mm nominal bore	each	1.00	80.00	80.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.11	368.00	40.48
	TOTAL				177.20
	Add 1 % Water charges				1.77
	TOTAL				178.97
	Add 15 % Contractor's profit and overheads				26.85
	Cost for one no.				205.82
	Say				205.80

18.46.4 32 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1644	G.I. Union 32 mm nominal bore	each	1.00	110.00	110.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.11	368.00	40.48
	TOTAL				207.20
	Add 1 % Water charges				2.07
	TOTAL				209.27
	Add 15 % Contractor's profit and overheads				31.39
	Cost for one no.				240.66
	Say				240.65

18.46.5 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1645	G.I. Union 40 mm nominal bore	each	1.00	160.00	160.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.11	368.00	40.48
	TOTAL				257.20
	Add 1 % Water charges				2.57
	TOTAL				259.77
	Add 15 % Contractor's profit and overheads				38.97
	Cost for one no.				298.74
	Say				298.75

18.46.6 50 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1646	G.I. Union 50 mm nominal bore	each	1.00	200.00	200.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.15	487.00	73.05
0114	Beldar	day	0.15	368.00	55.20
	TOTAL				331.40
	Add 1 % Water charges				3.31
	TOTAL				334.71
	Add 15 % Contractor's profit and overheads				50.21
	Cost for one no.				384.92
	Say				384.90

18.46.7 65 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1647	G.I. Union 65 mm nominal bore	each	1.00	400.00	400.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.15	487.00	73.05
0114	Beldar	day	0.15	368.00	55.20
	TOTAL				531.40
	Add 1 % Water charges				5.31
	TOTAL				536.71
	Add 15 % Contractor's profit and overheads				80.51
	Cost for one no.				617.22
	Say				617.20

18.46.8 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1648	G.I. Union 80mm nominal bore	each	1.00	470.00	470.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.15	487.00	73.05
0114	Beldar	day	0.15	368.00	55.20
	TOTAL				601.40
	Add 1 % Water charges				6.01
	TOTAL				607.41
	Add 15 % Contractor's profit and overheads				91.11
	Cost for one no.				698.52
	Say				698.50

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws, including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :**18.47.1 15 mm nominal bore**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1641	G.I. Union 15 mm nominal bore	each	1.00	30.00	30.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				315.30
	Add 1 % Water charges				3.15
	TOTAL				318.45
	Add 15 % Contractor's profit and overheads				47.77
	Cost for one no.				366.22
	Say				366.20

18.47.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1642	G.I. Union 20 mm nominal bore	each	1.00	50.00	50.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				335.30
	Add 1 % Water charges				3.35
	TOTAL				338.65
	Add 15 % Contractor's profit and overheads				50.80
	Cost for one no.				389.45
	Say				389.45

18.47.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1643	G.I. Union 25 mm nominal bore	each	1.00	80.00	80.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				365.30
	Add 1 % Water charges				3.65
	TOTAL				368.95
	Add 15 % Contractor's profit and overheads				55.34
	Cost for one no.				424.29
	Say				424.30

18.47.4 32 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1644	G.I. Union 32 mm nominal bore	each	1.00	110.00	110.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				395.30
	Add 1 % Water charges				3.95
	TOTAL				399.25
	Add 15 % Contractor's profit and overheads				59.89
	Cost for one no.				459.14
	Say				459.15

18.47.5 40 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1645	G.I. Union 40 mm nominal bore	each	1.00	160.00	160.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	0.33	368.00	121.44
	TOTAL				445.30
	Add 1 % Water charges				4.45
	TOTAL				449.75
	Add 15 % Contractor's profit and overheads				67.46
	Cost for one no.				517.21
	Say				517.20

18.47.6 50 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1646	G.I. Union 50 mm nominal bore	each	1.00	200.00	200.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.45	487.00	219.15
0114	Beldar	day	0.45	368.00	165.60
	TOTAL				587.90
	Add 1 % Water charges				5.88
	TOTAL				593.78
	Add 15 % Contractor's profit and overheads				89.07
	Cost for one no.				682.85
	Say				682.85

18.47.7 65 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1647	G.I. Union 65 mm nominal bore	each	1.00	400.00	400.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.45	487.00	219.15
0114	Beldar	day	0.45	368.00	165.60
	TOTAL				787.90
	Add 1 % Water charges				7.88
	TOTAL				795.78
	Add 15 % Contractor's profit and overheads				119.37
	Cost for one no.				915.15
	Say				915.15

18.47.8 80 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
1648	G.I. Union 80mm nominal bore	each	1.00	470.00	470.00
9988	Carriage of materials and sundries	L.S.	1.82	1.73	3.15
	LABOUR				
0116	Fitter (grade 1)	day	0.45	487.00	219.15
0114	Beldar	day	0.45	368.00	165.60
	TOTAL				857.90
	Add 1 % Water charges				8.58
	TOTAL				866.48
	Add 15 % Contractor's profit and overheads				129.97
	Cost for one no.				996.45
	Say				996.45

18.48 Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 500 litres				
	MATERIAL				
1649	Polyethylene water storage tank with cover and suitable locking arrangement	per litre	500.00	5.30	2650.00
9977	Carriage to site	L.S.	179.40	1.73	310.36
9999	Placing at terrace	L.S.	89.70	1.73	155.18
	TOTAL				3115.54
	Add 1 % Water charges				31.16
	TOTAL				3146.70
	Add 15 % Contractor's profit and overheads				472.01
	Cost for 500 litre				3618.71
	Cost of one litre				7.23
	Say				7.25

18.48A Providing and fixing rectangular high density polyethylene water storage loft tank with cover, conforming to ISI : 12701, colour of opaque white or as approved by Engineer-in-charge. The rate includes making necessary holes for inlet, outlet & over flow pipes. The base support i/c fittings & fixtures for tank shall be paid separately.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. tank of 500 litres				
	MATERIAL				
1649	Polyethylene water storage tank with cover and suitable locking arrangement	per litre	500.00	5.30	2650.00
9977	Carriage to site	L.S.	179.40	1.73	310.36

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Placing at terrace	L.S.	89.70	1.73	155.18
	TOTAL				3115.54
	Add 1 % Water charges				31.16
	TOTAL				3146.70
	Add 15 % Contractor's profit and overheads				472.01
	Cost of 500 liters				3618.71
	Cost of 1 litre				7.23
	Say				7.25

18.49 Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :

18.49.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7257	C.P. Brass bibcock 15 mm	each	1.00	300.00	300.00
9988	Carrige of material and fixing charges	L.S.	11.57	1.73	20.02
	TOTAL				320.02
	Add 1 % Water charges				3.20
	TOTAL				323.22
	Add 15 % Contractor's profit and overheads				48.48
	Cost of 1 no.				371.70
	Say				371.70

18.50 Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.

18.50.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7258	C.P. Brass long nose bibcock 15 mm	each	1.00	450.00	450.00
9988	Carrige of material and fixing charges	L.S.	16.25	1.73	28.11
	TOTAL				478.11
	Add 1 % Water charges				4.78
	TOTAL				482.89
	Add 15 % Contractor's profit and overheads				72.43
	Cost of 1 no.				555.32
	Say				555.30

18.51 Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.

18.51.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7259	C.P. Brass long body bibcock 15 mm	each	1.00	400.00	400.00
9988	Carrige of material and fixing charges	L.S.	13.91	1.73	24.06
	TOTAL				424.06
	Add 1 % Water charges				4.24
	TOTAL				428.30
	Add 15 % Contractor's profit and overheads				64.25
	Cost of 1 no.				492.55
	Say				492.55

18.52 Providing and fixing C.P. brass stop cock (conceaed) of standard design and of approved make conforming to IS:8931.

18.52.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7260	C.P. Brass stop cock (conceaed) 15 mm	each	1.00	450.00	450.00
9988	Carrige of material and fixing charges	L.S.	11.57	1.73	20.02
	TOTAL				470.02
	Add 1 % Water charges				4.70
	TOTAL				474.72
	Add 15 % Contractor's profit and overheads				71.21
	Cost of 1 no.				545.93
	Say				545.95

18.53 Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931

18.53.1 15mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7261	C.P. Brass angle valve 15 mm	each	1.00	390.00	390.00
9988	Carriage and fixing charges	L.S.	11.31	1.73	19.57
	TOTAL				409.57
	Add 1 % Water charges				4.10
	TOTAL				413.67
	Add 15 % Contractor's profit and overheads				62.05
	Cost of 1 no.				475.72
	Say				475.70

18.53A Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
0593	C.P. Brass Extension Nipple (1/2"x2" size)	each	1.00	45.00	45.00
9999	Sundries	L.S.	2.89	1.73	5.00
	TOTAL				50.00
	Add 1 % Water charges				0.50
	TOTAL				50.50
	Add 15 % Contractor's profit and overheads				7.58
	Cost of 1 no.				58.08
	Say				58.10

18.54 Providing and fixing PTMT bib cock of approved quality and colour.

18.54.1 15mm nominal bore, 86 mm long, weighing not less than 88 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7400	15 mm PTMT bib cock	each	1.00	75.00	75.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				88.94
	Add 1 % Water charges				0.89
	TOTAL				89.83
	Add 15 % Contractor's profit and overheads				13.47
	Cost of 1 no.				103.30
	Say				103.30

18.54.2 15 mm nominal bore, 122mm long, weighing not less than 99 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7401	15 mm PTMT bib cockwith flange (fancy)	each	1.00	110.00	110.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				123.94
	Add 1 % Water charges				1.24
	TOTAL				125.18
	Add 15 % Contractor's profit and overheads				18.78
	Cost of 1 no.				143.96
	Say				143.95

18.54.3 15 mm nominal bore, 165 mm long, weighing not less than 110 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7402	15 mm PTMT bib cock long body with flange	each	1.00	122.00	122.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				135.94
	Add 1 % Water charges				1.36
	TOTAL				137.30
	Add 15 % Contractor's profit and overheads				20.60
	Cost of 1 No..				157.90
	Say				157.90

18.54.4 15 mm nominal bore, 90 mm long, weighing not less than 93 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7859	P.T.M.T. Bib cock with nozzle 15mm	each	1.00	84.00	84.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				97.94
	Add 1 % Water charges				0.98
	TOTAL				98.92
	Add 15 % Contractor's profit and overheads				14.84
	Cost of 1 no.				113.76
	Say				113.75

18.55 Providing and fixing PTMT stop cock of approved quality and colour.

18.55.1 15 mm nominal bore, 86 mm long, weighing not less than 88 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7403	15 mm dia PTMT stop cock (male thread)	each	1.00	75.00	75.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				88.94
	Add 1 % Water charges				0.89
	TOTAL				89.83
	Add 15 % Contractor's profit and overheads				13.47
	Cost of 1 no.				103.30
	Say				103.30

18.55.2 20 mm nominal bore, 89 mm long, weighing not less than 88 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7405	20 mm dia. PTMT stop cock	each	1.00	102.00	102.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				115.94
	Add 1 % Water charges				1.16
	TOTAL				117.10
	Add 15 % Contractor's profit and overheads				17.57
	Cost of 1 no.				134.67
	Say				134.65

18.55.3 Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7861	P.T.M.T. Stop cock (concealed) 15mm	each	1.00	125.00	125.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				138.94
	Add 1 % Water charges				1.39
	TOTAL				140.33
	Add 15 % Contractor's profit and overheads				21.05
	Cost of 1 no.				161.38
	Say				161.40

18.56 Providing and fixing PTMT pillar cock of approved quality and colour.

18.56.1 15 mm nominal bore, 107 mm long, weighing not less than 110 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7406	PTMT pillar cock	each	1.00	129.00	129.00
9988	Carriage of materials and fixing charges	L.S.	9.49	1.73	16.42
	TOTAL				145.42
	Add 1 % Water charges				1.45
	TOTAL				146.87
	Add 15 % Contractor's profit and overheads				22.03
	Cost of 1 no.				168.90
	Say				168.90

18.56.2 15 mm nominal bore, 125 mm long foam flow, weighing not less than 120 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7410	PTMT pillar cock (fancy) 15 mm foam flow.	each	1.00	144.00	144.00
9988	Carriage of materials and fixing charges	L.S.	9.49	1.73	16.42
	TOTAL				160.42
	Add 1 % Water charges				1.60
	TOTAL				162.02
	Add 15 % Contractor's profit and overheads				24.30
	Cost of 1 no.				186.32
	Say				186.30

18.57 Providing and fixing PTMT, push cock of approved quality and colour.

18.57.1 15 mm nominal bore, 98 mm long, weighing not less than 75 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7407	PTMT push cock 15 mm dia.	each	1.00	65.00	65.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				78.94
	Add 1 % Water charges				0.79
	TOTAL				79.73
	Add 15 % Contractor's profit and overheads				11.96
	Cost of 1 no.				91.69
	Say				91.70

18.57.2 15 mm nominal bore, 80 mm long, weighing not less than 46 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7408	PTMT push cock 12 mm dia. 20 mm BSP	each	1.00	60.00	60.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				73.94
	Add 1 % Water charges				0.74
	TOTAL				74.68
	Add 15 % Contractor's profit and overheads				11.20
	Cost of 1 no.				85.88
	Say				85.90

18.58 Providing and fixing PTMT grating of approved quality and colour.

18.58.1 Circular type

18.58.1.1 100 mm nominal dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7409	PTMT grating 100 mm dia.	each	1.00	21.00	21.00
9988	Carriage of materials and fixing charges	L.S.	4.16	1.73	7.20
	TOTAL				28.20
	Add 1 % Water charges				0.28
	TOTAL				28.48
	Add 15 % Contractor's profit and overheads				4.27
	Cost of 1 no.				32.75
	Say				32.75

18.58.1.2 125 mm nominal dia with 25 mm waste hole

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no.				
	MATERIAL				
7411	125 mm grating with waste hole	each	1.00	32.00	32.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	4.16	1.73	7.20
	TOTAL				39.20
	Add 1 % Water charges				0.39
	TOTAL				39.59
	Add 15 % Contractor's profit and overheads				5.94
	Cost of 1 no.				45.53
	Say				45.55

18.58.2 Rectangular type with openable circular lid

18.58.2.1 150 mm nominal size square 100 mm diameter of the inner hinged round grating

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7412	Details of cost for 1 no. MATERIAL Rectangular type with openable circular lid 150 mm size 18 mm high with 100 mm dia. (110 gm)	each	1.00	122.00	122.00
9988	Carriage of materials and fixing charges	L.S.	4.16	1.73	7.20
	TOTAL				129.20
	Add 1 % Water charges				1.29
	TOTAL				130.49
	Add 15 % Contractor's profit and overheads				19.57
	Cost of 1 no.				150.06
	Say				150.05

18.59 Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :

18.59.1 50 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7415	Details of cost for 10 no. double acting air valves MATERIAL Double acting air valve 50 mm	each	10.00	3900.00	39000.00
9977	Carriage of air valves	L.S.	26.00	1.73	44.98
9999	Labour for laying double acting air valve Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.	L.S.	39.00	1.73	67.47
18.30.1	(Rate as per item no 18.30.1 of SH : Water Supply)	each	10.00	119.55	1195.50(A)
	TOTAL				40307.95
	Add 1 % Water charges on all except (A) i.e. on (40307.95 - 1195.50) = 39112.45				391.12
	TOTAL				40699.07
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (40699.07 - 1195.50) = 39503.57				5925.54
	Cost of 10 air valves				46624.61
	Cost of 1 air valve				4662.46
	Say				4662.45

18.59.2 80 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 no. double acting air valves				
	MATERIAL				
7416	Double acting air valve 80 mm	each	10.00	4750.00	47500.00
9977	Carriage of air valves	L.S.	26.00	1.73	44.98
9999	Labour for laying double acting air valve	L.S.	39.00	1.73	67.47
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
18.30.1	(Rate as per item no 18.30.1 of SH : Water Supply)	each	10.00	119.55	1195.50(A)
	TOTAL				48807.95
	Add 1 % Water charges on all except (A) i.e. on (48807.95 - 1195.50) = 47612.45				476.12
	TOTAL				49284.07
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (49284.07 - 1195.50) = 48088.57				7213.29
	Cost of 10 air valves				56497.36
	Cost of 1 air valve				5649.73
	Say				5649.75

18.59.3 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 no. double acting air valves				
	MATERIAL				
7417	Double acting air valve 100 mm	each	10.00	6200.00	62000.00
9977	Carriage of air valves	L.S.	26.00	1.73	44.98
9999	Labour for laying double acting air valve	L.S.	52.00	1.73	89.96
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
18.30.2	(Rate as per item No.18.30.2 Of SH:Water Supply)	each	10.00	193.85	1938.50(A)
	TOTAL				64073.44
	Add 1 % Water charges on all except (A) i.e. on (64073.44 - 1938.50) = 62134.94				621.35
	TOTAL				64694.79
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (64694.79 - 1938.50) = 62756.29				9413.44
	Cost of 10 air valves				74108.23
	Cost of 1 air valve				7410.82
	Say				7410.80

18.60 Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :

18.60.1 80 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7418	Details of cost for one no. water meter MATERIAL Water meter (including testing charges) 80 mm	each	1.00	2130.00	2130.00
9999	Testing charges	L.S.	130.00	1.73	224.90
9977	Carriage of water meter	L.S.	26.00	1.73	44.98
9999	Labour for laying water meter	L.S.	39.00	1.73	67.47
18.30.1	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc. (Rate as per item no 18.30.1 of SH : Water Supply) TOTAL	each	2.00	119.55	239.10(A) 2706.45
	Add 1 % Water charges on all except (A) i.e. on (2706.45 - 239.10) = 2467.35 TOTAL				24.67 2731.12
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2731.12 - 239.10) = 2492.02 Cost of 1 water meter Say				373.80 3104.92 3104.90

18.60.2 100 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7419	Details of cost for one no. water meter MATERIAL Water meter (including testing charges) 100 mm	each	1.00	3300.00	3300.00
9999	Testing charges	L.S.	130.00	1.73	224.90
9977	Carriage of water meter	L.S.	26.00	1.73	44.98
9999	Labour for laying water meter	L.S.	52.00	1.73	89.96
18.30.2	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc. (Rate as per item No.18.30.2) TOTAL	each	2.00	193.85	387.70(A) 4047.54
	Add 1 % Water charges on all except (A) i.e. on (4047.54 - 387.70) = 3659.84 TOTAL				36.60 4084.14
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4084.14 - 387.70) = 3696.44 Cost of 1 water meter Say				554.47 4638.61 4638.60

18.60.3 150 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7420	Details of cost for one no. water meter MATERIAL Water meter (including testing charges) 150 mm	each	1.00	5000.00	5000.00
9999	Testing charges	L.S.	156.00	1.73	269.88
9977	Carriage of water meter	L.S.	39.00	1.73	67.47
9999	Labour for laying water meter	L.S.	65.00	1.73	112.45
18.30.4	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc. (Rate as per item No.18.30.4 Of SH: Water Supply) TOTAL	each	2.00	243.05	486.10(A) 5935.90
	Add 1 % Water charges on all except (A) i.e. on (5935.90 - 486.10) = 5449.80 TOTAL				54.50 5990.40
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (5990.40 - 486.10) = 5504.30 Cost of 1 water meter Say				825.65 6816.05 6816.05

18.60.4 200 mm dia nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7421	Details of cost for one no. water meter MATERIAL Water meter (including testing charges) 200 mm	each	1.00	5400.00	5400.00
9999	Testing charges	L.S.	156.00	1.73	269.88
9977	Carriage of water meter	L.S.	52.00	1.73	89.96
9999	Labour for laying water meter	L.S.	104.00	1.73	179.92
18.30.5	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc. (Rate as per item no 20.47.5 of SH : Water Supply) TOTAL	each	2.00	267.45	534.90(A) 6474.66
	Add 1 % Water charges on all except (A) i.e. on (6474.66 - 534.90) = 5939.76 TOTAL				59.40 6534.06
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6534.06 - 534.90) = 5999.16 Cost of 1 water meter Say				899.87 7433.93 7433.95

18.61 Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :

18.61.1 80 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for on no. dirt box strainer MATERIAL				
7422	Dirt box srainer 80 mm	each	1.00	2810.00	2810.00
9977	Carriage of dirt box strainer	L.S.	26.00	1.73	44.98
9999	Labour for laying dirt box strainer	L.S.	39.00	1.73	67.47
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
18.30.1	(Rate as per item no 18.30.1 of SH : Water Supply)	each	2.00	119.55	239.10(A)
	TOTAL				3161.55
	Add 1 % Water charges on all except (A) i.e. on (3161.55 - 239.10) = 2922.45				29.22
	TOTAL				3190.77
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3190.77 - 239.10) = 2951.67				442.75
	Cost of 1 dirt box stainer				3633.52
	Say				3633.50

18.61.2 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. dirt box stainer MATERIAL				
7423	Dirt box srainer 100 mm	each	1.00	4580.00	4580.00
9977	Carriage of dirt box strainer	L.S.	26.00	1.73	44.98
9999	Labour for laying dirt box strainer	L.S.	52.00	1.73	89.96
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
18.30.2	(Rate as per item No.18.30.2 Of SH:Water Supply)	each	2.00	193.85	387.70(A)
	TOTAL				5102.64
	Add 1 % Water charges on all except (A) i.e. on (5102.64 - 387.70) = 4714.94				47.15
	TOTAL				5149.79
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (5149.79 - 387.70) = 4762.09				714.31
	Cost of 1 dirt box stainer				5864.10
	Say				5864.10

18.61.3 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. dirt box stainer				
	MATERIAL				
7424	Dirt box strainer 150 mm	each	1.00	5810.00	5810.00
9977	Carriage of dirt box strainer	L.S.	39.00	1.73	67.47
9999	Labour for laying dirt box strainer	L.S.	65.00	1.73	112.45
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
18.30.4	(Rate as per item No.18.30.4 Of SH:Water Supply)	each	2.00	243.05	486.10(A)
	TOTAL				6476.02
	Add 1 % Water charges on all except (A) i.e. on (6476.02 - 486.10) = 5989.92				59.90
	TOTAL				6535.92
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6535.92 - 486.10) = 6049.82				907.47
	Cost for 1 dirt box stainer				7443.39
	Say				7443.40

18.61.4 200 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. dirt box stainer				
	MATERIAL				
7425	Dirt box strainer 200 mm	each	1.00	8250.00	8250.00
9977	Carriage of dirt box strainer	L.S.	52.00	1.73	89.96
9999	Labour for laying dirt box strainer	L.S.	104.00	1.73	179.92
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
18.30.5	(Rate as per item no 20.47.5 of SH : Water Supply)	each	2.00	267.45	534.90(A)
	TOTAL				9054.78
	Add 1 % Water charges on all except (A) i.e. on (9054.78 - 534.90) = 8519.88				85.20
	TOTAL				9139.98
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9139.98 - 534.90) = 8605.08				1290.76
	Cost for 10 dirt box stainer				10430.74
	Say				10430.75

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.

18.62.1 15 mm nominal bore, 105 mm long, weighing not less than 138 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7495	PTMT Ball Cock 15mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	105.00	105.00
9988	Carriage of materials and fixing charges	L.S.	21.58	1.73	37.33
	TOTAL				142.33
	Add 1 % Water charges				1.42
	TOTAL				143.75
	Add 15 % Contractor's profit and overheads				21.56
	Cost of one no.				165.31
	Say				165.30

18.62.2 20 mm nominal bore, 120 mm long, weighing not less than 198 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7496	PTMT Ball Cock 20mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	140.00	140.00
9988	Carriage of materials and fixing charges	L.S.	26.91	1.73	46.55
	TOTAL				186.55
	Add 1 % Water charges				1.87
	TOTAL				188.42
	Add 15 % Contractor's profit and overheads				28.26
	Cost of one no.				216.68
	Say				216.70

18.62.3 25 mm nominal bore, 152mm long, weighing not less than 440 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7497	PTMT Ball Cock 25mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	1.00	300.00	300.00
9988	Carriage of materials and fixing charges	L.S.	32.24	1.73	55.78
	TOTAL				355.78
	Add 1 % Water charges				3.56
	TOTAL				359.34
	Add 15 % Contractor's profit and overheads				53.90
	Cost of one no.				413.24
	Say				413.25

18.62.4 40 mm nominal bore, 206mm long, weighing not less than 690 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7498	PTMT Ball Cock 40mm Complete with Epoxy Coated Aluminium Road & H.D. Ball	each	1.00	501.00	501.00
9988	Carriage of materials and fixing charges	L.S.	32.24	1.73	55.78
	TOTAL				556.78
	Add 1 % Water charges				5.57
	TOTAL				562.35
	Add 15 % Contractor's profit and overheads				84.35
	Cost of one no.				646.70
	Say				646.70

18.62.5 50 mm nominal bore, 242mm long, weighing not less than 1240 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7499	PTMT Ball Cock 50mm Complete with Epoxy Coated Aluminium Road & H.D. Ball	each	1.00	913.00	913.00
9988	Carriage of materials and fixing charges	L.S.	32.24	1.73	55.78
	TOTAL				968.78
	Add 1 % Water charges				9.69
	TOTAL				978.47
	Add 15 % Contractor's profit and overheads				146.77
	Cost of one no.				1125.24
	Say				1125.25

18.63 Providing and fixing PTMT angle stop cock 15 mm nominal bore, weighing not less than 85 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7500	PTMT Angle Stop cock with Flenge 15mm	each	1.00	102.00	102.00
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				115.94
	Add 1 % Water charges				1.16
	TOTAL				117.10
	Add 15 % Contractor's profit and overheads				17.57
	Cost of one no.				134.67
	Say				134.65

18.64 Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7501	PTMT Swiveling shower 15mm	each	1.00	75.00	75.00
9988	Carriage of materials and fixing charges	L.S.	6.76	1.73	11.69
	TOTAL				86.69
	Add 1 % Water charges				0.87
	TOTAL				87.56
	Add 15 % Contractor's profit and overheads				13.13
	Cost of one no.				100.69
	Say				100.70

18.65 Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements, weighing not less than 106 gms.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no				
	MATERIAL				
7509	PTMT Soap Dish/Holder 138x102x75mm	each	1.00	85.00	85.00
9988	Carriage of materials and fixing charges	L.S.	6.76	1.73	11.69
	TOTAL				96.69
	Add 1 % Water charges				0.97
	TOTAL				97.66
	Add 15 % Contractor's profit and overheads				14.65
	Cost of one no				112.31
	Say				112.30

18.66 Providing and laying S&S C.I. Standard specials such as tees, bends, collars tapers and caps etc, suitable for flanged jointing as per IS : 1538 :

18.66.1 Up to 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal				
	MATERIAL				
7708	S&S Centrifugally (Spun) C.I. Pipe Specials as per IS 1538 suitable for lead jointing upto 300mm dia	quintal	1.00	5450.00	5450.00
2309	Carriage of Cast iron fittings	tonne	0.10	92.24	9.22
	Labour for laying				
18.24	Rate as per Item Number 18.24 of SH: Water Supply	quintal	1.00	284.20	284.20(A)
	TOTAL				5743.42
	Add 1 % Water charges on all except (A) i.e. on (5743.42 - 284.20) = 5459.22				54.59
	TOTAL				5798.01
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (5798.01 - 284.20) = 5513.81				827.07
	Cost of 1 quintal				6625.08
	Say				6625.10

18.66.2 Above 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7709	Details of cost for 1 quintal MATERIAL S&S Centrifugally (Spun) C.I. Pipe Specials as per IS 1538 suitable for lead jointing over 300mm dia	quintal	1.00	6510.00	6510.00
2309	Carriage of Cast iron fittings Labour for laying	tonne	0.10	92.24	9.22
18.24	Rate as per Item Number 18.24 of SH: Water Supply	quintal	1.00	284.20	284.20(A)
	TOTAL				6803.42
	Add 1 % Water charges on all except (A) i.e. on (6803.42 - 284.20) = 6519.22				65.19
	TOTAL				6868.61
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6868.61 - 284.20) = 6584.41				987.66
	Cost of 1 quintal				7856.27
	Say				7856.25

18.67 Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382 :
18.67.1 Up to 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7710	Details of cost for 1 quintal MATERIAL S&S Centrifugally (Spun) C.I. Pipe specials suitable for mechanical joint as per I.S. 13382 upto 300mm dia	quintal	1.00	9000.00	9000.00
2309	Carriage of Cast iron fittings Labour for laying	tonne	0.10	92.24	9.22
18.24	Rate as per Item Number 18.24 of SH: Water Supply	quintal	1.00	284.20	284.20(A)
	TOTAL				9293.42
	Add 1 % Water charges on all except (A) i.e. on (9293.42 - 284.20) = 9009.22				90.09
	TOTAL				9383.51
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9383.51 - 284.20) = 9099.31				1364.90
	Cost of 1 quintal				10748.41
	Say				10748.40

18.67.2 Above 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7711	Details of cost for 1 quintal MATERIAL S&S Centrifugally (Spun) C.I. Pipe Specials suitable for mechanical joint as per IS 13382 over 300mm dia	quintal	1.00	9500.00	9500.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2309	Carriage of Cast iron fittings	tonne	0.10	92.24	9.22
18.24	Labour for Laying Rate as per Item Number 18.24 of SH: Water Supply	quintal	1.00	284.20	284.20(A)
	TOTAL				9793.42
	Add 1 % Water charges on all except (A) i.e. on (9793.42 - 284.20) = 9509.22				95.09
	TOTAL				9888.51
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9888.51 - 284.20) = 9604.31				1440.65
	Cost of 1 quintal				11329.16
	Say				11329.15

18.68 Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523 :

18.68.1 Up to 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal MATERIAL				
7682	Ductile Iron K - 12 specials suitable for push on jointing upto 600 mm dia	quintal	1.00	13000.00	13000.00
2309	Carriage of Cast iron fittings	tonne	0.10	92.24	9.22
18.24	Labour for laying Rate as per Item Number 18.24 of SH: Water Supply	quintal	1.00	284.20	284.20(A)
	TOTAL				13293.42
	Add 1 % Water charges on all except (A) i.e. on (13293.42 - 284.20) = 13009.22				130.09
	TOTAL				13423.51
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (13423.51 - 284.20) = 13139.31				1970.90
	Cost of 1 quintal				15394.41
	Say				15394.40

18.68.2 Above 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 quintal MATERIAL				
7683	Ductile Iron K - 12 specials suitable for push on jointing over 600mm dia	quintal	1.00	18000.00	18000.00
2309	Carriage of Cast iron fittings Labour for laying	tonne	0.10	92.24	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.24	Rate as per Item Number 18.24 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (18293.42 - 284.20) = 18009.22 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (18473.51 - 284.20) = 18189.31 Cost of 1 quintal Say	quintal	1.00	284.20	284.20(A) 18293.42 180.09 18473.51 2728.40 21201.91 21201.90

18.69 Providing and laying D.I. Specials of Class K - 12 suitable for mechanical jointing as per IS : 9523 :

18.69.1 Up to 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7684	Details of cost for 1 quintal MATERIAL Ductile Iron specials suitable for mechanical jointing as per I.S. 9523 - upto 600mm dia	quintal	1.00	13700.00	13700.00
2309	Carriage of Cast iron fittings Labour for laying	tonne	0.10	92.24	9.22
18.24	Rate as per Item Number 18.24 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (13993.42 - 284.20) = 13709.22 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (14130.51 - 284.20) = 13846.31 Cost of 1 quintal Say	quintal	1.00	284.20	284.20(A) 13993.42 137.09 14130.51 2076.95 16207.46 16207.45

18.69.2 Above 600 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7685	Details of cost for 1 quintal MATERIAL Ductile Iron Specials suitable for mechanical jointing as per I.S. 9523 over 600mm dia	quintal	1.00	19650.00	19650.00
2309	Carriage of Cast iron fittings Labour for laying	tonne	0.10	92.24	9.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.24	Rate as per Item Number 18.24 of SH: Water Supply	quintal	1.00	284.20	284.20(A)
	TOTAL				19943.42
	Add 1 % Water charges on all except (A) i.e. on (19943.42 - 284.20) = 19659.22				196.59
	TOTAL				20140.01
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (20140.01 - 284.20) = 19855.81				2978.37
	Cost of 1 quintal				23118.38
	Say				23118.40

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket :

18.70.1 100 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7666	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 100mm dia	each	50.00	30.00	1500.00
	Labour				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0117	Assistant Fitter or 2nd class Fitter	day	1.00	448.00	448.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				2803.00
	Add 1 % Water charges				28.03
	TOTAL				2831.03
	Add 15 % Contractor's profit and overheads				424.65
	Cost of 50 joints				3255.68
	Cost of 1 joint				65.11
	Say				65.10

18.70.2 150 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7668	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 150mm dia	each	50.00	38.00	1900.00
	Labour				
0116	Fitter (grade 1)	day	1.50	487.00	730.50
0117	Assistant Fitter or 2nd class Fitter	day	1.50	448.00	672.00
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				4406.50
	Add 1 % Water charges				44.07
	TOTAL				4450.57
	Add 15 % Contractor's profit and overheads				667.59
	Cost of 50 joints				5118.16
	Cost of 1 joint				102.36
	Say				102.35

18.70.3 200 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7669	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 200mm dia	each	50.00	66.00	3300.00
	LABOUR				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0117	Assistant Fitter or 2nd class Fitter	day	2.00	448.00	896.00
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				6642.00
	Add 1 % Water charges				66.42
	TOTAL				6708.42
	Add 15 % Contractor's profit and overheads				1006.26
	Cost of 50 joints				7714.68
	Cost of 1 joint				154.29
	Say				154.30

18.70.4 250 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7670	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 250mm dia	each	50.00	78.00	3900.00
	LABOUR				
0116	Fitter (grade 1)	day	2.50	487.00	1217.50
0117	Assistant Fitter or 2nd class Fitter	day	2.50	448.00	1120.00
0114	Beldar	day	5.00	368.00	1840.00
	TOTAL				8077.50
	Add 1 % Water charges				80.78
	TOTAL				8158.28
	Add 15 % Contractor's profit and overheads				1223.74
	Cost of 50 joints				9382.02
	Cost of 1 joint				187.64
	Say				187.65

18.70.5 300 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7671	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 300mm dia	each	50.00	115.00	5750.00
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	448.00	1344.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	6.00	368.00	2208.00
	TOTAL				10763.00
	Add 1 % Water charges				107.63
	TOTAL				10870.63
	Add 15 % Contractor's profit and overheads				1630.59
	Cost of 50 joints				12501.22
	Cost of 1 joint				250.02
	Say				250.00

18.70.6 350 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7672	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 350mm dia	each	50.00	132.00	6600.00
	LABOUR				
0116	Fitter (grade 1)	day	3.00	487.00	1461.00
0117	Assistant Fitter or 2nd class Fitter	day	3.00	448.00	1344.00
0114	Beldar	day	6.00	368.00	2208.00
	TOTAL				11613.00
	Add 1 % Water charges				116.13
	TOTAL				11729.13
	Add 15 % Contractor's profit and overheads				1759.37
	Cost of 50 joints				13488.50
	Cost of 1 joint				269.77
	Say				269.75

18.70.7 400 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7673	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 400mm dia	each	50.00	240.00	12000.00
	LABOUR				
0116	Fitter (grade 1)	day	4.00	487.00	1948.00
0117	Assistant Fitter or 2nd class Fitter	day	4.00	448.00	1792.00
0114	Beldar	day	8.00	368.00	2944.00
	TOTAL				18684.00
	Add 1 % Water charges				186.84
	TOTAL				18870.84
	Add 15 % Contractor's profit and overheads				2830.63
	Cost of 50 joints				21701.47
	Cost of 1 joint				434.02
	Say				434.00

18.70.8 450 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7674	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 450mm dia	each	50.00	280.00	14000.00
	LABOUR				
0116	Fitter (grade 1)	day	4.50	487.00	2191.50
0117	Assistant Fitter or 2nd class Fitter	day	4.50	448.00	2016.00
0114	Beldar	day	9.00	368.00	3312.00
	TOTAL				21519.50
	Add 1 % Water charges				215.20
	TOTAL				21734.70
	Add 15 % Contractor's profit and overheads				3260.21
	Cost of 50 joints				24994.91
	Cost of 1 joint				499.89
	Say				499.90

18.70.9 500 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7675	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 500mm dia	each	50.00	305.00	15250.00
	LABOUR				
0116	Fitter (grade 1)	day	4.75	487.00	2313.25
0117	Assistant Fitter or 2nd class Fitter	day	4.75	448.00	2128.00
0114	Beldar	day	9.50	368.00	3496.00
	TOTAL				23187.25
	Add 1 % Water charges				231.87
	TOTAL				23419.12
	Add 15 % Contractor's profit and overheads				3512.87
	Cost of 50 joints				26931.99
	Cost of 1 joint				538.63
	Say				538.65

18.70.10 600 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7676	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 600mm dia	each	50.00	380.00	19000.00
	LABOUR				
0116	Fitter (grade 1)	day	6.50	487.00	3165.50
0117	Assistant Fitter or 2nd class Fitter	day	6.50	448.00	2912.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	13.00	368.00	4784.00
	TOTAL				29861.50
	Add 1 % Water charges				298.62
	TOTAL				30160.12
	Add 15 % Contractor's profit and overheads				4524.02
	Cost of 50 joints				34684.14
	Cost of 1 joint				693.68
	Say				693.70

18.70.11 650 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7677	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 700mm dia	each	50.00	575.00	28750.00
	LABOUR				
0116	Fitter (grade 1)	day	7.70	487.00	3749.90
0117	Assistant Fitter or 2nd class Fitter	day	7.70	448.00	3449.60
0114	Beldar	day	15.40	368.00	5667.20
	TOTAL				41616.70
	Add 1 % Water charges				416.17
	TOTAL				42032.87
	Add 15 % Contractor's profit and overheads				6304.93
	Cost of 50 joints				48337.80
	Cost of 1 joint				966.75
	Say				966.75

18.70.12 700 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7678	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 750mm dia	each	50.00	690.00	34500.00
	LABOUR				
0116	Fitter (grade 1)	day	7.70	487.00	3749.90
0117	Assistant Fitter or 2nd class Fitter	day	7.70	448.00	3449.60
0114	Beldar	day	15.40	368.00	5667.20
	TOTAL				47366.70
	Add 1 % Water charges				473.67
	TOTAL				47840.37
	Add 15 % Contractor's profit and overheads				7176.06
	Cost of 50 joints				55016.43
	Cost of 1 joint				1100.32
	Say				1100.30

18.70.13 800 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7679	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 800mm dia	each	50.00	760.00	38000.00
	LABOUR				
0116	Fitter (grade 1)	day	8.50	487.00	4139.50
0117	Assistant Fitter or 2nd class Fitter	day	8.50	448.00	3808.00
0114	Beldar	day	17.00	368.00	6256.00
	TOTAL				52203.50
	Add 1 % Water charges				522.04
	TOTAL				52725.54
	Add 15 % Contractor's profit and overheads				7908.83
	Cost of 50 joints				60634.37
	Cost of 1 joint				1212.68
	Say				1212.70

18.70.14 900 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7680	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 900mm dia	each	50.00	1000.00	50000.00
	LABOUR				
0116	Fitter (grade 1)	day	10.00	487.00	4870.00
0117	Assistant Fitter or 2nd class Fitter	day	10.00	448.00	4480.00
0114	Beldar	day	20.00	368.00	7360.00
	TOTAL				66710.00
	Add 1 % Water charges				667.10
	TOTAL				67377.10
	Add 15 % Contractor's profit and overheads				10106.57
	Cost of 50 joints				77483.67
	Cost of 1 joint				1549.67
	Say				1549.65

18.70.15 1000 mm dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7681	Details of cost for 50 Joints MATERIAL Ruber Gaskets Conforming to I.S 5382 of S.B.R quality 1000mm dia	each	50.00	1200.00	60000.00
	LABOUR				
0116	Fitter (grade 1)	day	11.00	487.00	5357.00
0117	Assistant Fitter or 2nd class Fitter	day	11.00	448.00	4928.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	22.00	368.00	8096.00
	TOTAL				78381.00
	Add 1 % Water charges				783.81
	TOTAL				79164.81
	Add 15 % Contractor's profit and overheads				11874.72
	Cost of 50 joints				91039.53
	Cost of 1 joint				1820.79
	Say				1820.80

18.71 Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :

18.71.1 100 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7712	Details of cost for 5 metre MATERIAL 100 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 27.00 Kg Weight of 5 m pipes 27.00x5 = 135.00 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 100mm dia	metre	5.00	1375.00	6875.00
2319	Carriage of Spun iron S & S pipes 100 mm dia	100 metre	0.05	226.82	11.34
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	1.35	152.80	206.28(A)
	TOTAL				7092.62
	Add 1 % Water charges on all except (A) i.e. on (7092.62 - 206.28) = 6886.34				68.86
	TOTAL				7161.48
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (7161.48 - 206.28) = 6955.20				1043.28
	Cost of 5 metre				8204.76
	Cost of metre				1640.95
	Say				1640.95

18.71.2 150 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7713	Details of cost for 5 metre MATERIAL 150 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 44.10 Kg Weight of 5 m pipes 44.10x5 = 220.50 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 150mm dia	metre	5.00	2150.00	10750.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.05	378.03	18.90

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (11106.59 - 337.69) = 10768.90 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11214.28 - 337.69) = 10876.59 Cost of 5 metre Cost per metre Say	quintal	2.21	152.80	337.69(A) 11106.59 107.69 11214.28 1631.49 12845.77 2569.15 2569.15

18.71.3 200 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7714	Details of cost for 5 metre MATERIAL 200 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 63.50 Kg Weight of 5 m pipes 63.50x5 = 317.50 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 200mm dia	metre	5.00	3400.00	17000.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	0.05	614.93	30.75
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply TOTAL Add 1 % Water charges on all except (A) i.e. on (17516.65 - 485.90) = 17030.75 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (17686.96 - 485.90) = 17201.06 Cost of 5 metre Cost per metre Say	quintal	3.18	152.80	485.90(A) 17516.65 170.31 17686.96 2580.16 20267.12 4053.42 4053.40

18.71.4 250 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7715	Details of cost for 5 metre MATERIAL 250 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 85.30 Kg Weight of 5 m pipes 85.30x5 = 426.50 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 250mm dia	metre	5.00	4100.00	20500.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	0.05	873.84	43.69
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	4.27	152.80	652.46(A)
	TOTAL				21196.15
	Add 1 % Water charges on all except (A) i.e. on (21196.15 - 652.46) = 20543.69				205.44
	TOTAL				21401.59
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (21401.59 - 652.46) = 20749.13				3112.37
	Cost of 5 metre				24513.96
	Cost per metre				4902.79
	Say				4902.80

18.71.5 300 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7716	Details of cost for 5 metre MATERIAL 300 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 110.00 Kg Weight of 5 m pipes 110.00x5 = 550.00 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 300mm dia	metre	5.00	5240.00	26200.00
2324	Carriage of Spun iron S & S pipes 300 mm dia	100 metre	0.05	1080.08	54.00
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	5.50	152.80	840.40(A)
	TOTAL				27094.40
	Add 1 % Water charges on all except (A) i.e. on (27094.40 - 840.40) = 26254.00				262.54
	TOTAL				27356.94
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (27356.94 - 840.40) = 26516.54				3977.48
	Cost of 5 metre				31334.42
	Cost per metre				6266.88
	Say				6266.90

18.71.6 350 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 5 metre MATERIAL 350 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 135.70 Kg Weight of 5 m pipes 135.70x5 = 678.50 Kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7717	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 350mm dia	metre	5.00	6600.00	33000.00
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	0.05	1512.11	75.61
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	6.79	152.80	1037.51(A)
	TOTAL				34113.12
	Add 1 % Water charges on all except (A) i.e. on (34113.12 - 1037.51) = 33075.61				330.76
	TOTAL				34443.88
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (34443.88 - 1037.51) = 33406.37				5010.96
	Cost of 5 metre				39454.84
	Cost per metre				7890.96
	Say				7890.95

18.71.7 400 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7718	Details of cost for 5 metre MATERIAL 400 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 166.80 Kg Weight of 5 m pipes 166.80x5 = 834.00 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 400mm dia	metre	5.00	8550.00	42750.00
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	0.05	2061.97	103.10
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	8.34	152.80	1274.35(A)
	TOTAL				44127.45
	Add 1 % Water charges on all except (A) i.e. on (44127.45 - 1274.35) = 42853.10				428.53
	TOTAL				44555.98
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (44555.98 - 1274.35) = 43281.63				6492.24
	Cost of 5 metre				51048.22
	Cost per metre				10209.64
	Say				10209.65

18.71.8 450 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7719	Details of cost for 5 metre MATERIAL 450 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 201.60 Kg Weight of 5 m pipes 201.60x5 = 1008.00 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 450mm dia	metre	5.00	10900.00	54500.00
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	0.05	2520.19	126.01
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	10.08	152.80	1540.22(A)
	TOTAL				56166.23
	Add 1 % Water charges on all except (A) i.e. on (56166.23 - 1540.22) = 54626.01				546.26
	TOTAL				56712.49
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (56712.49 - 1540.22) = 55172.27				8275.84
	Cost of 5 metre				64988.33
	Cost per metre				12997.66
	Say				12997.65

18.71.9 500 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7720	Details of cost for 5 metre MATERIAL 500 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 234.80 Kg Weight of 5 m pipes 234.80x5 = 1174.00 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 500mm dia	metre	5.00	13560.00	67800.00
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	0.05	2520.19	126.01
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	11.74	152.80	1793.87(A)
	TOTAL				69719.88
	Add 1 % Water charges on all except (A) i.e. on (69719.88 - 1793.87) = 67926.01				679.26
	TOTAL				70399.14
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (70399.14 - 1793.87) = 68605.27				10290.79
	Cost of 5 metre				80689.93
	Cost per metre				16137.98
	Say				16138.00

18.71.10 600 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7721	Details of cost for 5 metre MATERIAL 600 mm dia. cast iron pipes double flanged Weight of 1 m pipes = 315.30 Kg Weight of 5 m pipes 315.30x5 = 1576.50 Kg Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 600mm dia	metre	5.00	18800.00	94000.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	0.05	3780.28	189.01
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	15.77	152.80	2409.66(A)
	TOTAL				96598.67
	Add 1 % Water charges on all except (A) i.e. on (96598.67 - 2409.66) = 94189.01				941.89
	TOTAL				97540.56
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (97540.56 - 2409.66) = 95130.90				14269.64
	Cost of 5 metre				111810.20
	Cost per metre				22362.04
	Say				22362.05

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :
18.72.1 100 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7722	Details of cost for 10 metre MATERIAL 100mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 15.39 Kg Weight of 10m pipes 15.39x10 = 153.90 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 100mm dia	metre	10.00	775.00	7750.00
2343	Carriage of ductile iron pipes (k7) 100 mm dia	100 metre	0.10	226.82	22.68
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	1.54	152.80	235.31(A)
	TOTAL				8007.99
	Add 1 % Water charges on all except (A) i.e. on (8007.99 - 235.31) = 7772.68				77.73
	TOTAL				8085.72
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8085.72 - 235.31) = 7850.41				1177.56
	Cost of 10 metre				9263.28
	Cost per metre				926.32
	Say				926.30

18.72.2 150 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7723	Details of cost for 10 metre MATERIAL 150 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 22.750 Kg Weight of 10m pipes 22.750x10 = 227.50 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 150mm dia	metre	10.00	1120.00	11200.00
2344	Carriage of cast iron pipes 150 mm dia	100 metre	0.10		
18.23	Rate same as per item no 18.23 of SH: Water Supply	quintal	2.28	152.80	348.38(A)
	TOTAL				11586.18
	Add 1 % Water charges on all except (A) i.e. on (11586.18 - 348.38) = 11237.80				112.38
	TOTAL				11698.56
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11698.56 - 348.38) = 11350.18				1702.53
	Cost of 10 metre				13401.09
	Cost per metre				1340.10
	Say				1340.10

18.72.3 200 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7724	Details of cost for 10 metre MATERIAL 200 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 30.090 Kg Weight of 10m pipes 30.090x10 = 300.90 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 200mm dia	metre	10.00	1550.00	15500.00
2345	Carriage of cast iron pipes 200 mm dia	100 metre	0.10	614.93	61.49
18.23	Labour for laying Rate same as per item no 18.23 of SH: Water Supply	quintal	3.01	152.80	459.93(A)
	TOTAL				16021.42
	Add 1 % Water charges on all except (A) i.e. on (16021.42 - 459.93) = 15561.49				155.61
	TOTAL				16177.03
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (16177.03 - 459.93) = 15717.10				2357.57
	Cost of 10 metre				18534.60
	Cost per metre				1853.46
	Say				1853.45

18.72.4 250 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7725	Details of cost for 10 metre MATERIAL 250mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 39.310 Kg Weight of 10m pipes 39.310x10 = 393.10 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 250mm dia	metre	10.00	2100.00	21000.00
2346	Carriage of cast iron pipes 250 mm dia Labour for laying	100 metre	0.10	873.84	87.38
18.23	Rate same as per item no 18.23 of SH: Water Supply TOTAL	quintal	3.93	152.80	600.50(A) 21687.88
	Add 1 % Water charges on all except (A) i.e. on (21687.88 - 600.50) = 21087.38 TOTAL				210.87 21898.75
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (21898.75 - 600.50) = 21298.25 Cost of 10 metre Cost per metre Say				3194.74 25093.49 2509.34 2509.35

18.72.5 300 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7726	Details of cost for 10 metre MATERIAL 300mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 48.400 Kg Weight of 10m pipes 48.400x10 = 484.00 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 300mm dia	metre	10.00	2771.00	27710.00
2347	Carriage of cast iron pipes 300 mm dia Labour for laying	100 metre	0.10	1080.08	108.01
18.23	Rate same as per item no 18.23 of SH: Water Supply TOTAL	quintal	4.84	152.80	739.55(A) 28557.56
	Add 1 % Water charges on all except (A) i.e. on (28557.56 - 739.55) = 27818.01 TOTAL				278.18 28835.74
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (28835.74 - 739.55) = 28096.19 Cost of 10 metre Cost per metre Say				4214.43 33050.17 3305.01 3305.00

18.72.6 350 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 350mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 66.020 Kg Weight of 10m pipes 66.020x10 = 660.20 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 350mm dia	metre	10.00	3354.00	33540.00
7727					
2348	Carriage of cast iron pipes 350 mm dia Labour for laying	100 metre	0.10	1512.11	151.21
18.23	Rate same as per item no 18.23 of SH: Water Supply	quintal	6.60	152.80	1008.48(A)
	TOTAL				34699.69
	Add 1 % Water charges on all except (A) i.e. on (34699.69 - 1008.48) = 33691.21				336.91
	TOTAL				35036.60
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (35036.60 - 1008.48) = 34028.12				5104.22
	Cost of 10 metre				40140.82
	Cost per metre				4014.08
	Say				4014.10

18.72.7 400 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 400mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 78.280 Kg Weight of 10m pipes 78.280x10 = 782.80 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 400mm dia	metre	10.00	4015.00	40150.00
7728					
2349	Carriage of cast iron pipes 400 mm dia Labour for laying	100 metre	0.10	2061.97	206.20
18.23	Rate same as per item no 18.23 of SH: Water Supply	quintal	7.83	152.80	1196.42(A)
	TOTAL				41552.62
	Add 1 % Water charges on all except (A) i.e. on (41552.62 - 1196.42) = 40356.20				403.56
	TOTAL				41956.18
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (41956.18 - 1196.42) = 40759.76				6113.96
	Cost of 10 metre				48070.14
	Cost per metre				4807.01
	Say				4807.00

18.72.8 450 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 450mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 91.410 Kg Weight of 10m pipes 91.410x10 = 914.10 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 450mm dia	metre	10.00	4852.00	48520.00
7729					
2350	Carriage of cast iron pipes 450 mm dia Labour for laying	100 metre	0.10	2520.19	252.02
18.23	Rate same as per item no 18.23 of SH: Water Supply	quintal	9.14	152.80	1396.59(A)
	TOTAL				50168.61
	Add 1 % Water charges on all except (A) i.e. on (50168.61 - 1396.59) = 48772.02				487.72
	TOTAL				50656.33
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (50656.33 - 1396.59) = 49259.74				7388.96
	Cost of 10 metre				58045.29
	Cost per metre				5804.52
	Say				5804.50

18.72.9 500 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 500mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 106.640 Kg Weight of 10m pipes 106.640x10 = 1066.40 Kg Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 500mm dia	metre	10.00	5735.00	57350.00
7730					
2351	Carriage of cast iron pipes 500 mm dia Labour for laying	100 metre	0.10	2520.19	252.02
18.23	Rate same as per item no 18.23 of SH: Water Supply	quintal	10.66	152.80	1628.85(A)
	TOTAL				59230.87
	Add 1 % Water charges on all except (A) i.e. on (59230.87 - 1628.85) = 57602.02				576.02
	TOTAL				59806.89
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (59806.89 - 1628.85) = 58178.04				8726.71
	Cost of 10 metre				68533.60
	Cost per metre				6853.36
	Say				6853.35

18.72.10 600 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 600mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 138.61 Kg Weight of 10m pipes 138.61x10 = 1386.10 Kg				
7731	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 600mm dia	metre	10.00	7402.00	74020.00
2352	Carriage of cast iron pipes 600 mm dia Labour for laying	100 metre	0.10	3780.28	378.03
18.23	Rate same as per item no 18.23 of SH: Water Supply	quintal	13.86	152.80	2117.81(A)
	TOTAL				76515.84
	Add 1 % Water charges on all except (A) i.e. on (76515.84 - 2117.81) = 74398.03				743.98
	TOTAL				77259.82
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (77259.82 - 2117.81) = 75142.01				11271.30
	Cost of 10 metre				88531.12
	Cost per metre				8853.11
	Say				8853.10

18.72.11 700 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 700mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 188.92 Kg Weight of 10m pipes 188.92x10 = 1889.20 Kg				
7732	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 700mm dia	metre	10.00	9613.00	96130.00
2353	Carriage of cast iron pipes 700 mm dia Labour for laying	100 metre	0.10	3780.28	378.03
18.23	Rate as per Item Number 18.23 of SH: Water Supply	quintal	18.89	152.80	2886.39(A)
	TOTAL				99394.42
	Add 1 % Water charges on all except (A) i.e. on (99394.42 - 2886.39) = 96508.03				965.08
	TOTAL				100359.50
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (100359.50 - 2886.39) = 97473.11				14620.97
	Cost of 10 metre				114980.47
	Cost per metre				11498.04
	Say				11498.05

18.72.12 800 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 800mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 243.51 Kg Weight of 10m pipes 243.51x10 = 2435.10 Kg				
7733	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 800mm dia	metre	10.00	12100.00	121000.00
2355	Carriage of cast iron pipes 800 mm dia Labour for laying	100 metre	0.10	3780.28	378.03
18.23	Rate as per Item Number 18.23 of SH: Water Supply	quintal	24.35	152.80	3720.68(A)
	TOTAL				125098.71
	Add 1 % Water charges on all except (A) i.e. on (125098.71 - 3720.68) = 121378.03				1213.78
	TOTAL				126312.49
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (126312.49 - 3720.68) = 122591.81				18388.77
	Cost of 10 metre				144701.26
	Cost per metre				14470.12
	Say				14470.10

18.72.13 900 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 900 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 282.74 Kg Weight of 10m pipes 282.74x10 = 2827.40 Kg				
7734	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 900mm dia	metre	10.00	15603.00	156030.00
2356	Carriage of cast iron pipes 900 mm dia Labour for laying	100 metre	0.10	5670.42	567.04
18.23	Rate as per Item Number 18.23 of SH: Water Supply	quintal	28.27	152.80	4319.66(A)
	TOTAL				160916.70
	Add 1 % Water charges on all except (A) i.e. on (160916.70 - 4319.66) = 156597.04				1565.97
	TOTAL				162482.67
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (162482.67 - 4319.66) = 158163.01				23724.45
	Cost of 10 metre				186207.12
	Cost per metre				18620.71
	Say				18620.70

18.72.14 1000 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 1000 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 348.23 Kg Weight of 10m pipes 348.23x10 = 3482.30 Kg				
7735	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 1000mm dia	metre	10.00	17032.00	170320.00
2357	Carriage of cast iron pipes 1000 mm dia	100 metre	0.10	7560.57	756.06
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	34.82	152.80	5320.50(A)
	TOTAL				176396.56
	Add 1 % Water charges on all except (A) i.e. on (176396.56 - 5320.50) = 171076.06				1710.76
	TOTAL				178107.32
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (178107.32 - 5320.50) = 172786.82				25918.02
	Cost of 10 metre				204025.34
	Cost per metre				20402.53
	Say				20402.55

18.72.15 100 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 100mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 17.76 Kg Weight of 10m pipes 17.76x10 = 177.60 Kg				
7651	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 100mm dia	metre	10.00	800.00	8000.00
2319	Carriage of Spun iron S & S pipes 100 mm dia	100 metre	0.10	226.82	22.68
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	1.776	152.80	271.37(A)
	TOTAL				8294.05
	Add 1 % Water charges on all except (A) i.e. on (8294.05 - 271.37) = 8022.68				80.23
	TOTAL				8374.28
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8374.28 - 271.37) = 8102.91				1215.44
	Cost of 10 metre				9589.72
	Cost per metre				958.97
	Say				958.95

18.72.16 150 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7652	Details of cost for 10 metre MATERIAL 150 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 26.27 Kg Weight of 10m pipes 26.27x10 = 262.70 Kg Ductile Iron class K - 9 pipe Conforming to I.S. 8329 150mm dia	metre	10.00	1200.00	12000.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.10	378.03	37.80
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	2.627	152.80	401.41(A)
	TOTAL				12439.21
	Add 1 % Water charges on all except (A) i.e. on (12439.21 - 401.41) = 12037.80				120.38
	TOTAL				12559.59
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (12559.59 - 401.41) = 12158.18				1823.73
	Cost of 10 metre				14383.32
	Cost per metre				1438.33
	Say				1438.35

18.72.17 200 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7653	Details of cost for 10 metre MATERIAL 200 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 36.15 Kg Weight of 10m pipes 36.15x10 = 361.50 Kg Ductile Iron class K - 9 pipe Conforming to I.S. 8329 200mm dia	metre	10.00	1650.00	16500.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	0.10	614.93	61.49
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	3.615	152.80	552.37(A)
	TOTAL				17113.86
	Add 1 % Water charges on all except (A) i.e. on (17113.86 - 552.37) = 16561.49				165.61
	TOTAL				17279.47
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (17279.47 - 552.37) = 16727.10				2509.07
	Cost of 10 metre				19788.54
	Cost per metre				1978.85
	Say				1978.85

18.72.18 250 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7654	Details of cost for 10 metre MATERIAL 250mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 48.00 Kg Weight of 10m pipes 48.00x10 = 480.00 Kg Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 250mm dia	metre	10.00	2300.00	23000.00
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	0.10	873.84	87.38
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	4.80	152.80	733.44(A)
	TOTAL				23820.82
	Add 1 % Water charges on all except (A) i.e. on (23820.82 - 733.44) = 23087.38				230.87
	TOTAL				24051.69
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (24051.69 - 733.44) = 23318.25				3497.74
	Cost of 10 metre				27549.43
	Cost per metre				2754.94
	Say				2754.95

18.72.19 300 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7655	Details of cost for 10 metre MATERIAL 300mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 60.490 Kg Weight of 10m pipes 60.490x10 = 604.90 Kg Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 300mm dia	metre	10.00	2860.00	28600.00
2324	Carriage of Spun iron S & S pipes 300 mm dia	100 metre	0.10	1080.08	108.01
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	6.049	152.80	924.29(A)
	TOTAL				29632.30
	Add 1 % Water charges on all except (A) i.e. on (29632.30 - 924.29) = 28708.01				287.08
	TOTAL				29919.38
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (29919.38 - 924.29) = 28995.09				4349.26
	Cost of 10 metre				34268.64
	Cost per metre				3426.86
	Say				3426.85

18.72.20 350 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7656	Details of cost for 10 metre MATERIAL 350mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 79.730 Kg Weight of 10m pipes 79.730x10 = 797.30 Kg Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 350mm dia	metre	10.00	3510.00	35100.00
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	0.10	1512.11	151.21
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	7.973	152.80	1218.27(A)
	TOTAL				36469.48
	Add 1 % Water charges on all except (A) i.e. on (36469.48 - 1218.27) = 35251.21				352.51
	TOTAL				36821.99
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (36821.99 - 1218.27) = 35603.72				5340.56
	Cost of 10 metre				42162.55
	Cost per metre				4216.25
	Say				4216.25

18.72.21 400 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7657	Details of cost for 10 metre MATERIAL 400mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 94.800 Kg Weight of 10m pipes 94.800x10 = 948.00 Kg Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 400mm dia	metre	10.00	4500.00	45000.00
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	0.10	2061.97	206.20
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	9.48	152.80	1448.54(A)
	TOTAL				46654.74
	Add 1 % Water charges on all except (A) i.e. on (46654.74 - 1448.54) = 45206.20				452.06
	TOTAL				47106.80
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (47106.80 - 1448.54) = 45658.26				6848.74
	Cost of 10 metre				53955.54
	Cost per metre				5395.55
	Say				5395.55

18.72.22 450 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 450mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 110.970 Kg Weight of 10m pipes 110.970x10 = 1109.70 Kg				
7658	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 450mm dia	metre	10.00	5200.00	52000.00
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	0.10	2520.19	252.02
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	11.097	152.80	1695.62(A)
	TOTAL				53947.64
	Add 1 % Water charges on all except (A) i.e. on (53947.64 - 1695.62) = 52252.02				522.52
	TOTAL				54470.16
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (54470.16 - 1695.62) = 52774.54				7916.18
	Cost of 10 metre				62386.34
	Cost per metre				6238.63
	Say				6238.65

18.72.23 500 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 500mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 129.480 Kg Weight of 10m pipes 129.480x10 = 1294.80 Kg				
7659	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 500mm dia	metre	10.00	6580.00	65800.00
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	0.10	2520.19	252.02
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	12.948	152.80	1978.45(A)
	TOTAL				68030.47
	Add 1 % Water charges on all except (A) i.e. on (68030.47 - 1978.45) = 66052.02				660.52
	TOTAL				68690.99
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (68690.99 - 1978.45) = 66712.54				10006.88
	Cost of 10 metre				78697.87
	Cost per metre				7869.78
	Say				7869.80

18.72.24 600 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 600mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 168.680 Kg Weight of 10m pipes 168.680x10 = 1686.80 Kg				
7660	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 600mm dia	metre	10.00	7930.00	79300.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	0.10	3780.28	378.03
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	16.868	152.80	2577.43(A)
	TOTAL				82255.46
	Add 1 % Water charges on all except (A) i.e. on (82255.46 - 2577.43) = 79678.03				796.78
	TOTAL				83052.24
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (83052.24 - 2577.43) = 80474.81				12071.22
	Cost of 10 metre				95123.46
	Cost per metre				9512.34
	Say				9512.35

18.72.25 700 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 700mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 217.540 Kg Weight of 10m pipes 217.540x10 = 2175.40 Kg				
7661	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 700mm dia	metre	10.00	11000.00	110000.00
2330	Carriage of C.I. pipes 500 mm dia	100 metre	0.10	2520.19	252.02
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	21.754	152.80	3324.01(A)
	TOTAL				113576.03
	Add 1 % Water charges on all except (A) i.e. on (113576.03 - 3324.01) = 110252.02				1102.52
	TOTAL				114678.55
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (114678.55 - 3324.01) = 111354.54				16703.18
	Cost of 10 metre				131381.73
	Cost per metre				13138.17
	Say				13138.15

18.72.26 750 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 750mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 242.600 Kg Weight of 10m pipes 242.600x10 = 2426.00 Kg				
7662	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 750mm dia	metre	10.00	11900.00	119000.00
2331	Carriage of R.C.C. pipes 900 mm dia Labour for laying	100 metre	0.10	5670.42	567.04
18.23	Rate as per Item Number 18.23 of SH: Water Supply	quintal	24.26	152.80	3706.93(A)
	TOTAL				123273.97
	Add 1 % Water charges on all except (A) i.e. on (123273.97 - 3706.93) = 119567.04				1195.67
	TOTAL				124469.64
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (124469.64 - 3706.93) = 120762.71				18114.41
	Cost of 10 metre				142584.05
	Cost per metre				14258.40
	Say				14258.40

18.72.27 800 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 800 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 267.100 Kg Weight of 10m pipes 267.100x10 = 2671.00 Kg				
7663	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 800mm dia	metre	10.00	12000.00	120000.00
2332	Carriage of R.C.C. pipes 1000 mm dia Labour for laying	100 metre	0.10	7560.57	756.06
18.23	Rate as per Item Number 18.23 of SH: Water Supply	quintal	26.71	152.80	4081.29(A)
	TOTAL				124837.35
	Add 1 % Water charges on all except (A) i.e. on (124837.35 - 4081.29) = 120756.06				1207.56
	TOTAL				126044.91
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (126044.91 - 4081.29) = 121963.62				18294.54
	Cost of 10 metre				144339.45
	Cost per metre				14433.94
	Say				14433.95

18.72.28 900 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 900 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 321.290 Kg Weight of 10m pipes 321.290x10 = 3212.90 Kg				
7664	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 900mm dia	metre	10.00	14500.00	145000.00
2333	Carriage of R.C.C. pipes 1100 mm dia Labour for laying	100 metre	0.10	7560.57	756.06
18.23	Rate as per Item Number 18.23 of SH: Water Supply TOTAL	quintal	32.129	152.80	4909.31(A) 150665.37
	Add 1 % Water charges on all except (A) i.e. on (150665.37 - 4909.31) = 145756.06 TOTAL				1457.56 152122.93
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (152122.93 - 4909.31) = 147213.62				22082.04
	Cost of 10 metre				174204.97
	Cost per metre				17420.49
	Say				17420.50

18.72.29 1000 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL 1000 mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1 m pipes = 380.190 Kg Weight of 10m pipes 380.190x10 = 3801.90 Kg				
7665	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 1000mm dia	metre	10.00	16300.00	163000.00
2334	Carriage of R.C.C. pipes 1200 mm dia Labour for laying	100 metre	0.10	7560.57	756.06
18.23	Rate as per Item Number 18.23 of SH: Water Supply TOTAL	quintal	38.019	152.80	5809.30(A) 169565.36
	Add 1 % Water charges on all except (A) i.e. on (169565.36 - 5809.30) = 163756.06 TOTAL				1637.56 171202.92
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (171202.92 - 5809.30) = 165393.62				24809.04
	Cost of 10 metre				196011.96
	Cost per metre				19601.19
	Say				19601.20

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.1 100 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7686	Details of cost for 5 metre MATERIAL 100 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 21.700 Kg Weight of 5 m pipes 21.700x5 = 108.50 Kg Ductile Iron Pipe Class K-9 flanges and welding 100mm dia	metre	5.00	1155.00	5775.00
2319	Carriage of Spun iron S & S pipes 100 mm dia	100 metre	0.05	226.82	11.34
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	1.09	152.80	166.55(A)
	TOTAL				5952.89
	Add 1 % Water charges on all except (A) i.e. on (5952.89 - 166.55) = 5786.34				57.86
	TOTAL				6010.75
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6010.75 - 166.55) = 5844.20				876.63
	Cost of 5 metre				6887.38
	Cost per metre				1377.47
	Say				1377.45

18.73.2 150 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7687	Details of cost for 5 metre MATERIAL 150 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 32.600 Kg Weight of 5 m pipes 32.600x5 = 163.00 Kg Ductile Iron Pipe Class K-9 flanges and welding 150 dia	metre	5.00	1733.00	8665.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.05	378.03	18.90
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	1.63	152.80	249.06(A)
	TOTAL				8932.96
	Add 1 % Water charges on all except (A) i.e. on (8932.96 - 249.06) = 8683.90				86.84
	TOTAL				9019.80
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9019.80 - 249.06) = 8770.74				1315.61
	Cost of 5 metre				10335.41
	Cost per metre				2067.08
	Say				2067.10

18.73.3 200 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7688	Details of cost for 5 metre MATERIAL 200 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 44.200 Kg Weight of 5 m pipes 44.200x5 = 221.00 Kg Ductile Iron Pipe Class K-9 flanges and welding 200mm dia	metre	5.00	2179.00	10895.00
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	0.05	614.93	30.75
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	2.21	152.80	337.69(A)
	TOTAL				11263.44
	Add 1 % Water charges on all except (A) i.e. on (11263.44 - 337.69) = 10925.75				109.26
	TOTAL				11372.70
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11372.70 - 337.69) = 11035.01				1655.25
	Cost of 5 metre				13027.95
	Cost per metre				2605.59
	Say				2605.60

18.73.4 250 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7689	Details of cost for 5 metre MATERIAL 250 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 59.400 Kg Weight of 5 m pipes 59.400x5 = 297.00 Kg Ductile Iron Pipe Class K-9 flanges and welding 250mm dia	metre	5.00	3098.00	15490.00
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	0.05	873.84	43.69
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	2.97	152.80	453.82(A)
	TOTAL				15987.51
	Add 1 % Water charges on all except (A) i.e. on (15987.51 - 453.82) = 15533.69				155.34
	TOTAL				16142.85
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (16142.85 - 453.82) = 15689.03				2353.35
	Cost of 5 metre				18496.20
	Cost per metre				3699.24
	Say				3699.25

18.73.5 300 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7690	Details of cost for 5 metre MATERIAL 300 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 76.400 Kg Weight of 5 m pipes 76.400x5 = 382.00 Kg Ductile Iron Pipe Class K-9 flanges and welding 300mm dia	metre	5.00	3980.00	19900.00
2324	Carriage of Spun iron S & S pipes 300 mm dia	100 metre	0.05	1080.08	54.00
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	3.82	152.80	583.70(A)
	TOTAL				20537.70
	Add 1 % Water charges on all except (A) i.e. on (20537.70 - 583.70) = 19954.00				199.54
	TOTAL				20737.24
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (20737.24 - 583.70) = 20153.54				3023.03
	Cost of 5 metre				23760.27
	Cost per metre				4752.05
	Say				4752.05

18.73.6 350 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7691	Details of cost for 5 metre MATERIAL 350 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 91.400 Kg Weight of 5 m pipes 91.400x5 = 457.00 Kg Ductile Iron Pipe Class K-9 flanges and welding 350mm dia	metre	5.00	5019.00	25095.00
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	0.05	1512.11	75.61
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	4.57	152.80	698.30(A)
	TOTAL				25868.91
	Add 1 % Water charges on all except (A) i.e. on (25868.91 - 698.30) = 25170.61				251.71
	TOTAL				26120.62
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (26120.62 - 698.30) = 25422.32				3813.35
	Cost of 5 metre				29933.97
	Cost per metre				5986.79
	Say				5986.80

18.73.7 400 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7692	Details of cost for 5 metre MATERIAL 400 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 108.100 Kg Weight of 5 m pipes 108.100x5 = 540.50 Kg Ductile Iron Pipe Class K-9 flanges and welding 400mm dia	metre	5.00	6458.00	32290.00
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	0.05	2061.97	103.10
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	5.40	152.80	825.12(A)
	TOTAL				33218.22
	Add 1 % Water charges on all except (A) i.e. on (33218.22 - 825.12) = 32393.10				323.93
	TOTAL				33542.15
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (33542.15 - 825.12) = 32717.03				4907.55
	Cost of 5 metre				38449.70
	Cost per metre				7689.94
	Say				7689.95

18.73.8 450 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7693	Details of cost for 5 metre MATERIAL 450 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 127.800 Kg Weight of 5 m pipes 127.800x5 = 639.00 Kg Ductile Iron Pipe Class K-9 flanges and welding 450mm dia	metre	5.00	6776.00	33880.00
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	0.05	2520.19	126.01
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	6.39	152.80	976.39(A)
	TOTAL				34982.40
	Add 1 % Water charges on all except (A) i.e. on (34982.40 - 976.39) = 34006.01				340.06
	TOTAL				35322.46
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (35322.46 - 976.39) = 34346.07				5151.91
	Cost of 5 metre				40474.37
	Cost per metre				8094.87
	Say				8094.85

18.73.9 500 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7694	Details of cost for 5 metre MATERIAL 500 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 147.900 Kg Weight of 5 m pipes 147.900x5 = 739.50 Kg Ductile Iron Pipe Class K-9 flanges and welding 500mm dia	metre	5.00	9639.00	48195.00
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	0.05	2520.19	126.01
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	7.40	152.80	1130.72(A)
	TOTAL				49451.73
	Add 1 % Water charges on all except (A) i.e. on (49451.73 - 1130.72) = 48321.01				483.21
	TOTAL				49934.94
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (49934.94 - 1130.72) = 48804.22				7320.63
	Cost of 5 metre				57255.57
	Cost per metre				11451.11
	Say				11451.10

18.73.10 600 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7695	Details of cost for 5 metre MATERIAL 600 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 198.900 Kg Weight of 5 m pipes 198.900x5 = 994.50 Kg Ductile Iron Pipe Class K-9 flanges and welding 600mm dia	metre	5.00	12758.00	63790.00
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	0.05	3780.28	189.01
18.23	Labour for laying Rate as per Item Number 18.23 of SH: Water Supply	quintal	9.95	152.80	1520.36(A)
	TOTAL				65499.37
	Add 1 % Water charges on all except (A) i.e. on (65499.37 - 1520.36) = 63979.01				639.79
	TOTAL				66139.16
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (66139.16 - 1520.36) = 64618.80				9692.82
	Cost of 5 metre				75831.98
	Cost per metre				15166.39
	Say				15166.40

18.73.11 700 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7696	Details of cost for 5 metre MATERIAL 700 mm dia. ductile iron pipes double flanged Weight of 1 m pipes = 254.900 Kg Weight of 5 m pipes 254.900x5 = 1274.50 Kg Ductile Iron Pipe Class K-9 flanges and welding 700mm dia	metre	5.00	15089.00	75445.00
2330	Carriage of C.I. pipes 500 mm dia Labour for laying	100 metre	0.05	2520.19	126.01
18.23	Rate as per Item Number 18.23 of SH: Water Supply TOTAL	quintal	12.75	152.80	1948.20(A) 77519.21
	Add 1 % Water charges on all except (A) i.e. on (77519.21 - 1948.20) = 75571.01 TOTAL				755.71 78274.92
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (78274.92 - 1948.20) = 76326.72				11449.01
	Cost of 5 metre				89723.93
	Cost per metre				17944.78
	Say				17944.80

18.74 Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.**18.74.1 15 mm nominal bore with 30cm length**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7862	Details of cost for one no. MATERIAL 15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts	each	1.00	32.00	32.00
9988	Carriage of materials and fixing charges TOTAL	L.S.	12.22	1.73	21.14 53.14
	Add 1 % Water charges TOTAL				0.53 53.67
	Add 15 % Contractor's profit and overheads				8.05
	Cost of one no.				61.72
	Say				61.70

18.74.2 15 mm nominal bore with 45 cm length

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7863	Details of cost for one no. MATERIAL 15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts	each	1.00	34.00	34.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	13.52	1.73	23.39
	TOTAL				57.39
	Add 1 % Water charges				0.57
	TOTAL				57.96
	Add 15 % Contractor's profit and overheads				8.69
	Cost of one no.				66.65
	Say				66.65

18.75 Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.

18.75.1 15 mm nominal bore, weighing not less than 32 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7864	P.T.M.T. extension nipple 15mm	each	1.00	19.00	19.00
9988	Carriage of materials and fixing charges	L.S.	3.38	1.73	5.85
	TOTAL				24.85
	Add 1 % Water charges				0.25
	TOTAL				25.10
	Add 15 % Contractor's profit and overheads				3.77
	Cost of one no.				28.87
	Say				28.85

18.75.2 20 mm nominal bore, weighing not less than 40 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7865	P.T.M.T. extension nipple 20mm	each	1.00	28.00	28.00
9988	Carriage of materials and fixing charges	L.S.	3.38	1.73	5.85
	TOTAL				33.85
	Add 1 % Water charges				0.34
	TOTAL				34.19
	Add 15 % Contractor's profit and overheads				5.13
	Cost of one no.				39.32
	Say				39.30

18.75.3 25mm nominal bore, weighing not less than 62 gms

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
7866	P.T.M.T. extension nipple 25mm	each	1.00	40.00	40.00
9988	Carriage of materials and fixing charges	L.S.	3.38	1.73	5.85
	TOTAL				45.85
	Add 1 % Water charges				0.46
	TOTAL				46.31
	Add 15 % Contractor's profit and overheads				6.95
	Cost of one no.				53.26
	Say				53.25

18.76 Cutting holes up to 30x30 cm in walls including making good the same:**18.76.1 With common burnt clay F.P.S. (non modular) bricks**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 holes Size 30x30 cm in 34 cm wall Labour for cutting holes				
0123	Mason (brick layer) 1st class	day	0.16	487.00	77.92
0124	Mason (brick layer) 2nd class	day	0.16	448.00	71.68
0114	Beldar	day	1.25	368.00	460.00
	Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) 10x0.30x0.30x0.344m = 0.309 cum Les 33% for pipe etc. = (-) 0.102 cum = 0.207 cum Say 0.21 cum				
6.4.1	Rate as per item No 6.4.1 of SH :- Brick work. 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) 10x2x0.3x0.3m = 1.80 sqm Les 33% for pipe etc. = (-) 0.59 sqm = 1.21 sqm Say 1.20 sqm	cum	0.21	5801.50	1218.32(A)
13.4.1	(Rate as per item no 13.4.1 of SH : Finishing)	sqm	1.20	180.85	217.02(A)
9999	Add for delay	L.S.	16.12	1.73	27.89
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				2086.77
	Add 1 % Water charges on all except (A) i.e. on (2086.77 - 1435.34) = 651.43				6.51
	TOTAL				2093.28
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2093.28 - 1435.34) = 657.94				98.69
	Cost of 10 holes				2191.97
	Cost of 1 hole				219.19
	Say				219.20

18.77 Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 holes Average size 15x15x15 cm Labour for cutting holes				
0123	Mason (brick layer) 1st class	day	0.83	487.00	404.21
0124	Mason (brick layer) 2nd class	day	0.83	448.00	371.84
0114	Beldar	day	1.67	368.00	614.56
	Cement concrete 1:2:4 (1 cement : 2 coarse sand ; 4 graded stone aggregate 20 mm nominal size)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	10x0.15x0.15x0.15 m = 0.033 cum Les 33% for pipe etc. = (-) 0.011 cum = 0.022 cum Say 0.02 cum Rate as per item no. 4.1.3 of SH : concrete Work	cum	0.02	5481.95	109.64(A)
9999	Finishing top and bottom and making the holes leak proof	L.S.	121.16	1.73	209.61
9999	Add for delay	L.S.	40.30	1.73	69.72
9999	Sundries	L.S.	21.58	1.73	37.33
	TOTAL				1816.91
	Add 1 % Water charges on all except (A) i.e. on (1816.91 - 109.64) = 1707.27				17.07
	TOTAL				1833.98
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1833.98 - 109.64) = 1724.34				258.65
	Cost of 10 holes				2092.63
	Cost of 1 hole				209.26
	Say				209.25

18.78 Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0123	Details of cost for 10 metres Labour for making chases Mason (brick layer) 1st class	day	0.25	487.00	121.75
0124	Mason (brick layer) 2nd class	day	0.25	448.00	112.00
0114	Beldar	day	1.00	368.00	368.00
4.2.5	Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.075x0.075x10 m = 0.05625 cum Les 33% for pipe etc. = (-) 0.01856 cum = 0.03769 cum Say 0.04 cum Rate as per item no 4.2.5 of SH : Concrete work	cum	0.04	5992.75	239.71(A)
	TOTAL				841.46
	Add 1 % Water charges on all except (A) i.e. on (841.46 - 239.71) = 601.75				6.02
	TOTAL				847.48
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (847.48 - 239.71) = 607.77				91.17
	Cost of 10 metre				938.65
	Cost of 1 metre				93.86
	Say				93.85

18.79 Making hole up to 20x20 cm and embedding pipes up to 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand 6 graded stone aggregate 20 mm nominal size) including disposal of malba.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.2.5	Details of cost for 10 metres Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.2x0.2x10 m = 0.40 cum Les for pipe $3.14 \times (0.15)^2 / 4 \times 10 = (-) 0.177$ cum = 0.223 cum Say 0.22 cum Rate as per item no 4.2.5 of SH : Concrete work	cum	0.22	5992.75	1318.41(A)
9999	Disposal of malba	L.S.	13.52	1.73	23.39
	TOTAL				1341.80
	Add 1 % Water charges on all except (A) i.e. on (1341.80 - 1318.41) = 23.39				0.23
	TOTAL				1342.03
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1342.03 - 1318.41) = 23.62				3.54
	Cost of 10 metre				1345.57
	Cost of 1 metre				134.55
	Say				134.55

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.

18.80.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1301	Details of cost for 100 metres MATERIAL Bleaching powder $3 \times 3.14 / 4 \times (80/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms = 754.28 gms Say 0.008 q	quintal	0.008	1750.00	14.00
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0114	Beldar	day	1.31	368.00	482.08
9999	Sundries including testing of samples	L.S.	9.88	1.73	17.09
	TOTAL				673.88
	Add 1 % Water charges				6.74
	TOTAL				680.62
	Add 15 % Contractor's profit and overheads				102.09
	Cost of 100 metre				782.71
	Say				782.70

18.80.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (100/10)^2 \times (100 \times 100)/1000 \times 0.5$ gms				
	= 1178.57 gms Say 0.012 q				
1301	Bleaching powder	quintal	0.012	1750.00	21.00
	LABOUR				
0116	Fitter (grade 1)	day	0.49	487.00	238.63
0114	Beldar	day	1.64	368.00	603.52
9999	Sundries including testing of samples	L.S.	13.52	1.73	23.39
	TOTAL				886.54
	Add 1 % Water charges				8.87
	TOTAL				895.41
	Add 15 % Contractor's profit and overheads				134.31
	Cost of 100 metre				1029.72
	Say				1029.70

18.80.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (125/10)^2 \times (100 \times 100)/1000 \times 0.5$ gms				
	= 1841.52 gms Say 0.018 q				
1301	Bleaching powder	quintal	0.018	1750.00	31.50
	LABOUR				
0116	Fitter (grade 1)	day	0.66	487.00	321.42
0114	Beldar	day	1.97	368.00	724.96
9999	Sundries including testing of samples	L.S.	17.94	1.73	31.04
	TOTAL				1108.92
	Add 1 % Water charges				11.09
	TOTAL				1120.01
	Add 15 % Contractor's profit and overheads				168.00
	Cost of 100 metre				1288.01
	Say				1288.00

18.80.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (150/10)^2 \times (100 \times 100)/1000 \times 0.5$ gms				
	= 2651 gms Say 0.027 q				
1301	Bleaching powder	quintal	0.027	1750.00	47.25

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.82	487.00	399.34
0114	Beldar	day	2.30	368.00	846.40
9999	Sundries including testing of samples	L.S.	22.88	1.73	39.58
	TOTAL				1332.57
	Add 1 % Water charges				13.33
	TOTAL				1345.90
	Add 15 % Contractor's profit and overheads				201.89
	Cost of 100 metre				1547.79
	Say				1547.80

18.80.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder $3 \times 3.14/4 \times (200/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms = 4712.39 gms Say 0.047 q				
1301	Bleaching powder	quintal	0.047	1750.00	82.25
	LABOUR				
0116	Fitter (grade 1)	day	1.15	487.00	560.05
0114	Beldar	day	2.95	368.00	1085.60
9999	Sundries including testing of samples	L.S.	31.46	1.73	54.43
	TOTAL				1782.33
	Add 1 % Water charges				17.82
	TOTAL				1800.15
	Add 15 % Contractor's profit and overheads				270.02
	Cost of 100 metre				2070.17
	Say				2070.15

18.80.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder $3 \times 3.14/4 \times (250/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms = 7363.10 gms Say 0.074 q				
1301	Bleaching powder	quintal	0.074	1750.00	129.50
	LABOUR				
0116	Fitter (grade 1)	day	1.48	487.00	720.76
0114	Beldar	day	3.61	368.00	1328.48
9999	Sundries including testing of samples	L.S.	40.30	1.73	69.72
	TOTAL				2248.46
	Add 1 % Water charges				22.48
	TOTAL				2270.94
	Add 15 % Contractor's profit and overheads				340.64
	Cost of 100 metre				2611.58
	Say				2611.60

18.80.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (300/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms				
	= 10602.88 gms Say 0.106 q				
1301	Bleaching powder	quintal	0.106	1750.00	185.50
	LABOUR				
0116	Fitter (grade 1)	day	1.64	487.00	798.68
0114	Beldar	day	3.94	368.00	1449.92
9999	Sundries including testing of samples	L.S.	44.46	1.73	76.92
	TOTAL				2511.02
	Add 1 % Water charges				25.11
	TOTAL				2536.13
	Add 15 % Contractor's profit and overheads				380.42
	Cost of 100 metre				2916.55
	Say				2916.55

18.80.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (350/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms				
	= 14431.70 gms Say 0.144 q				
1301	Bleaching powder	quintal	0.144	1750.00	252.00
	LABOUR				
0116	Fitter (grade 1)	day	1.80	487.00	876.60
0114	Beldar	day	4.27	368.00	1571.36
9999	Sundries including testing of samples	L.S.	48.36	1.73	83.66
	TOTAL				2783.62
	Add 1 % Water charges				27.84
	TOTAL				2811.46
	Add 15 % Contractor's profit and overheads				421.72
	Cost of 100 metre				3233.18
	Say				3233.20

18.80.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (400/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms				
	= 18849.60 gms Say 0.189 q				
1301	Bleaching powder	quintal	0.189	1750.00	330.75
	LABOUR				
0116	Fitter (grade 1)	day	1.97	487.00	959.39
0114	Beldar	day	4.59	368.00	1689.12

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries including testing of samples	L.S.	53.82	1.73	93.11
	TOTAL				3072.37
	Add 1 % Water charges				30.72
	TOTAL				3103.09
	Add 15 % Contractor's profit and overheads				465.46
	Cost of 100 metre				3568.55
	Say				3568.55

18.80.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (450/10)^2 \times (100 \times 100)/1000 \times 0.5$ gms				
	= 23856.50 gms Say 0.239 q				
1301	Bleaching powder	quintal	0.239	1750.00	418.25
	LABOUR				
0116	Fitter (grade 1)	day	2.13	487.00	1037.31
0114	Beldar	day	4.92	368.00	1810.56
9999	Sundries including testing of samples	L.S.	58.24	1.73	100.76
	TOTAL				3366.88
	Add 1 % Water charges				33.67
	TOTAL				3400.55
	Add 15 % Contractor's profit and overheads				510.08
	Cost of 100 metre				3910.63
	Say				3910.65

18.80.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (500/10)^2 \times (100 \times 100)/1000 \times 0.5$ gms				
	= 29452.40 gms Say 0.295 q				
1301	Bleaching powder	quintal	0.295	1750.00	516.25
	LABOUR				
0116	Fitter (grade 1)	day	2.30	487.00	1120.10
0114	Beldar	day	5.25	368.00	1932.00
9999	Sundries including testing of samples	L.S.	63.7	1.73	110.20
	TOTAL				3678.55
	Add 1 % Water charges				36.79
	TOTAL				3715.34
	Add 15 % Contractor's profit and overheads				557.30
	Cost of 100 metre				4272.64
	Say				4272.65

18.80.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3 \times 3.14/4 \times (600/10)^2 \times (100 \times 100) / 1000 \times 0.5$ gms				
	= 42411.5 gms Say 0.424 q				
1301	Bleaching powder	quintal	0.424	1750.00	742.00
	LABOUR				
0116	Fitter (grade 1)	day	2.62	487.00	1275.94
0114	Beldar	day	5.91	368.00	2174.88
9999	Sundries including testing of samples	L.S.	71.37	1.73	123.47
	TOTAL				4316.29
	Add 1 % Water charges				43.16
	TOTAL				4359.45
	Add 15 % Contractor's profit and overheads				653.92
	Cost of 100 metre				5013.37
	Say				5013.35

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
1301	Bleaching powder	quintal	0.003	1750.00	5.25
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.49	368.00	180.32
9999	Sundries including testing of samples	L.S.	4.42	1.73	7.65
	TOTAL				246.79
	Add 1 % Water charges				2.47
	TOTAL				249.26
	Add 15 % Contractor's profit and overheads				37.39
	Cost of 100 metre				286.65
	Say				286.65

18.81.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
1301	Bleaching powder	quintal	0.004	1750.00	7.00
	LABOUR				
0116	Fitter (grade 1)	day	0.16	487.00	77.92
0114	Beldar	day	0.57	368.00	209.76

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries including testing of samples	L.S.	4.42	1.73	7.65
	TOTAL				302.33
	Add 1 % Water charges				3.02
	TOTAL				305.35
	Add 15 % Contractor's profit and overheads				45.80
	Cost of 100 metre				351.15
	Say				351.15

18.81.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.006	1750.00	10.50
	LABOUR				
0116	Fitter (grade 1)	day	0.22	487.00	107.14
0114	Beldar	day	0.66	368.00	242.88
9999	Sundries including testing of samples	L.S.	5.46	1.73	9.45
	TOTAL				369.97
	Add 1 % Water charges				3.70
	TOTAL				373.67
	Add 15 % Contractor's profit and overheads				56.05
	Cost of 100 metre				429.72
	Say				429.70

18.81.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.009	1750.00	15.75
	LABOUR				
0116	Fitter (grade 1)	day	0.27	487.00	131.49
0114	Beldar	day	0.74	368.00	272.32
9999	Sundries including testing of samples	L.S.	7.15	1.73	12.37
	TOTAL				431.93
	Add 1 % Water charges				4.32
	TOTAL				436.25
	Add 15 % Contractor's profit and overheads				65.44
	Cost of 100 metre				501.69
	Say				501.70

18.81.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.016	1750.00	28.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	0.58	487.00	282.46
0114	Beldar	day	0.90	368.00	331.20
9999	Sundries including testing of samples	L.S.	9.88	1.73	17.09
	TOTAL				658.75
	Add 1 % Water charges				6.59
	TOTAL				665.34
	Add 15 % Contractor's profit and overheads				99.80
	Cost of 100 metre				765.14
	Say				765.15

18.81.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.025	1750.00	43.75
	LABOUR				
0116	Fitter (grade 1)	day	0.60	487.00	292.20
0114	Beldar	day	1.10	368.00	404.80
9999	Sundries including testing of samples	L.S.	10.79	1.73	18.67
	TOTAL				759.42
	Add 1 % Water charges				7.59
	TOTAL				767.01
	Add 15 % Contractor's profit and overheads				115.05
	Cost of 100 metre				882.06
	Say				882.05

18.81.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.035	1750.00	61.25
	LABOUR				
0116	Fitter (grade 1)	day	0.60	487.00	292.20
0114	Beldar	day	1.30	368.00	478.40
9999	Sundries including testing of samples	L.S.	13.52	1.73	23.39
	TOTAL				855.24
	Add 1 % Water charges				8.55
	TOTAL				863.79
	Add 15 % Contractor's profit and overheads				129.57
	Cost of 100 metre				993.36
	Say				993.35

18.81.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
1301	MATERIAL Bleaching powder	quintal	0.048	1750.00	84.00
	LABOUR				
0116	Fitter (grade 1)	day	0.70	487.00	340.90
0114	Beldar	day	1.50	368.00	552.00
9999	Sundries including testing of samples	L.S.	16.12	1.73	27.89
	TOTAL				1004.79
	Add 1 % Water charges				10.05
	TOTAL				1014.84
	Add 15 % Contractor's profit and overheads				152.23
	Cost of 100 metre				1167.07
	Say				1167.05

18.81.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
1301	MATERIAL Bleaching powder	quintal	0.063	1750.00	110.25
	LABOUR				
0116	Fitter (grade 1)	day	0.80	487.00	389.60
0114	Beldar	day	1.70	368.00	625.60
9999	Sundries including testing of samples	L.S.	17.94	1.73	31.04
	TOTAL				1156.49
	Add 1 % Water charges				11.56
	TOTAL				1168.05
	Add 15 % Contractor's profit and overheads				175.21
	Cost of 100 metre				1343.26
	Say				1343.25

18.81.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
1301	MATERIAL Bleaching powder	quintal	0.08	1750.00	140.00
	LABOUR				
0116	Fitter (grade 1)	day	0.90	487.00	438.30
0114	Beldar	day	1.90	368.00	699.20
9999	Sundries including testing of samples	L.S.	20.67	1.73	35.76
	TOTAL				1313.26
	Add 1 % Water charges				13.13
	TOTAL				1326.39
	Add 15 % Contractor's profit and overheads				198.96
	Cost of 100 metre				1525.35
	Say				1525.35

18.81.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
1301	MATERIAL Bleaching powder	quintal	0.098	1750.00	171.50
	LABOUR				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0114	Beldar	day	2.10	368.00	772.80
9999	Sundries including testing of samples	L.S.	23.27	1.73	40.26
	TOTAL				1471.56
	Add 1 % Water charges				14.72
	TOTAL				1486.28
	Add 15 % Contractor's profit and overheads				222.94
	Cost of 100 metre				1709.22
	Say				1709.20

18.81.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
1301	MATERIAL Bleaching powder	quintal	0.141	1750.00	246.75
	LABOUR				
0116	Fitter (grade 1)	day	1.20	487.00	584.40
0114	Beldar	day	2.50	368.00	920.00
9999	Sundries including testing of samples	L.S.	26.00	1.73	44.98
	TOTAL				1796.13
	Add 1 % Water charges				17.96
	TOTAL				1814.09
	Add 15 % Contractor's profit and overheads				272.11
	Cost of 100 metre				2086.20
	Say				2086.20

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks, including stacking of pipes at site lead up to 50 metre:**18.82.1 80 mm diameter C.I. pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth $1 \times 40.26 \times 55 \times 0.75 \text{ m} = 16.61 \text{ cum}$ Deduct for pipe $1 \times 40.26 \times 3.14 / 4 \times (0.098)^2 = (-) 0.30 \text{ cum}$ Total= 16.31 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	16.31	166.40	2713.98(A)
2.25	(Rate as per item No.2.25 of SH Earth work) Breaking lead caulked joints, blocks and stacking	cum	16.31	125.75	2050.98(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0761	MATERIAL Fuel wood	quintal	0.373	500.00	186.50
0771	Kerosene oil	litre	0.379	45.00	17.06
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	0.50	448.00	224.00
0114	Beldar	day	4.00	368.00	1472.00
9988	Sundries and carriage	L.S.	53.82	1.73	93.11
	TOTAL				6757.63
	Add 1 % Water charges on all except (A) i.e. on (6757.63 - 4764.96) = 1992.67				19.93
	TOTAL				6777.56
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6777.56 - 4764.96) = 2012.60				301.89
	Cost of 40.26 metre				7079.45
	Cost of one metre				175.84
	Say				175.85

18.82.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m=16.61 cum Deduct for pipe 1x40.26x3.14/4x(0.118) ² =(-) 0.44 cum Total= 16.17 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	16.17	166.40	2690.69(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	16.17	125.75	2033.38(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	0.466	500.00	233.00
0771	Kerosene oil	litre	0.379	45.00	17.06
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	0.63	448.00	282.24
0114	Beldar	day	4.50	368.00	1656.00
9988	Sundries and carriage	L.S.	53.82	1.73	93.11
	TOTAL				7005.48
	Add 1 % Water charges on all except (A) i.e. on (7005.48 - 4724.07) = 2281.41				22.81
	TOTAL				7028.29
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (7028.29 - 4724.07) = 2304.22				345.63
	Cost of 40.26 metre				7373.92
	Cost of one metre				183.15
	Say				183.15

18.82.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m=16.61 cum Deduct for pipe 1x40.26x3.14/4x(0.144) ² =(-) 0.65 cum Total= 15.96 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	15.96	166.40	2655.74(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	15.96	125.75	2006.97(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	0.559	500.00	279.50
0771	Kerosene oil	litre	0.568	45.00	25.56
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	0.75	448.00	336.00
0114	Beldar	day	5.00	368.00	1840.00
9988	Sundries and carriage	L.S.	53.82	1.73	93.11
	TOTAL				7236.88
	Add 1 % Water charges on all except (A) i.e. on (7236.88 - 4662.71) = 2574.17				25.74
	TOTAL				7262.62
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (7262.62 - 4662.71) = 2599.91				389.99
	Cost of 40.26 metre				7652.61
	Cost of one metre				190.07
	Say				190.05

18.82.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m=16.61 cum Deduct for pipe 1x40.26x3.14/4x(0.17) ² =(-) 0.91 cum Total= 15.70 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	15.70	166.40	2612.48(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	15.70	125.75	1974.28(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	0.653	500.00	326.50
0771	Kerosene oil	litre	0.568	45.00	25.56
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	0.88	448.00	394.24
0114	Beldar	day	5.50	368.00	2024.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Sundries and carriage	L.S.	67.21	1.73	116.27
	TOTAL				7473.33
	Add 1 % Water charges on all except (A) i.e. on (7473.33 - 4586.76) = 2886.57				28.87
	TOTAL				7502.20
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (7502.20 - 4586.76) = 2915.44				437.32
	Cost of 40.26 metre				7939.52
	Cost of one metre				197.20
	Say				197.20

18.82.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x60x0.75 m=18.12 cum Deduct for pipe 1x40.26x3.14/4x(0.222) ² =(-) 1.56 cum Total= 16.56 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	16.56	166.40	2755.58(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	16.56	125.75	2082.42(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	0.84	500.00	420.00
0771	Kerosene oil	litre	0.7576	45.00	34.09
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	1.10	448.00	492.80
0114	Beldar	day	6.50	368.00	2392.00
9988	Sundries and carriage	L.S.	67.21	1.73	116.27
	TOTAL				8293.16
	Add 1 % Water charges on all except (A) i.e. on (8293.16 - 4838.00) = 3455.16				34.55
	TOTAL				8327.71
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8327.71 - 4838.00) = 3489.71				523.46
	Cost of 40.26 metre				8851.17
	Cost of one metre				219.85
	Say				219.85

18.82.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x.65x0.75 m=19.63 cum Deduct for pipe 1x40.26x3.14/4x(0.274) ² =(-) 2.37 cum Total= 17.26 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	17.26	166.40	2872.06(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	17.26	125.75	2170.45(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	1.026	500.00	513.00
0771	Kerosene oil	litre	1.1365	45.00	51.14
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	1.30	448.00	582.40
0114	Beldar	day	7.50	368.00	2760.00
9988	Sundries and carriage	L.S.	80.73	1.73	139.66
	TOTAL				9088.71
	Add 1 % Water charges on all except (A) i.e. on (9088.71 - 5042.51) = 4046.20				40.46
	TOTAL				9129.17
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9129.17 - 5042.51) = 4086.66				613.00
	Cost of 40.26 metre				9742.17
	Cost of one metre				241.98
	Say				242.00

18.82.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x.70x0.75 m=21.14 cum Deduct for pipe 1x40.26x3.14/4x(0.326) ² =(-) 3.36 cum Total= 17.79 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	17.79	166.40	2960.26(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	17.79	125.75	2237.09(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	1.12	500.00	560.00
0771	Kerosene oil	litre	1.515	45.00	68.18
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	1.50	448.00	672.00
0114	Beldar	day	8.50	368.00	3128.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Sundries and carriage	L.S.	94.12	1.73	162.83
	TOTAL				9788.36
	Add 1 % Water charges on all except (A) i.e. on (9788.36 - 5197.35) = 4591.01				45.91
	TOTAL				9834.27
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9834.27 - 5197.35) = 4636.92				695.54
	Cost of 40.26 metre				10529.81
	Cost of one metre				261.54
	Say				261.55

18.82.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x.75x0.75 m=22.65 cum Deduct for pipe 1x40.26x3.14/4x(0.378) ² =(-) 4.51 cum Total= 18.14 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	18.14	166.40	3018.50(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	18.14	125.75	2281.11(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	1.213	500.00	606.50
0771	Kerosene oil	litre	1.515	45.00	68.18
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	1.75	448.00	784.00
0114	Beldar	day	9.50	368.00	3496.00
9988	Sundries and carriage	L.S.	107.64	1.73	186.22
	TOTAL				10440.51
	Add 1 % Water charges on all except (A) i.e. on (10440.51 - 5299.61) = 5140.90				51.41
	TOTAL				10491.92
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (10491.92 - 5299.61) = 5192.31				778.85
	Cost of 40.26 metre				11270.77
	Cost of one metre				279.94
	Say				279.95

18.82.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x.80x0.75 m=24.16 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.8.1	Deduct for pipe $1 \times 40.26 \times 3.14 / 4 \times (0.429)^2$ =(-) 5.93 cum Total= 18.23 cum (Rate as per item no. 2.8.1 of SH: Earth work)	cum	18.23	166.40	3033.47(A)
2.25	(Rate as per item No.2.25 of SH Earth work) Breaking lead caulked joints, blocks and stacking	cum	18.23	125.75	2292.42(A)
	MATERIAL				
0761	Fuel wood	quintal	1.306	500.00	653.00
0771	Kerosene oil	litre	1.894	45.00	85.23
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	2.00	448.00	896.00
0114	Beldar	day	10.50	368.00	3864.00
9988	Sundries and carriage	L.S.	121.03	1.73	209.38
	TOTAL				11033.50
	Add 1 % Water charges on all except (A) i.e. on (11033.50 - 5325.89) = 5707.61				57.08
	TOTAL				11090.58
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11090.58 - 5325.89) = 5764.69				864.70
	Cost of 40.26 metre				11955.28
	Cost of one metre				296.95
	Say				296.95

18.82.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.8.1	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth $1 \times 40.26 \times 0.85 \times 0.75$ m=25.67 cum Deduct for pipe $1 \times 40.26 \times 3.14 / 4 \times (0.48)^2$ =(-) 7.29 cum Total= 18.38 cum (Rate as per item no. 2.8.1 of SH: Earth work)	cum	18.38	166.40	3058.43(A)
2.25	(Rate as per item No.2.25 of SH Earth work) Breaking lead caulked joints, blocks and stacking	cum	18.38	125.75	2311.29(A)
	MATERIAL				
0761	Fuel wood	quintal	1.40	500.00	700.00
0771	Kerosene oil	litre	2.273	45.00	102.29
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	2.25	448.00	1008.00
0114	Beldar	day	11.50	368.00	4232.00
9988	Sundries and carriage	L.S.	134.55	1.73	232.77
	TOTAL				11644.78
	Add 1 % Water charges on all except (A) i.e. on (11644.78 - 5369.72) = 6275.06				62.75
	TOTAL				11707.53
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11707.53 - 5369.72) = 6337.81				950.67
	Cost of 40.26 metre				12658.20
	Cost of one metre				314.41
	Say				314.40

18.82.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x.90x0.75 m=27.18 cum Deduct for pipe 1x40.26x3.14/4x(0.532) ² =(-) 8.94 cum Total= 18.24 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	18.24	166.40	3035.14(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	18.24	125.75	2293.68(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	1.492	500.00	746.00
0771	Kerosene oil	litre	2.652	45.00	119.34
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	2.50	448.00	1120.00
0114	Beldar	day	12.50	368.00	4600.00
9988	Sundries and carriage	L.S.	147.94	1.73	255.94
	TOTAL				12170.10
	Add 1 % Water charges on all except (A) i.e. on (12170.10 - 5328.82) = 6841.28				68.41
	TOTAL				12238.51
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (12238.51 - 5328.82) = 6909.69				1036.45
	Cost of 40.26 metre				13274.96
	Cost of one metre				329.73
	Say				329.75

18.82.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x1.00x0.75 m=30.20 cum Deduct for pipe 1x40.26x3.14/4x(0.635) ² =(-) 12.76 cum Total= 17.44 cum				
2.8.1	(Rate as per item no. 2.8.1 of SH: Earth work)	cum	17.44	166.40	2902.02(A)
2.25	(Rate as per item No.2.25 of SH Earth work)	cum	17.44	125.75	2193.08(A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIAL				
0761	Fuel wood	quintal	1.68	500.00	840.00
0771	Kerosene oil	litre	3.41	45.00	153.45
	LABOUR				
0117	Assistant Fitter or 2nd class Fitter	day	3.00	448.00	1344.00
0114	Beldar	day	14.50	368.00	5336.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Sundries and carriage	L.S.	174.85	1.73	302.49
	TOTAL				13071.04
	Add 1 % Water charges on all except (A) i.e. on (13071.04 - 5095.10) = 7975.94				79.76
	TOTAL				13150.80
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (13150.80 - 5095.10) = 8055.70				1208.36
	Cost of 40.26 metre				14359.16
	Cost of one metre				356.66
	Say				356.65

18.83 Labour for cutting C.I. pipe with steel saw.

18.83.1 80 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.06	487.00	29.22
0114	Beldar	day	0.06	368.00	22.08
9999	Sundries	L.S.	1.82	1.73	3.15
	TOTAL				54.45
	Add 1 % Water charges				0.54
	TOTAL				54.99
	Add 15 % Contractor's profit and overheads				8.25
	Cost of each cut				63.24
	Say				63.25

18.83.2 100 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.08	487.00	38.96
0114	Beldar	day	0.08	368.00	29.44
9999	Sundries	L.S.	2.73	1.73	4.72
	TOTAL				73.12
	Add 1 % Water charges				0.73
	TOTAL				73.85
	Add 15 % Contractor's profit and overheads				11.08
	Cost of each cut				84.93
	Say				84.95

18.83.3 125 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.11	487.00	53.57
0114	Beldar	day	0.11	368.00	40.48

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				101.70
	Add 1 % Water charges				1.02
	TOTAL				102.72
	Add 15 % Contractor's profit and overheads				15.41
	Cost of each cut				118.13
	Say				118.15

18.83.4 150 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.15	487.00	73.05
0114	Beldar	day	0.15	368.00	55.20
9999	Sundries	L.S.	5.33	1.73	9.22
	TOTAL				137.47
	Add 1 % Water charges				1.37
	TOTAL				138.84
	Add 15 % Contractor's profit and overheads				20.83
	Cost of each cut				159.67
	Say				159.65

18.83.5 200 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.20	487.00	97.40
0114	Beldar	day	0.20	368.00	73.60
9999	Sundries	L.S.	7.15	1.73	12.37
	TOTAL				183.37
	Add 1 % Water charges				1.83
	TOTAL				185.20
	Add 15 % Contractor's profit and overheads				27.78
	Cost of each cut				212.98
	Say				213.00

18.83.6 250 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.25	487.00	121.75
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				227.69
	Add 1 % Water charges				2.28
	TOTAL				229.97
	Add 15 % Contractor's profit and overheads				34.50
	Cost of each cut				264.47
	Say				264.45

18.83.7 300 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.30	487.00	146.10
0114	Beldar	day	0.30	368.00	110.40
9999	Sundries	L.S.	9.88	1.73	17.09
	TOTAL				273.59
	Add 1 % Water charges				2.74
	TOTAL				276.33
	Add 15 % Contractor's profit and overheads				41.45
	Cost of each cut				317.78
	Say				317.80

18.83.8 350 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.35	487.00	170.45
0114	Beldar	day	0.35	368.00	128.80
9999	Sundries	L.S.	10.79	1.73	18.67
	TOTAL				317.92
	Add 1 % Water charges				3.18
	TOTAL				321.10
	Add 15 % Contractor's profit and overheads				48.17
	Cost of each cut				369.27
	Say				369.25

18.83.9 400 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.40	487.00	194.80
0114	Beldar	day	0.40	368.00	147.20
9999	Sundries	L.S.	12.48	1.73	21.59
	TOTAL				363.59
	Add 1 % Water charges				3.64
	TOTAL				367.23
	Add 15 % Contractor's profit and overheads				55.08
	Cost of each cut				422.31
	Say				422.30

18.83.10 450 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.45	487.00	219.15
0114	Beldar	day	0.45	368.00	165.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				408.14
	Add 1 % Water charges				4.08
	TOTAL				412.22
	Add 15 % Contractor's profit and overheads				61.83
	Cost of each cut				474.05
	Say				474.05

18.83.11 500 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	15.21	1.73	26.31
	TOTAL				453.81
	Add 1 % Water charges				4.54
	TOTAL				458.35
	Add 15 % Contractor's profit and overheads				68.75
	Cost of each cut				527.10
	Say				527.10

18.83.12 600 mm diameter C.I. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter (grade 1)	day	0.60	487.00	292.20
0114	Beldar	day	0.60	368.00	220.80
9999	Sundries	L.S.	16.12	1.73	27.89
	TOTAL				540.89
	Add 1 % Water charges				5.41
	TOTAL				546.30
	Add 15 % Contractor's profit and overheads				81.95
	Cost of each cut				628.25
	Say				628.25

18.84 Providing & fixing chrome plated brass battery based infrared sensor operated pillar cock, having foam flow technology.

18.84.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no.				
	MATERIAL				
3327	15 mm Battery Based Sensor Pillar Cock	each	1.00	5800.00	5800.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9988	Carriage of materials and fixing charges	L.S.	8.06	1.73	13.94
	TOTAL				5813.94
	Add 1 % Water charges				58.14
	TOTAL				5872.08
	Add 15 % Contractor's profit and overheads				880.81
	Cost of one no.				6752.89
	Say				6752.90

18.85 Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00 m spacing including cutting and making good the walls including testing of joints complete as per direction of Engineer-in-charge. (The pipe length inserted in the fitting shall not be measured for payment)

Internal work - Exposed on wall

18.85.1 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8779	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 15.88 mm outer dia	metre	10.00	142.00	1420.00(X)
2272	Carriage of Stainless Steel pipes below 100 mm dia	tonne	0.00301	92.24	0.28
	Add 3% for pipe inserted into fitting and wastage etc. on X				42.60
	3 * X / 100				
9999	Cement, sand and grit	L.S.	2.73	1.73	4.72
	Add 2% for special T&P and sundries etc. on X				28.40
	2 * X / 100				
	LABOUR				
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				2195.27
	Add 1 % Water charges				21.95
	TOTAL				2217.22
	Add 15 % Contractor's profit and overheads				332.58
	Cost of 10 metre				2549.80
	Cost of 1 metre				254.98
	Say				255.00

18.85.2 22.22 mm outer dia Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8780	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 22.22 mm outer dia	metre	10.00	254.00	2540.00(X)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2272	Carriage of Stainless Steel pipes below 100 mm dia Add 3% for pipe inserted into fitting and wastage etc. on X 3 * X / 100	tonne	0.00529	92.24	0.49
9999	Cement, sand and grit Add 2% for special T&P and sundries etc. on X 2 * X / 100	L.S.	2.73	1.73	4.72
	LABOUR				50.80
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				3371.48
	Add 1 % Water charges				33.71
	TOTAL				3405.19
	Add 15 % Contractor's profit and overheads				510.78
	Cost of 10 metre				3915.97
	Cost of 1 metre				391.59
	Say				391.60

18.85.3 28.58 mm outer dia Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8781	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 28.58 mm outer dia	metre	10.00	324.00	3240.00(X)
2272	Carriage of Stainless Steel pipes below 100 mm dia Add 3% for pipe inserted into fitting and wastage etc. on X 3 * X / 100	tonne	0.00687	92.24	0.63
9999	Cement, sand and grit Add 2% for special T&P and sundries etc. on X 2 * X / 100	L.S.	4.16	1.73	7.20
	LABOUR				64.80
0116	Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				4109.10
	Add 1 % Water charges				41.09
	TOTAL				4150.19
	Add 15 % Contractor's profit and overheads				622.53
	Cost of 10 metre				4772.72
	Cost of 1 metre				477.27
	Say				477.25

18.85.4 34.00 mm outer dia Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8782	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 34.00 mm outer dia	metre	10.00	462.00	4620.00(X)
2272	Carriage of Stainless Steel pipes below 100 mm dia Add 3% for pipe inserted into fitting and wastage etc. on X 3 * X / 100	tonne	0.0098	92.24	0.90
9999	Cement, sand and grit Add 2% for special T&P and sundries etc. on X 2 * X / 100	L.S.	4.16	1.73	7.20
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				5558.37
	Add 1 % Water charges				55.58
	TOTAL				5613.95
	Add 15 % Contractor's profit and overheads				842.09
	Cost of 10 metre				6456.04
	Cost of 1 metre				645.60
	Say				645.60

18.85.5 42.70 mm outer dia Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8783	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 42.70 mm outer dia	metre	10.00	479.00	4790.00(X)
2272	Carriage of Stainless Steel pipes below 100 mm dia Add 3% for pipe inserted into fitting and wastage etc. on X 3 * X / 100	tonne	0.0124	92.24	1.14
9999	Cement, sand and grit Add 2% for special T&P and sundries etc. on X 2 * X / 100	L.S.	5.33	1.73	9.22
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				5739.13
	Add 1 % Water charges				57.39
	TOTAL				5796.52
	Add 15 % Contractor's profit and overheads				869.48
	Cost of 10 metre				6666.00
	Cost of 1 metre				666.60
	Say				666.60

18.85.6 48.60 mm outer dia Pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8701	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 48.60 mm outer dia	metre	10.00	584.00	5840.00(X)
2272	Carriage of Stainless Steel pipes below 100 mm dia Add 3% for pipe inserted into fitting and wastage etc. on X 3 * X / 100	tonne	0.0142	92.24	1.31
9999	Cement, sand and grit Add 2% for special T&P and sundries etc. on X 2 * X / 100	L.S.	5.33	1.73	9.22
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				6841.80
	Add 1 % Water charges				68.42
	TOTAL				6910.22
	Add 15 % Contractor's profit and overheads				1036.53
	Cost of 10 metre				7946.75
	Cost of 1 metre				794.67
	Say				794.65

18.86 Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00m spacing and also including cutting of chases and making good the walls including testing of joints complete as per direction of Engineer -in-charge. (The pipe length inserted in the fitting shall not be measured for payment)

Internal work - Concealed Pipe

18.86.1 15.88 mm outer dia .Pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8779	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 15.88 mm outer dia Add 3% for pipe inserted into fitting and wastage etc. on X 3 * X / 100	metre	10.00	142.00	1420.00(X)
2272	Carriage of Stainless Steel pipes below 100 mm dia Making chases upto 7.5x7.5 cm.in walls and making good the same	tonne	0.00301	92.24	0.28
18.78	Rate as per Item No.18.78 of SH:WATER SUPPLY Add 2% for special T&P and sundries etc. on X 2 * X / 100	metre	10.00	93.85	938.50(A)
					28.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				3129.05
	Add 1 % Water charges on all except (A) i.e. on (3129.05 - 938.50) = 2190.55				21.91
	TOTAL				3150.96
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3150.96 - 938.50) = 2212.46				331.87
	Cost of 10 metre				3482.83
	Cost of 1 metre				348.28
	Say				348.30

18.86.2 22.22 mm Outer dia pipes

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8780	Details of cost for 10 metre MATERIAL SS pipe 304 grades with press fit technology as per JIS 3448 standard 22.22 mm outer dia Add 3% for pipe inserted into fitting and wastage etc. on X $3 * X / 100$	metre	10.00	254.00	2540.00(X) 76.20
2272	Carriage of Stainless Steel pipes below 100 mm dia Making chases upto 7.5x7.5 cm.in walls and making good the same	tonne	0.00529	92.24	0.49
18.78	Rate as per Item No.18.78 of SH: WATER SUPPLY Add 2% for special T&P and sundries etc. on X $2 * X / 100$	metre	10.00	93.85	938.50(A) 50.80
0116	LABOUR Fitter (grade 1)	day	0.33	487.00	160.71
0117	Assistant Fitter or 2nd class Fitter	day	0.66	448.00	295.68
0114	Beldar	day	0.66	368.00	242.88
	TOTAL				4305.26
	Add 1 % Water charges on all except (A) i.e. on (4305.26 - 938.50) = 3366.76				33.67
	TOTAL				4338.93
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4338.93 - 938.50) = 3400.43				510.06
	Cost of 10 metre				4848.99
	Cost of 1 metre				484.89
	Say				484.90

18.87 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Coupling/Socket

18.87.1 For 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8702	Details of cost for 1 no. MATERIAL Coupling/Socket fittings for 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	42.00	42.00 42.00 0.42 42.42 6.36 48.78 48.80

18.87.2 For 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8786	Details of cost for 1 no. MATERIAL Coupling/Socket fittings for 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	63.00	63.00 63.00 0.63 63.63 9.54 73.17 73.15

18.87.3 For 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8787	Details of cost for 1 no. MATERIAL Coupling/Socket fittings for 28.58 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	89.00	89.00 89.00 0.89 89.89 13.48 103.37 103.35

18.87.4 For 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8788	Details of cost for 1 no. MATERIAL Coupling/Socket fittings for 34.00 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	131.00	131.00 131.00 1.31 132.31 19.85 152.16 152.15

18.87.5 For 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8789	Details of cost for 1 no. MATERIAL Coupling/Socket fittings for 42.70 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	158.00	158.00 158.00 1.58 159.58 23.94 183.52 183.50

18.87.6 For 48.60 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8790	Details of cost for 1 no. MATERIAL Coupling/Socket fittings for 48.60 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	180.00	180.00 180.00 1.80 181.80 27.27 209.07 209.05

18.88 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Reducer

18.88.1 For 22.22 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8791	Details of cost for 1 no. MATERIAL Reducer for 22.22 mm X 15.88 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	103.00	103.00 103.00 1.03 104.03 15.60 119.63 119.65

18.88.2 For 28.58 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8792	Details of cost for 1 no. MATERIAL Reducer for 28.58 mm X 15.88 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	141.00	141.00 141.00 1.41 142.41 21.36 163.77 163.75

18.88.3 For 28.58 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8793	Details of cost for 1 no. MATERIAL Reducer for 28.58 mm X 22.22 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	145.00	145.00 145.00 1.45 146.45 21.97 168.42 168.40

18.88.4 For 34.00 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8794	Details of cost for 1 no. MATERIAL Reducer for 34.00 mm X 15.88 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	184.00	184.00 184.00 1.84 185.84 27.88 213.72 213.70

18.88.5 For 34.00 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8795	Details of cost for 1 no. MATERIAL Reducer for 34.00 mm X 22.22 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	187.00	187.00 187.00 1.87 188.87 28.33 217.20 217.20

18.88.6 For 34.00 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8796	Details of cost for 1 no. MATERIAL Reducer for 34.00 mm X 28.58 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	190.00	190.00 190.00 1.90 191.90 28.79 220.69 220.70

18.88.7 For 42.70 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8797	Details of cost for 1 no. MATERIAL Reducer for 42.70 mm X 15.88 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	359.00	359.00 359.00 3.59 362.59 54.39 416.98 417.00

18.88.8 For 42.70 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8798	Details of cost for 1 no. MATERIAL Reducer for 42.70 mm X 22.22 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	362.00	362.00 362.00 3.62 365.62 54.84 420.46 420.45

18.88.9 For 42.70 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8799	Details of cost for 1 no. MATERIAL Reducer for 42.70 mm X 28.58 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	362.00	362.00 362.00 3.62 365.62 54.84 420.46 420.45

18.88.10 For 42.70 mm x 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8800	Details of cost for 1 no. MATERIAL Reducer for 42.70 mm X 34.00 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	387.00	387.00 387.00 3.87 390.87 58.63 449.50 449.50

18.88.11 For 48.60 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8801	Details of cost for 1 no. MATERIAL Reducer for 48.60 mm X 15.88 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	410.00	410.00 410.00 4.10 414.10 62.12 476.22 476.20

18.88.12 For 48.60 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8802	Details of cost for 1 no. MATERIAL Reducer for 48.60 mm X 22.22 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	410.00	410.00 410.00 4.10 414.10 62.12 476.22 476.20

18.88.13 For 48.60 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8803	Details of cost for 1 no. MATERIAL Reducer for 48.60 mm X 28.58 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	410.00	410.00 410.00 4.10 414.10 62.12 476.22 476.20

18.88.14 For 48.60 mm x 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8804	Details of cost for 1 no. MATERIAL Reducer for 48.60 mm X 34.00 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	410.00	410.00 410.00 4.10 414.10 62.12 476.22 476.20

18.88.15 For 48.60 mm x 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8805	Details of cost for 1 no. MATERIAL Reducer for 48.60 mm X 42.70 mm outer Dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	410.00	410.00 410.00 4.10 414.10 62.12 476.22 476.20

18.89 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Slip Coupling/ Socket

18.89.1 For 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8806	Slip Coupling / Socket 15.88 mm outer dia SS pipe	each	1.00	47.00	47.00
	TOTAL				47.00
	Add 1 % Water charges				0.47
	TOTAL				47.47
	Add 15 % Contractor's profit and overheads				7.12
	Cost of 1 no.				54.59
	Say				54.60

18.89.2 For 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8807	Details of cost for 1 no. MATERIAL Slip Coupling / Socket 22.22 mm outer dia SS pipe	each	1.00	63.00	63.00
	TOTAL				63.00
	Add 1 % Water charges				0.63
	TOTAL				63.63
	Add 15 % Contractor's profit and overheads				9.54
	Cost of 1 no.				73.17
	Say				73.15

18.89.3 For 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8808	Details of cost for 1 no. MATERIAL Slip Coupling / Socket 28.58 mm outer dia SS pipe	each	1.00	89.00	89.00
	TOTAL				89.00
	Add 1 % Water charges				0.89
	TOTAL				89.89
	Add 15 % Contractor's profit and overheads				13.48
	Cost of 1 no.				103.37
	Say				103.35

18.89.4 For 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8809	Details of cost for 1 no. MATERIAL Slip Coupling / Socket 34.00 mm outer dia SS pipe	each	1.00	131.00	131.00
	TOTAL				131.00
	Add 1 % Water charges				1.31
	TOTAL				132.31
	Add 15 % Contractor's profit and overheads				19.85
	Cost of 1 no.				152.16
	Say				152.15

18.89.5 For 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8810	Details of cost for 1 no. MATERIAL Slip Coupling / Socket 42.70 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	158.00	158.00 158.00 1.58 159.58 23.94 183.52 183.50

18.89.6 For 48.60 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8811	Details of cost for 1 no. MATERIAL Slip Coupling / Socket 48.60 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	170.00	170.00 170.00 1.70 171.70 25.76 197.46 197.45

18.90 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.**Elbow 90°****18.90.1 For 15.88mm outer dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8812	Details of cost for 1 no. MATERIAL Elbow 90° for 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	58.00	58.00 58.00 0.58 58.58 8.79 67.37 67.35

18.90.2 For 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8813	Details of cost for 1 no. MATERIAL Elbow 90° for 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	63.00	63.00 63.00 0.63 63.63 9.54 73.17 73.15

18.90.3 For 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8814	Details of cost for 1 no. MATERIAL Elbow 90° for 28.58 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	96.00	96.00 96.00 0.96 96.96 14.54 111.50 111.50

18.90.4 For 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8815	Details of cost for 1 no. MATERIAL Elbow 90° for 34.00 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	109.00	109.00 109.00 1.09 110.09 16.51 126.60 126.60

18.90.5 For 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8816	Details of cost for 1 no. MATERIAL Elbow 90° for 42.70 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	116.00	116.00 116.00 1.16 117.16 17.57 134.73 134.75

18.90.6 For 48.60 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8817	Details of cost for 1 no. MATERIAL Elbow 90° for 48.60 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	150.00	150.00 150.00 1.50 151.50 22.73 174.23 174.25

18.91 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Reducing Elbow 90°**18.91.1 For 22.22 mm x 15.88 mm outer dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8818	Details of cost for 1 no. MATERIAL Reducing Elbow 90° for 22.22 mm X 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	148.00	148.00 148.00 1.48 149.48 22.42 171.90 171.90

18.91.2 For 28.58 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8819	Details of cost for 1 no. MATERIAL Reducing Elbow 90° for 28.58 mm X 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	191.00	191.00 191.00 1.91 192.91 28.94 221.85 221.85

18.91.3 For 28.58 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8820	Details of cost for 1 no. MATERIAL Reducing Elbow 90° for 28.58 mm X 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	221.00	221.00 221.00 2.21 223.21 33.48 256.69 256.70

18.91.4 For 34.00 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8821	Details of cost for 1 no. MATERIAL Reducing Elbow 90° for 34.00 mm X 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	287.00	287.00 287.00 2.87 289.87 43.48 333.35 333.35

18.91.5 For 34.00 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8822	Details of cost for 1 no. MATERIAL Reducing Elbow 90° for 34.00 mm X 28.58 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	396.00	396.00 396.00 3.96 399.96 59.99 459.95 459.95

18.91.6 For 42.70 mm x 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8823	Reducing Elbow 90° for 42.70 mm X 34.00 mm outer dia SS pipe	each	1.00	179.00	179.00
	TOTAL				179.00
	Add 1 % Water charges				1.79
	TOTAL				180.79
	Add 15 % Contractor's profit and overheads				27.12
	Cost of 1 no.				207.91
	Say				207.90

18.92 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Equal Tee

18.92.1 For 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8824	Details of cost for 1 no. MATERIAL Equal Tee for 15.88 mm outer dia SS pipe	each	1.00	159.00	159.00
	TOTAL				159.00
	Add 1 % Water charges				1.59
	TOTAL				160.59
	Add 15 % Contractor's profit and overheads				24.09
	Cost of 1 no.				184.68
	Say				184.70

18.92.2 For 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8825	Details of cost for 1 no. MATERIAL Equal Tee for 22.22 mm outer dia SS pipe	each	1.00	231.00	231.00
	TOTAL				231.00
	Add 1 % Water charges				2.31
	TOTAL				233.31
	Add 15 % Contractor's profit and overheads				35.00
	Cost of 1 no.				268.31
	Say				268.30

18.92.3 For 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8826	Equal Tee for 28.58 mm outer dia SS pipe	each	1.00	273.00	273.00
	TOTAL				273.00
	Add 1 % Water charges				2.73
	TOTAL				275.73
	Add 15 % Contractor's profit and overheads				41.36
	Cost of 1 no.				317.09
	Say				317.10

18.92.4 For 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8827	Details of cost for 1 no.				
	MATERIAL				
	Equal Tee for 34.00 mm outer dia SS pipe	each	1.00	437.00	437.00
	TOTAL				437.00
	Add 1 % Water charges				4.37
	TOTAL				441.37
	Add 15 % Contractor's profit and overheads				66.21
	Cost of 1 no.				507.58
	Say				507.60

18.92.5 For 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8828	Details of cost for 1 no.				
	MATERIAL				
	Equal Tee for 42.70 mm outer dia SS pipe	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.92.6 For 48.60 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8829	Details of cost for 1 no.				
	MATERIAL				
	Equal Tee for 48.60 mm outer dia SS pipe	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.93 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Reducing Tee

18.93.1 For 22.22 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8830	Details of cost for 1 no. MATERIAL Reducing Tee for 22.22 mm X 15.88 mm outer dia SS TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	179.00	179.00 179.00 1.79 180.79 27.12 207.91 207.90

18.93.2 For 28.58 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8831	Details of cost for 1 no. MATERIAL Reducing Tee for 28.58 mm X 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	273.00	273.00 273.00 2.73 275.73 41.36 317.09 317.10

18.93.3 For 28.58 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8832	Details of cost for 1 no. MATERIAL Reducing Tee for 28.58 mm X 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	273.00	273.00 273.00 2.73 275.73 41.36 317.09 317.10

18.93.4 For 34.00 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8833	Details of cost for 1 no. MATERIAL Reducing Tee for 34.00 mm X 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.93.5 For 34.00 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8834	Details of cost for 1 no. MATERIAL Reducing Tee for 34.00 mm X 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.93.6 For 34.00 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8835	Details of cost for 1 no. MATERIAL Reducing Tee for 34.00 mm X 28.58 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.93.7 For 42.70 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. MATERIAL				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8836	Reducing Tee for 42.70 mm X 15.88 mm outer dia SS pipe TOTAL	each	1.00	683.00	683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.93.8 For 42.70 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8837	Details of cost for 1 no. MATERIAL Reducing Tee for 42.70 mm X 22.22 mm outer dia SS pipe TOTAL	each	1.00	683.00	683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.93.9 For 42.70 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8838	Details of cost for 1 no. MATERIAL Reducing Tee for 42.70 mm X 28.58 mm outer dia SS pipe TOTAL	each	1.00	683.00	683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.93.10 For 42.70 mm x 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8839	Details of cost for 1 no. MATERIAL Reducing Tee for 42.70 mm X 34.00 mm outer dia SS pipe TOTAL	each	1.00	683.00	683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.93.11 For 48.60 mm x 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8840	Details of cost for 1 no. MATERIAL Reducing Tee for 48.60 mm X 15.88 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.93.12 For 48.60 mm x 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8841	Details of cost for 1 no. MATERIAL Reducing Tee for 48.60 mm X 22.22 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.93.13 For 48.60 mm x 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8842	Details of cost for 1 no. MATERIAL Reducing Tee for 48.60 mm X 28.58 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.93.14 For 48.60 mm x 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8843	Details of cost for 1 no. MATERIAL Reducing Tee for 48.60mm X 34.00 mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.93.15 For 48.60 mm x 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8844	Details of cost for 1 no. MATERIAL Reducing Tee for 48.60mm X 42.70mm outer dia SS pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.94 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Male Thread Tee**18.94.1 For 15.88 mm outer dia x 15 mm nominal dia threaded**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8845	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 15.88 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	179.00	179.00 179.00 1.79 180.79 27.12 207.91 207.90

18.94.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8846	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 22.22 mm outer dia X 15 mm nominal dia threaded	each	1.00	200.00	200.00
	TOTAL				200.00
	Add 1 % Water charges				2.00
	TOTAL				202.00
	Add 15 % Contractor's profit and overheads				30.30
	Cost of 1 no.				232.30
	Say				232.30

18.94.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8847	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 22.22 mm outer dia X 20 mm nominal dia threaded	each	1.00	205.00	205.00
	TOTAL				205.00
	Add 1 % Water charges				2.05
	TOTAL				207.05
	Add 15 % Contractor's profit and overheads				31.06
	Cost of 1 no.				238.11
	Say				238.10

18.94.4 For 28.58 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8848	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 28.58 mm outer dia X 15 mm nominal dia threaded	each	1.00	273.00	273.00
	TOTAL				273.00
	Add 1 % Water charges				2.73
	TOTAL				275.73
	Add 15 % Contractor's profit and overheads				41.36
	Cost of 1 no.				317.09
	Say				317.10

18.94.5 For 28.58 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8849	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 28.58 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	273.00	273.00 273.00 2.73 275.73 41.36 317.09 317.10

18.94.6 For 28.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8850	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 28.58 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	273.00	273.00 273.00 2.73 275.73 41.36 317.09 317.10

18.94.7 For 34.00 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8851	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 34.00 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.94.8 For 34.00 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8852	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 34.00 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.94.9 For 34.00 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8853	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 34.00 mm outer dia X 25 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.94.10 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8854	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 34.00 mm outer dia X 32 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	437.00	437.00 437.00 4.37 441.37 66.21 507.58 507.60

18.94.11 For 42.70 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8855	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 42.70 mm outer dia X 15 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.94.12 For 42.70 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8856	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 42.70 mm outer dia X 20 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.94.13 For 42.70 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8857	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 42.70 mm outer dia X 25 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.94.14 For 42.70 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8858	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 42.70 mm outer dia X 32 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.94.15 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8859	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 42.70 mm outer dia X 40 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.94.16 For 48.60 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8860	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 48.60 mm outer dia X 15 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.94.17 For 48.60 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8861	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 48.60 mm outer dia X 20 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.94.18 For 48.60 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8862	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 48.60 mm outer dia X 25 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.94.19 For 48.60 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8863	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 48.60 mm outer dia X 32 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.94.20 For 48.60 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8864	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 48.60 mm outer dia X 40 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.94.21 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8865	Details of cost for 1 no. MATERIAL Stainless steel Male thread Tee for 48.60 mm outer dia X 50 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.95 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Female Thread Tee**18.95.1 For 15.88 mm outer dia x15 mm nominal dia threaded**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8866	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 15.88 mm outer dia X 15 mm nominal dia threaded	each	1.00	179.00	179.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				179.00
	Add 1 % Water charges				1.79
	TOTAL				180.79
	Add 15 % Contractor's profit and overheads				27.12
	Cost of 1 no.				207.91
	Say				207.90

18.95.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8867	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 22.22 mm outer dia X 15 mm nominal dia threaded	each	1.00	200.00	200.00
	TOTAL				200.00
	Add 1 % Water charges				2.00
	TOTAL				202.00
	Add 15 % Contractor's profit and overheads				30.30
	Cost of 1 no.				232.30
	Say				232.30

18.95.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8868	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 22.22 mm outer dia X 20 mm nominal dia threaded	each	1.00	200.00	200.00
	TOTAL				200.00
	Add 1 % Water charges				2.00
	TOTAL				202.00
	Add 15 % Contractor's profit and overheads				30.30
	Cost of 1 no.				232.30
	Say				232.30

18.95.4 For 28.58 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8869	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 28.58 mm outer dia X 15 mm nominal dia threaded	each	1.00	273.00	273.00
	TOTAL				273.00
	Add 1 % Water charges				2.73
	TOTAL				275.73
	Add 15 % Contractor's profit and overheads				41.36
	Cost of 1 no.				317.09
	Say				317.10

18.95.5 For 28.58 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8870	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 28.58 mm outer dia X 20 mm nominal dia threaded	each	1.00	273.00	273.00
	TOTAL				273.00
	Add 1 % Water charges				2.73
	TOTAL				275.73
	Add 15 % Contractor's profit and overheads				41.36
	Cost of 1 no.				317.09
	Say				317.10

18.95.6 For 28.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8871	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 28.58 mm outer dia X 25 mm nominal dia threaded	each	1.00	273.00	273.00
	TOTAL				273.00
	Add 1 % Water charges				2.73
	TOTAL				275.73
	Add 15 % Contractor's profit and overheads				41.36
	Cost of 1 no.				317.09
	Say				317.10

18.95.7 For 34.00 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8872	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 34.00 mm outer dia X 15 mm nominal dia threaded	each	1.00	437.00	437.00
	TOTAL				437.00
	Add 1 % Water charges				4.37
	TOTAL				441.37
	Add 15 % Contractor's profit and overheads				66.21
	Cost of 1 no.				507.58
	Say				507.60

18.95.8 For 34.00 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8873	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 34.00 mm outer dia X 20 mm nominal dia threaded	each	1.00	437.00	437.00
	TOTAL				437.00
	Add 1 % Water charges				4.37
	TOTAL				441.37
	Add 15 % Contractor's profit and overheads				66.21
	Cost of 1 no.				507.58
	Say				507.60

18.95.9 For 34.00 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8874	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 34.00 mm outer dia X 25 mm nominal dia threaded	each	1.00	437.00	437.00
	TOTAL				437.00
	Add 1 % Water charges				4.37
	TOTAL				441.37
	Add 15 % Contractor's profit and overheads				66.21
	Cost of 1 no.				507.58
	Say				507.60

18.95.10 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8875	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 34.00 mm outer dia X 32 mm nominal dia threaded	each	1.00	437.00	437.00
	TOTAL				437.00
	Add 1 % Water charges				4.37
	TOTAL				441.37
	Add 15 % Contractor's profit and overheads				66.21
	Cost of 1 no.				507.58
	Say				507.60

18.95.11 For 42.70 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8876	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 42.70 mm outer dia X 15 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.95.12 For 42.70 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8877	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 42.70 mm outer dia X 20 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.95.13 For 42.70 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8878	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 42.70 mm outer dia X 25 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.95.14 For 42.70 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8879	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 42.70 mm outer dia X 32 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.95.15 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8880	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 42.70 mm outer dia X 40 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.95.16 For 48.60 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8881	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 48.60 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.95.17 For 48.60 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8882	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 48.60 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.95.18 For 48.60 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8883	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 48.60 mm outer dia X 25 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	887.00	887.00 887.00 8.87 895.87 134.38 1030.25 1030.25

18.95.19 For 48.60 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8884	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 48.60 mm outer dia X 32 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.95.20 For 48.60 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8885	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 48.60 mm outer dia X 40 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.95.21 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8886	Details of cost for 1 no. MATERIAL Stainless steel Female thread Tee for 48.60 mm outer dia X 50 mm nominal dia threaded	each	1.00	887.00	887.00
	TOTAL				887.00
	Add 1 % Water charges				8.87
	TOTAL				895.87
	Add 15 % Contractor's profit and overheads				134.38
	Cost of 1 no.				1030.25
	Say				1030.25

18.96 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Female Thread Connector/ Adapter

18.96.1 For 15.88 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8887	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 15.88 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	190.00	190.00 190.00 1.90 191.90 28.79 220.69 220.70

18.96.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8888	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 22.22 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	230.00	230.00 230.00 2.30 232.30 34.85 267.15 267.15

18.96.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8889	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 22.22 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	237.00	237.00 237.00 2.37 239.37 35.91 275.28 275.30

18.96.4 For 28.58 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8890	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 28.58 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	277.00	277.00 277.00 2.77 279.77 41.97 321.74 321.75

18.96.5 For 28.58 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8891	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 28.58 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	286.00	286.00 286.00 2.86 288.86 43.33 332.19 332.20

18.96.6 For 28.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8892	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 28.58 mm outer dia X 25 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	337.00	337.00 337.00 3.37 340.37 51.06 391.43 391.45

18.96.7 For 34.00 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8893	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 34.00 mm outer dia X 25 mm nominal dia threaded	each	1.00	409.00	409.00
	TOTAL				409.00
	Add 1 % Water charges				4.09
	TOTAL				413.09
	Add 15 % Contractor's profit and overheads				61.96
	Cost of 1 no.				475.05
	Say				475.05

18.96.8 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8894	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 34.00 mm outer dia X 32 mm nominal dia threaded	each	1.00	538.00	538.00
	TOTAL				538.00
	Add 1 % Water charges				5.38
	TOTAL				543.38
	Add 15 % Contractor's profit and overheads				81.51
	Cost of 1 no.				624.89
	Say				624.90

18.96.9 For 42.70 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8895	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 42.70 mm outer dia X 32 mm nominal dia threaded	each	1.00	576.00	576.00
	TOTAL				576.00
	Add 1 % Water charges				5.76
	TOTAL				581.76
	Add 15 % Contractor's profit and overheads				87.26
	Cost of 1 no.				669.02
	Say				669.00

18.96.10 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8896	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 42.70 mm outer dia X 40 mm nominal dia threaded	each	1.00	681.00	681.00
	TOTAL				681.00
	Add 1 % Water charges				6.81
	TOTAL				687.81
	Add 15 % Contractor's profit and overheads				103.17
	Cost of 1 no.				790.98
	Say				791.00

18.96.11 For 48.60 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8897	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 48.60 mm outer dia X 40 mm nominal dia threaded	each	1.00	838.00	838.00
	TOTAL				838.00
	Add 1 % Water charges				8.38
	TOTAL				846.38
	Add 15 % Contractor's profit and overheads				126.96
	Cost of 1 no.				973.34
	Say				973.35

18.96.12 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8898	Details of cost for 1 no. MATERIAL Stainless steel Female threaded Connector/Adapter for 48.60 mm outer dia X 50 mm nominal dia threaded	each	1.00	965.00	965.00
	TOTAL				965.00
	Add 1 % Water charges				9.65
	TOTAL				974.65
	Add 15 % Contractor's profit and overheads				146.20
	Cost of 1 no.				1120.85
	Say				1120.85

18.97 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Male Thread Connector/ Adapter

18.97.1 For 15.88 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8899	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 15.88 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	193.00	193.00 193.00 1.93 194.93 29.24 224.17 224.15

18.97.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8900	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 22.22 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	227.00	227.00 227.00 2.27 229.27 34.39 263.66 263.65

18.97.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8901	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 22.22 mm outer dia X 20mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	248.00	248.00 248.00 2.48 250.48 37.57 288.05 288.05

18.97.4 For 28.58 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8902	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 28.58 mm outer dia X 20 mm nominal dia threaded	each	1.00	313.00	313.00
	TOTAL				313.00
	Add 1 % Water charges				3.13
	TOTAL				316.13
	Add 15 % Contractor's profit and overheads				47.42
	Cost of 1 no.				363.55
	Say				363.55

18.97.5 For 28.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8903	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 28.58 mm outer dia X 25 mm nominal dia threaded	each	1.00	320.00	320.00
	TOTAL				320.00
	Add 1 % Water charges				3.20
	TOTAL				323.20
	Add 15 % Contractor's profit and overheads				48.48
	Cost of 1 no.				371.68
	Say				371.70

18.97.6 For 34.00 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8904	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 34.00 mm outer dia X 25 mm nominal dia threaded	each	1.00	461.00	461.00
	TOTAL				461.00
	Add 1 % Water charges				4.61
	TOTAL				465.61
	Add 15 % Contractor's profit and overheads				69.84
	Cost of 1 no.				535.45
	Say				535.45

18.97.7 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8905	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 34.00 mm outer dia X 32 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	565.00	565.00 565.00 5.65 570.65 85.60 656.25 656.25

18.97.8 For 42.70 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8906	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 42.70 mm outer dia X 32 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	649.00	649.00 649.00 6.49 655.49 98.32 753.81 753.80

18.97.9 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8907	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 42.70 mm outer dia X 40 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	726.00	726.00 726.00 7.26 733.26 109.99 843.25 843.25

18.97.10 For 48.60 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8908	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 48.60 mm outer dia X 40 mm nominal dia threaded	each	1.00	840.00	840.00
	TOTAL				840.00
	Add 1 % Water charges				8.40
	TOTAL				848.40
	Add 15 % Contractor's profit and overheads				127.26
	Cost of 1 no.				975.66
	Say				975.65

18.97.11 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8909	Details of cost for 1 no. MATERIAL Stainless steel Male threaded Connector/ Adapter for 48.60 mm outer dia X 50 nominal dia threaded	each	1.00	1138.00	1138.00
	TOTAL				1138.00
	Add 1 % Water charges				11.38
	TOTAL				1149.38
	Add 15 % Contractor's profit and overheads				172.41
	Cost of 1 no.				1321.79
	Say				1321.80

18.98 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Valve Connector**18.98.1 For 15.88 mm outer dia x 15 mm nominal dia threaded**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8910	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 15.88 mm outer dia X 15 mm nominal dia threaded	each	1.00	234.00	234.00
	TOTAL				234.00
	Add 1 % Water charges				2.34
	TOTAL				236.34
	Add 15 % Contractor's profit and overheads				35.45
	Cost of 1 no.				271.79
	Say				271.80

18.98.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8911	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 22.22 mm outer dia X 15 mm nominal dia threaded	each	1.00	276.00	276.00
	TOTAL				276.00
	Add 1 % Water charges				2.76
	TOTAL				278.76
	Add 15 % Contractor's profit and overheads				41.81
	Cost of 1 no.				320.57
	Say				320.55

18.98.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8912	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 22.22 mm outer dia X 20 mm nominal dia threaded	each	1.00	295.00	295.00
	TOTAL				295.00
	Add 1 % Water charges				2.95
	TOTAL				297.95
	Add 15 % Contractor's profit and overheads				44.69
	Cost of 1 no.				342.64
	Say				342.65

18.98.4 For 28.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8913	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 28.58 mm outer dia X 25 mm nominal dia threaded	each	1.00	424.00	424.00
	TOTAL				424.00
	Add 1 % Water charges				4.24
	TOTAL				428.24
	Add 15 % Contractor's profit and overheads				64.24
	Cost of 1 no.				492.48
	Say				492.50

18.98.5 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8914	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 34.00 mm outer dia X 32 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	629.00	629.00 629.00 6.29 635.29 95.29 730.58 730.60

18.98.6 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8915	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 42.70 mm outer dia X 40 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	875.00	875.00 875.00 8.75 883.75 132.56 1016.31 1016.30

18.98.7 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8916	Details of cost for 1 no. MATERIAL Stainless steel Valve Connector for 48.60 mm outer dia X 50 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	1176.00	1176.00 1176.00 11.76 1187.76 178.16 1365.92 1365.90

18.99 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Female Threaded Elbow 90°

18.99.1 For 15.88 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8917	Details of cost for 1 no. MATERIAL SS Female Threaded Elbow 90° for 15.88 mm outer dia X 15 mm nominal dia threaded	each	1.00	150.00	150.00
	TOTAL				150.00
	Add 1 % Water charges				1.50
	TOTAL				151.50
	Add 15 % Contractor's profit and overheads				22.73
	Cost of 1 no.				174.23
	Say				174.25

18.99.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8918	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 22.22 mm outer dia X 15 mm nominal dia threaded	each	1.00	191.00	191.00
	TOTAL				191.00
	Add 1 % Water charges				1.91
	TOTAL				192.91
	Add 15 % Contractor's profit and overheads				28.94
	Cost of 1 no.				221.85
	Say				221.85

18.99.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8919	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 22.22 mm outer dia X 20 mm nominal dia threaded	each	1.00	191.00	191.00
	TOTAL				191.00
	Add 1 % Water charges				1.91
	TOTAL				192.91
	Add 15 % Contractor's profit and overheads				28.94
	Cost of 1 no.				221.85
	Say				221.85

18.99.4 For 25.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8920	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 25.58 mm outer dia X 25 mm nominal dia threaded	each	1.00	205.00	205.00
	TOTAL				205.00
	Add 1 % Water charges				2.05
	TOTAL				207.05
	Add 15 % Contractor's profit and overheads				31.06
	Cost for 1 no.				238.11
	Say				238.10

18.99.5 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8921	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 34.00 mm outer dia X 32 mm nominal dia threaded	each	1.00	287.00	287.00
	TOTAL				287.00
	Add 1 % Water charges				2.87
	TOTAL				289.87
	Add 15 % Contractor's profit and overheads				43.48
	Cost for 1 no.				333.35
	Say				333.35

18.99.6 For 42.70 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8922	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 42.70 mm outer dia X 32 mm nominal dia threaded	each	1.00	478.00	478.00
	TOTAL				478.00
	Add 1 % Water charges				4.78
	TOTAL				482.78
	Add 15 % Contractor's profit and overheads				72.42
	Cost of 1 no.				555.20
	Say				555.20

18.99.7 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8923	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 42.70 mm outer dia X40 mm nominal dia threaded	each	1.00	478.00	478.00
	TOTAL				478.00
	Add 1 % Water charges				4.78
	TOTAL				482.78
	Add 15 % Contractor's profit and overheads				72.42
	Cost of 1 no.				555.20
	Say				555.20

18.99.8 For 48.60 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8924	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 48.60 mm outer dia X 40 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.99.9 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8925	Details of cost for 1 no. MATERIAL Stainless steel Female Threaded Elbow 90° for 48.60 mm outer dia X 50 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.100 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Male Threaded Elbow 90°

18.100.1 For 15.88 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8926	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 15.88 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	191.00	191.00 191.00 1.91 192.91 28.94 221.85 221.85

18.100.2 For 22.22 mm outer dia x 15 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8927	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 22.22 mm outer dia X 15 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	205.00	205.00 205.00 2.05 207.05 31.06 238.11 238.10

18.100.3 For 22.22 mm outer dia x 20 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8928	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 22.22 mm outer dia X 20 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	205.00	205.00 205.00 2.05 207.05 31.06 238.11 238.10

18.100.4 For 28.58 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8929	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 28.58 mm outer dia X 25 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	205.00	205.00 205.00 2.05 207.05 31.06 238.11 238.10

18.100.5 For 34.00 mm outer dia x 25 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8930	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 34.00 mm outer dia X 25 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	287.00	287.00 287.00 2.87 289.87 43.48 333.35 333.35

18.100.6 For 34.00 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8931	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 34.00 mm outer dia X 32 mm nominal dia threaded TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	287.00	287.00 287.00 2.87 289.87 43.48 333.35 333.35

18.100.7 For 42.70 mm outer dia x 32 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8932	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 42.70 mm outer dia X 32 mm nominal dia threaded	each	1.00	478.00	478.00
	TOTAL				478.00
	Add 1 % Water charges				4.78
	TOTAL				482.78
	Add 15 % Contractor's profit and overheads				72.42
	Cost of 1 no.				555.20
	Say				555.20

18.100.8 For 42.70 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8933	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 42.70 mm outer dia X40 mm nominal dia threaded	each	1.00	478.00	478.00
	TOTAL				478.00
	Add 1 % Water charges				4.78
	TOTAL				482.78
	Add 15 % Contractor's profit and overheads				72.42
	Cost of 1 no.				555.20
	Say				555.20

18.100.9 For 48.60 mm outer dia x 40 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8934	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 48.60 mm outer dia X 40 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.100.10 For 48.60 mm outer dia x 50 mm nominal dia threaded

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8935	Details of cost for 1 no. MATERIAL Stainless steel Male Threaded Elbow 90° for 48.60 mm outer dia X 50 mm nominal dia threaded	each	1.00	683.00	683.00
	TOTAL				683.00
	Add 1 % Water charges				6.83
	TOTAL				689.83
	Add 15 % Contractor's profit and overheads				103.47
	Cost of 1 no.				793.30
	Say				793.30

18.101 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.**Cap****18.101.1 For 15.88 mm outer dia pipe**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8936	Details of cost for 1 no. MATERIAL Stainless steel Cap for 15.88 mm outer dia pipe	each	1.00	45.00	45.00
	TOTAL				45.00
	Add 1 % Water charges				0.45
	TOTAL				45.45
	Add 15 % Contractor's profit and overheads				6.82
	Cost of 1 no.				52.27
	Say				52.25

18.101.2 For 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8937	Details of cost for 1 no. MATERIAL Stainless steel Cap for 22.22 mm outer dia pipe	each	1.00	64.00	64.00
	TOTAL				64.00
	Add 1 % Water charges				0.64
	TOTAL				64.64
	Add 15 % Contractor's profit and overheads				9.70
	Cost of 1 no.				74.34
	Say				74.35

18.101.3 For 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8938	Details of cost for 1 no. MATERIAL Stainless steel Cap for 28.58 mm outer dia pipe	each	1.00	84.00	84.00
	TOTAL				84.00
	Add 1 % Water charges				0.84
	TOTAL				84.84
	Add 15 % Contractor's profit and overheads				12.73
	Cost of 1 no.				97.57
	Say				97.55

18.101.4 For 34.00 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8939	Details of cost for 1 no. MATERIAL Stainless steel Cap for 34.00 mm outer dia pipe	each	1.00	173.00	173.00
	TOTAL				173.00
	Add 1 % Water charges				1.73
	TOTAL				174.73
	Add 15 % Contractor's profit and overheads				26.21
	Cost of 1 no.				200.94
	Say				200.95

18.101.5 For 42.70 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8940	Details of cost for 1 no. MATERIAL Stainless steel Cap for 42.70 mm outer dia pipe	each	1.00	253.00	253.00
	TOTAL				253.00
	Add 1 % Water charges				2.53
	TOTAL				255.53
	Add 15 % Contractor's profit and overheads				38.33
	Cost of 1 no.				293.86
	Say				293.85

18.101.6 For 48.60 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8941	Details of cost for 1 no. MATERIAL Stainless steel Cap for 48.60 mm outer dia pipe	each	1.00	330.00	330.00
	TOTAL				330.00
	Add 1 % Water charges				3.30
	TOTAL				333.30
	Add 15 % Contractor's profit and overheads				50.00
	Cost of 1 no.				383.30
	Say				383.30

18.102 Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.

Pipe Bridge

18.102.1 For 15.88 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8942	Details of cost for 1 no. MATERIAL Stainless steel Pipe Bridge for 15.88 mm outer dia pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	214.00	214.00 214.00 2.14 216.14 32.42 248.56 248.55

18.102.2 For 22.22 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8943	Details of cost for 1 no. MATERIAL Stainless steel Pipe Bridge for 15.88 mm outer dia pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost of 1 no. Say	each	1.00	271.00	271.00 271.00 2.71 273.71 41.06 314.77 314.75

18.102.3 For 28.58 mm outer dia pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8944	Details of cost for 1 no. MATERIAL Stainless steel Pipe Bridge for 28.58 mm outer dia pipe TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost for 1 no. Say	each	1.00	407.00	407.00 407.00 4.07 411.07 61.66 472.73 472.75

SUB HEAD : 19.0
DRAINAGE

19.1 Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :

19.1.1 100 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1854	Details of cost for 30 metre MATERIAL Stoneware pipes grade A (60 cm long) 100 mm dia	each	55.00	50.00	2750.00
2224	Added 10% allowance for breakage Carriage of S.W. pipes 100 mm dia Added 10% allowance for breakage Cement for 50 joints = 0.019 tonne	100 metre	0.33	138.36	45.66
0367	Portland Cement (OPC-43 grade)	tonne	0.019	5700.00	108.30
2209	Carriage of Cement	tonne	0.019	92.24	1.75
0983	Fine sand (zone IV)	cum	0.01	760.00	7.60
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.01	103.77	1.04
1881	Spun yarn or plain gaskin @ 0.09 kg per joint = 0.09x50 = 4.50 kg	kilogram	4.50	50.00	225.00
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.00	487.00	487.00
0124	Mason (brick layer) 2nd class	day	1.00	448.00	448.00
0114	Beldar	day	3.00	368.00	1104.00
0101	Bhisti	day	1.00	407.00	407.00
	TOTAL				5585.35
	Add 1 % Water charges				55.85
	TOTAL				5641.20
	Add 15 % Contractor's profit and overheads				846.18
	Cost of 30 metre				6487.38
	Cost of 1 metre				216.24
	Say				216.25

19.1.2 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1855	Details of cost for 30 metre MATERIAL Stoneware pipes grade A (60 cm long) 150 mm dia	each	55.00	80.00	4400.00
2225	Added 10% allowance for breakage Carriage of S.W. pipes 150 mm dia Added 10% allowance for breakage Cement of 50 joints = 0.036 tonne	100 metre	0.33	276.72	91.32
0367	Portland Cement (OPC-43 grade)	tonne	0.036	5700.00	205.20
2209	Carriage of Cement	tonne	0.036	92.24	3.32
0983	Fine sand (zone IV)	cum	0.019	760.00	14.44
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.019	103.77	1.97
1881	Spun yarn or plain gaskin @ 0.18 kg per joint = 0.18x50 = 9 kg	kilogram	9.00	50.00	450.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.50	487.00	730.50
0124	Mason (brick layer) 2nd class	day	1.50	448.00	672.00
0114	Beldar	day	4.00	368.00	1472.00
0101	Bhisti	day	1.00	407.00	407.00
	TOTAL				8447.75
	Add 1 % Water charges				84.48
	TOTAL				8532.23
	Add 15 % Contractor's profit and overheads				1279.83
	Cost of 30 metre				9812.06
	Cost of 1 metre				327.06
	Say				327.05

19.1.3 200 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL				
1856	Stoneware pipes grade A (60 cm long) 200 mm dia	each	55.00	110.00	6050.00
	Added 10% allowance for breakage				
2226	Carriage of S.W. pipes 200 mm dia Added 10% allowance for breakage in items (I) & (ii)	100 metre	0.33	461.19	152.19
	Cement of 50 joints = 0.053 tonne				
0367	Portland Cement (OPC-43 grade)	tonne	0.053	5700.00	302.10
2209	Carriage of Cement	tonne	0.053	92.24	4.89
0983	Fine sand (zone IV)	cum	0.028	760.00	21.28
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.028	103.77	2.91
1881	Spun yarn or plain gaskin @ 0.24 kg per joint = 0.24x50 =12.00 kg	kilogram	12.00	50.00	600.00
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.75	487.00	852.25
0124	Mason (brick layer) 2nd class	day	1.75	448.00	784.00
0114	Beldar	day	4.50	368.00	1656.00
0101	Bhisti	day	1.25	407.00	508.75
	TOTAL				10934.37
	Add 1 % Water charges				109.34
	TOTAL				11043.71
	Add 15 % Contractor's profit and overheads				1656.56
	Cost of 30 metre				12700.27
	Cost of 1 metre				423.34
	Say				423.35

19.1.4 250 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MATERIAL				
1858	Stoneware pipes grade A (60 cm long) 250 mm dia	each	55.00	210.00	11550.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2228	Added 10% allowance for breakage Carriage of S.W. pipes 250 mm dia Added 10% allowance for breakage Cement of 50 joints = 0.094 tonne	100 metre	0.33	790.62	260.90
0367	Portland Cement (OPC-43 grade)	tonne	0.094	5700.00	535.80
2209	Carriage of Cement	tonne	0.094	92.24	8.67
0983	Fine sand (zone IV)	cum	0.05	760.00	38.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.05	103.77	5.19
1881	Spun yarn or plain gaskin @ 0.30 kg per joint = 0.30x50= 15.00 kg	kilogram	15.00	50.00	750.00
	LABOUR				
0123	Mason (brick layer) 1st class	day	2.25	487.00	1095.75
0124	Mason (brick layer) 2nd class	day	2.25	448.00	1008.00
0114	Beldar	day	5.50	368.00	2024.00
0101	Bhisti	day	1.50	407.00	610.50
	TOTAL				17886.81
	Add 1 % Water charges				178.87
	TOTAL				18065.68
	Add 15 % Contractor's profit and overheads				2709.85
	Cost of 30 metre				20775.53
	Cost of 1 metre				692.51
	Say				692.50

19.1.5 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1859	Details of cost for 30 metre MATERIAL Stoneware pipes grade A (60 cm long) 300 mm dia	each	55.00	240.00	13200.00
2229	Added 10% allowance for breakage Carriage of S.W. pipes 300 mm dia Added 10% allowance for breakage Cement of 50 joints = 0.125 tonne	100 metre	0.33	988.27	326.13
0367	Portland Cement (OPC-43 grade)	tonne	0.125	5700.00	712.50
2209	Carriage of Cement	tonne	0.125	92.24	11.53
0983	Fine sand (zone IV)	cum	0.075	760.00	57.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.075	103.77	7.78
1881	Spun yarn or plain gaskin @ 0.36 kg / joint = 0.36x50 =18.00 kg	kilogram	18.00	50.00	900.00
	LABOUR				
0123	Mason (brick layer) 1st class	day	2.50	487.00	1217.50
0124	Mason (brick layer) 2nd class	day	2.50	448.00	1120.00
0114	Beldar	day	6.00	368.00	2208.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	1.50	407.00	610.50
	TOTAL				20370.94
	Add 1 % Water charges				203.71
	TOTAL				20574.65
	Add 15 % Contractor's profit and overheads				3086.20
	Cost of 30 metre				23660.85
	Cost of 1 metre				788.69
	Say				788.70

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :

19.2.1 100 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	<p>Details of cost for 10 metre</p> $\text{Area} = W \times W/2 + \frac{1}{2} \times (3.14 \times W^2 / 4) - (3.14 \times D^2 / 4)$ $= W^2 \times (0.5 + 3.14 / 8) - (3.14 \times D^2 / 4)$ <p>Where $W = D + X$ $D = 100 + 12 + 12 = 124 \text{ mm or } 12.4 \text{ cm}$ $X = 300 \text{ mm as trench depth is less than } 1200 \text{ mm}$ $W = 12.4 + 30 = 42.4$</p> <p>Area= $= 42.4^2 \times (0.5 + 3.14/8) - (3.14 \times 12.4^2/4)$ $= 1484 \text{ sqcm} = 0.1484 \text{ sqm Say } 0.148 \text{ sqm}$</p> <p>For 10 m length qty. of concrete reqd. $= 1.48 \text{ cum}$</p> <p>Rate as per item no 4.1.10 of SH : Concrete Work</p>	cum	1.48	4209.05	6229.39(A)
	Cost of 10 metres				6229.39
	Cost of metre				622.93
	Say				622.95

19.2.2 150 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	<p>Details of cost for 10 metre</p> $\text{Area} = W \times W/2 + \frac{1}{2} \times (3.14 \times W^2 / 4) - (3.14 \times D^2 / 4)$ $= W^2 \times (0.5 + 3.14 / 8) - (3.14 \times D^2 / 4)$ <p>Where $W = D + X$ $D = 150 + 16 + 16 = 182 \text{ mm or } 18.2 \text{ cm}$ $X = 300 \text{ mm as trench depth is less than } 1200 \text{ mm}$ $W = 18.2 + 30 = 48.2$</p> <p>Area $= 48.2^2 \times (0.5 + 3.14/8) - (3.14 \times 18.2^2/4)$ $= 1807.66 \text{ sqcm} = 0.1808 \text{ sqm}$ Say 0.181 sqm</p>				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	For 10 m length qty. of concrete reqd. = 1.81 cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost of metre Say	cum	1.81	4209.05	7618.38(A) 7618.38 761.83 761.85

19.2.3 200 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	Details of cost for 10 metre Area = $W \times W/2 + \frac{1}{2} \times (3.14 \times W^2 / 4)$ - $(3.14 \times D^2 / 4)$ = $W^2 \times (0.5 + 3.14 / 8) - (3.14 \times D^2 / 4)$ Where $W = D + X$ $D = 200 + 17 + 17 = 234$ mm or 23.4 cm $X = 300$ mm as trench depth is less than 1200 mm $W = 23.4 + 30 = 53.4$ Area = $53.4^2 \times (0.5 + 3.14 / 8) - (3.14 \times 23.4^2/4)$ = 2115 sqcm = 0.2115 sqm Say 0.211 sqm For 10 m length qty. of concrete reqd. = 2.11 cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost of metre Say	cum	2.11	4209.05	8881.10(A) 8881.10 888.11 888.10

19.2.4 250 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	Details of cost for 10 metre Area = $W \times W/2 + \frac{1}{2} \times (3.14 \times W^2 / 4)$ - $(3.14 \times D^2 / 4)$ = $W^2 \times (0.5 + 3.14 / 8) - (3.14 \times D^2 / 4)$ Where $W = D + X$ $D = 250 + 20 + 20 = 290$ mm or 29.0 cm $X = 300$ mm as trench depth is less than 1200 mm $W = 29 + 30 = 59$ Area = $59^2 \times (0.5 + 3.14/ 8) - (3.14 \times 29^2/4)$ = 2447 sqcm = 0.2447 sqm. Say 0.244 sqm For 10 m length qty. of concrete reqd. = 2.44 cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost of metre Say	cum	2.44	4209.05	10270.08(A) 10270.08 1027.00 1027.00

19.3 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :

19.3.1 100 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	<p>Area = $W \times D1 + 2 \times \frac{1}{2} \times R \cot Q \times R - [R^2/2(3.14/2-Q)] - (3.14/2)R^2$ $= WD1 + R^2(\cot Q) - R^2(3.14/2 - Q) - (3.14/2)R^2$ $= WD1 + R^2(\cot Q - 3.14 + Q)$ Where $\sin Q = [R/(W/2)] = 2R/W$ $W = D + X$; $X = 300$ mm, $D = 100 + 12 + 12 = 124$ mm $W = 124 + 300 = 424$ mm $D1 = \text{Depth} = 100 + (\frac{1}{2} \times 124) = 162$ mm $R = 62$ mm $\sin Q = (2 \times 62)/424 = 0.292$ therefor $Q = 17^\circ 0'$ Hence $\tan Q = 0.3057$ $\text{Area} = 424 \times 162 + (62)^2 (\cot Q - 3.14 + Q)$ $= [68688 + 3844 (1/0.3057 - 180^\circ + 17^\circ 0')]$ sqmm $= [68688 + 3844 (3.27 - 163^\circ 0' \times 3.14/180)]$ sqmm $= (68688 + 3844 \times 0.43)$ sqmm $= (68688 + 1652.92)$ sqmm $= 70340.92$ sqmm Say 70341 sqmm or 0.070341 sqm For 10 m length qty. of concrete reqd. $= 0.07034 \times 10 = 0.7034$ cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost per metre Say</p>	cum	0.7034	4209.05	2960.65(A) 2960.65 296.06 296.05

19.3.2 150 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	<p>Details of cost for 10 metre length pipe Area = $W \times D1 + 2 \times \frac{1}{2} \times R \cot Q \times R - [R^2/2(3.14/2-Q)] - (3.14/2)R^2$ $= WD1 + R^2(\cot Q) - R^2(3.14/2 - Q) - (3.14/2)R^2$ $= WD1 + R^2(\cot Q - 3.14 + Q)$ Where $\sin Q = [R/(W/2)] = 2R/W$ $W = D + X$; $X = 300$ mm, $D = 150 + 16 + 16 = 182$ mm $W = 182 + 300 = 482$ mm $D1 = \text{Depth} = 150 + (\frac{1}{2} \times 182) = 241$ mm $R = 91$ mm $\sin Q = (2 \times 91)/482 = 0.3776$ therefor $Q = 22^\circ 12'$</p>				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	<p>Hence Tan Q = 0.4081 Area = $482 \times 241 + (91)^2 (\text{Cot } Q - 3.14 + Q)$ = $[116162 + 8281 (1/0.4081 - 180^\circ + 22^\circ 12')]$ sqmm = $[116162 + 8281 (2.45 - 157^\circ 48' \times 3.14/180)]$ sqmm = $[116162 + 8281 \times (2.45-2.75)]$ sqmm = $[116162 + 8281 \times (-0.30)]$ sqmm = $(116162 - 2484.3)$ sqmm = 113677.7 sqmm Say 113677.7 sqmm or 0.1136777 sqm For 10 m length qty. of concrete reqd. = $0.1136777 \times 10 = 1.136777$ cum Say 1.14 cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost per metre Say</p>	cum	1.14	4209.05	4798.32(A) 4798.32 479.83 479.85

19.3.3 200 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	<p>Details of cost for 10 metre length pipe Area = $W \times D1 + 2 \times \frac{1}{2} \times R \text{ Cot } Q \times R - [R^2/2(3.14/2-Q)] - (3.14/2)R^2$ = $WD1 + R^2(\text{Cot } Q) - R^2(3.14/2 - Q) - (3.14/2)R^2$ = $WD1 + R^2(\text{Cot } Q - 3.14 + Q)$ Where Sin Q = $[R/(W/2)] = 2R/W$ W = D + X ; X = 300 mm, D = 200 + 17 + 17 = 234 mm W = 234 + 300 = 534 mm D1 = Depth = $150 + (\frac{1}{2} \times 234) = 267$ mm R = 117 mm Sin Q = $(2 \times 117)/534 = 0.4382$ therefor Q = $26^\circ 0'$ Hence Tan Q = 0.4877 Area = $534 \times 267 + (117)^2 (\text{Cot } Q - 3.14 + Q)$ = $[142578 + 13689 (1/0.4877 - 180^\circ + 26^\circ 0')]$ sqmm = $[142578 + 13689 (2.05 - 154^\circ 0' \times 3.14/180)]$ sqmm = $[142578 + 13689 \times (2.05-2.69)]$ sqmm = $[142578 + 13689 \times (-0.64)]$ sqmm = $(142578 - 8760.96)$ sqmm = 133817.04 sqmm Say 133817 sqmm or 0.134 sqm For 10 m length qty. of concrete reqd. = $0.134 \times 10 = 1.34$ cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost per metre Say</p>	cum	1.34	4209.05	5640.13(A) 5640.13 564.01 564.00

19.3.4 250 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	<p>Details of cost for 10 metre length pipe Area = $WxD1 + 2x\frac{1}{2}xR \text{ Cot } QxR$ $- [R^2/2(3.14/2-Q)] - (3.14/2)R^2$ $= WD1 + R^2(\text{Cot } Q) - R^2(3.14/2 - Q)$ $- (3.14/2)R^2$ $= WD1 + R^2(\text{Cot } Q - 3.14 + Q)$ Where $\text{Sin } Q = [R/(W/2)] = 2R/W$ $W = D + X$; $X = 300 \text{ mm}$, $D = 250 + 20$ $+ 20 = 290 \text{ mm}$ $W = 290 + 300 = 590 \text{ mm}$ $D1 = \text{Depth} = 150 + (\frac{1}{2} \times 290) = 295 \text{ mm}$ $R = 145 \text{ mm}$ $\text{Sin } Q = (2x145)/590 = 0.49154$ therefor $Q = 29^\circ 26'$ Hence $\text{Tan } Q = 0.5635$ $\text{Area} = 590 \times 295 + (145)^2 (\text{Cot } Q - 3.14 + Q)$ $= [174050 + 21025 (1/0.5635 - 180^\circ$ $+ 29^\circ 26')] \text{ sqmm}$ $= [174050 + 21025 (1.77 - 150^\circ 34' \times$ $3.14/180)] \text{ sqmm}$ $= [174050 + 21025 \times (1.77-2.63)] \text{ sqmm}$ $= [174050 + 21025 \times (-0.86)] \text{ sqmm}$ $= (174050 - 18081.5) \text{ sqmm}$ $= 155968.5 \text{ sqmm}$ Say 155968 sqmm or 0.156 sqm For 10 m length qty. of concrete reqd. $= 0.156 \times 10 = 1.56 \text{ cum}$ Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost per metre Say</p>	cum	1.56	4209.05	6566.12(A) 6566.12 656.61 656.60

19.3.5 300 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	<p>Details of cost for 10 metre length pipe Area = $WxD1 + 2x\frac{1}{2}xR \text{ Cot } QxR$ $- [R^2/2(3.14/2-Q)] - (3.14/2)R^2$ $= WD1 + R^2(\text{Cot } Q) - R^2(3.14/2 - Q)$ $- (3.14/2)R^2$ $= WD1 + R^2(\text{Cot } Q - 3.14 + Q)$ Where $\text{Sin } Q = [R/(W/2)] = 2R/W$ $W = D + X$; $X = 300 \text{ mm}$, $D = 300 + 25$ $+ 25 = 350 \text{ mm}$ $W = 350 + 300 = 650 \text{ mm}$ $D1 = \text{Depth} = 150 + (\frac{1}{2} \times 350) = 325 \text{ mm}$ $R = 175 \text{ mm}$ $\text{Sin } Q = (2x175)/650 = 0.5385$ therefor Q $= 32^\circ 34'$</p>				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.10	<p>Hence $\tan Q = 0.6387$ Area = $650 \times 325 + (175)^2 (\cot Q - 3.14 + Q)$ = $[211250 + 30625 (1/0.6387 - 180^\circ + 32^\circ 34')]$ sqmm = $[211250 + 30625 (1.566 - 147^\circ 26' \times 3.14/180)]$ sqmm = $[211250 + 30625 \times (1.566 - 2.571)]$ sqmm = $[211250 + 30625 \times (-1.005)]$ sqmm = $[211250 - 30778.13]$ sqmm = 180471.87 sqmm Say 0.180 sqm For 10 m length qty. of concrete reqd. = $0.180 \times 10 = 1.80$ cum Rate as per item no 4.1.10 of SH : Concrete Work Cost of 10 metres Cost per metre Say</p>	cum	1.80	4209.05	7576.29(A) 7576.29 757.62 757.60

19.4 Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:

19.4.1 100x100 mm size P type

19.4.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1900	Details of cost of one gully tarp				
1364	S.W. gully trap P type 100x100 mm	each	1.00	90.00	90.00
1352	C.I. grating 100x100 mm	each	1.00	15.00	15.00
9977	C.I. cover and frame 300x300 mm inside	each	1.00	300.00	300.00
	Carriage of materials	L.S.	4.50	1.73	7.79
4.1.11	<p>Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) $0.68 \times 0.68 \times 0.10$ m = 0.046 cum Concrete around trap $0.30 \times 0.30 \times 0.675$ m = 0.061 cum Total=0.107 cum Deduct: $0.345 \div 3 \times [0.09 + 0.01 + (0.09 \times 0.01)^{1/2}]$ = 0.015 cum $3.14/4 \times (0.124)^2 \times 0.47 = 0.006$ cum Total= 0.021 cum Net quantity 0.107 cum (-) 0.021 cum = 0.086 cum say 0.09 cum Rate as per item no 4.1.11 of SH : Concrete Work Brick work with 7.5 class designation brick in cement mortar 1:4 (1 cement : 4 coarse sand) $1.66 \times 0.115 \times 0.675$ m = 0.129 cum say 0.13 cum</p>	cum	0.09	3959.70	356.37(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	4970.30	646.14(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement : [1/2x0.358x(1.20+0.40)] = 0.286 sqm say 0.29 sqm	cum	0.008	6547.70	52.38(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Add 1 % Water charges on all except (A) i.e. on (1535.74 - 1122.95) = 412.79 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1539.87 - 1122.95) = 416.92 Cost of each Say	sqm	0.29	234.70	68.06(A) 1535.74 4.13 1539.87 62.54 1602.41 1602.40

19.4.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1900	Detaila of cost of one gully tarp S.W. gully trap P type 100x100 mm	each	1.00	90.00	90.00
1364	C.I. grating 100x100 mm	each	1.00	15.00	15.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	300.00	300.00
9977	Carriage of materials Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total=0.107 cum Deduct: 0.345÷3x[0.09+0.01+(0.09x0.01)1/2] = 0.015 cum 3.14/4x(0.124)²x0.47 = 0.006 cum Total = 0.021 cum Net quantity 0.107 cum (-) 0.021 cum = 0.086 cum say 0.09 cum	L.S.	4.50	1.73	7.79
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work Brick work with 75 class designation brick in cement mortar 1:4 (1 cement :4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.09	3959.70	356.37(A)
6.36.1	Rate as per item No 6.36.1 of SH : Brick Work	cum	0.13	5102.00	663.26(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.2.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum Rate as per item no 4.2.3 of SH : Concrete Work	cum	0.008	6547.70	52.38(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement : [1/2x0.358x(1.20+0.40)] = 0.286 sqm say 0.29 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	0.29	234.70	68.06(A)
	TOTAL				1552.86
	Add 1 % Water charges on all except (A) i.e. on (1552.86 - 1140.07) = 412.79				4.13
	TOTAL				1556.99
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1556.99 - 1140.07) = 416.92				62.54
	Cost of each				1619.53
	Say				1619.55

19.4.2 150 x 100 mm size P type

19.4.2.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1902	Details of cost of one gully tarp				
	S.W. gully trap P type 150x100 mm	each	1.00	130.00	130.00
1366	C.I. grating 150x150 mm	each	1.00	25.00	25.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	300.00	300.00
9977	Carriage of materials	L.S.	4.50	1.73	7.79
	Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.322÷3x[0.09+0.023+(0.09x0.023)1/2] = 0.017 cum 3.14/4x(0.124)²x0.485 = 0.006 cum Total = 0.023 cum Net quantity 0.107 cum (-) 0.023 cum = 0.084 cum say 0.08 cum				
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.08	3959.70	316.78(A)
	Brick work with 75 class designation brick in cement mortar 1:4 (1 cement :4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	4970.30	646.14(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement : [1/2x0.337x(1.20+0.60)] = 0.303 sqm say 0.30 sqm	cum	0.008	6547.70	52.38(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Add 1 % Water charges on all except (A) i.e. on (1548.50 - 1085.71) = 462.79 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1553.13 - 1085.71) = 467.42 Cost of each Say	sqm	0.30	234.70	70.41(A) 1548.50 4.63 1553.13 70.11 1623.24 1623.25

19.4.2.2 With sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1902	Details of cost of one gully tarp S.W. gully trap P type 150x100 mm	each	1.00	130.00	130.00
1366	C.I. grating 150x150 mm	each	1.00	25.00	25.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	300.00	300.00
9977	Carriage of materials Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total =0.107 cum Deduct: 0.322÷3x[0.09+0.023+(0.09x0.023)1/2] = 0.017 cum 3.14/4x(0.124)²x0.485 = 0.006 cum Total= 0.023 cum Net quantity 0.107 cum (-) 0.023 cum = 0.084 cum say 0.08 cum	L.S.	4.50	1.73	7.79
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work Brick work with sewer bricks conforming to IS:4885 in cement mortar 1:4 (1 cement :4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.08	3959.70	316.78(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per item No 6.36.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.13	5102.00	663.26(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement : [1/2x0.337x(1.20+0.60)] = 0.303 sqm say 0.30 sqm	cum	0.008	6547.70	52.38(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Add 1 % Water charges on all except (A) i.e. on (1565.62 - 1102.83) = 462.79 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1570.25 - 1102.83) = 467.42 Cost of each Say	sqm	0.30	234.70	70.41(A) 1565.62 4.63 1570.25 70.11 1640.36 1640.35

19.4.3 180x150 mm size P type

19.4.3.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1904	Details of cost of one gully tarp S.W. gully trap P type 180x150 mm	each	1.00	225.00	225.00
1367	C.I. grating 180x180 mm	each	1.00	30.00	30.00
1352	C.I. cover and frame 300x300 mm inside	each	1.00	300.00	300.00
9977	Carriage of materials Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total=0.107 cum Deduct: 0.155÷3x[0.09+0.032+(0.09x0.032)1/2] = 0.008 cum 3.14/4x(0.182) ² x0.70 =0.018 cum Total= 0.026 cum Net quantity 0.107 cum (-) 0.026 cum = 0.081 cum say 0.08 cum	L.S.	4.50	1.73	7.79
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work Brick work with 75 class designation brick in cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.08	3959.70	316.78(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	1.66x0.115x0.675 m = 0.129 cum say 0.13 cum Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	0.13	4970.30	646.14(A)
4.2.3	1.66x0.115x0.04 m =0.008 cum Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement : [1/2x0.166x(1.20+0.72)] = 0.159 sqm say 0.16 sqm	cum	0.008	6547.70	52.38(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Add 1 % Water charges on all except (A) i.e. on (1615.64 - 1052.85) = 562.79 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1621.27 - 1052.85) = 568.42 Cost of each Say	sqm	0.16	234.70	37.55(A) 1615.64 5.63 1621.27 85.26 1706.53 1706.55

19.4.3.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1904	Details of cost of one gully tarp	each	1.00	225.00	225.00
1367	S.W. gully trap P type 180x150 mm	each	1.00	30.00	30.00
1352	C.I. grating 180x180 mm	each	1.00	300.00	300.00
9977	C.I. cover and frame 300x300 mm inside Carriage of materials	L.S.	4.50	1.73	7.79
4.1.11	Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum Total=0.107 cum Deduct: 0.155÷3x[0.09+0.032+(0.09x0.032)1/2] = 0.008 cum 3.14/4x(0.182) ² x0.70 =0.018 cum Total= 0.026 cum Net quantity 0.107 cum (-) 0.026 cum = 0.081 cum say 0.08 cum Rate as per item no 4.1.11 of SH : Concrete Work Brick work with sewer bricks conforming to IS:4885 in cement mortar 1:4 (1 cement : 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.08	3959.70	316.78(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per item No 6.36.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m =0.008 cum	cum	0.13	5102.00	663.26(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement : [1/2x0.166x(1.20+0.72)] = 0.159 sqm say 0.16 sqm	cum	0.008	6547.70	52.38(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Add 1 % Water charges on all except (A) i.e. on (1632.76 - 1069.97) = 562.79 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1638.39 - 1069.97) = 568.42 Cost of each Say	sqm	0.16	234.70	37.55(A) 1632.76 5.63 1638.39 85.26 1723.65 1723.65

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps :

19.5.1 100 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre LABOUR				
0114	Beldar	day	0.49	368.00	180.32
0115	Coolie	day	0.36	368.00	132.48
	TOTAL				312.80
	Add 1 % Water charges				3.13
	TOTAL				315.93
	Add 15 % Contractor's profit and overheads				47.39
	Cost of 10 metres				363.32
	Cost of 1 metre				36.33
	Say				36.35

19.5.2 150 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre LABOUR				
0114	Beldar	day	0.49	368.00	180.32

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.45	368.00	165.60
	TOTAL				345.92
	Add 1 % Water charges				3.46
	TOTAL				349.38
	Add 15 % Contractor's profit and overheads				52.41
	Cost of 10 metres				401.79
	Cost of 1 metre				40.17
	Say				40.15

19.5.3 200 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.49	368.00	180.32
0115	Coolie	day	0.51	368.00	187.68
	TOTAL				368.00
	Add 1 % Water charges				3.68
	TOTAL				371.68
	Add 15 % Contractor's profit and overheads				55.75
	Cost of 10 metres				427.43
	Cost of 1 metre				42.74
	Say				42.75

19.5.4 250 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.49	368.00	180.32
0115	Coolie	day	0.57	368.00	209.76
	TOTAL				390.08
	Add 1 % Water charges				3.90
	TOTAL				393.98
	Add 15 % Contractor's profit and overheads				59.10
	Cost of 10 metres				453.08
	Cost of 1 metre				45.30
	Say				45.30

19.5.5 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.49	368.00	180.32
0115	Coolie	day	0.63	368.00	231.84
	TOTAL				412.16
	Add 1 % Water charges				4.12
	TOTAL				416.28
	Add 15 % Contractor's profit and overheads				62.44
	Cost of 10 metres				478.72
	Cost of 1 metre				47.87
	Say				47.85

19.5.6 350 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.60	368.00	220.80
0115	Coolie	day	0.69	368.00	253.92
	TOTAL				474.72
	Add 1 % Water charges				4.75
	TOTAL				479.47
	Add 15 % Contractor's profit and overheads				71.92
	Cost of 10 metres				551.39
	Cost of 1 metre				55.13
	Say				55.15

19.5.7 400 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.75	368.00	276.00
	TOTAL				518.88
	Add 1 % Water charges				5.19
	TOTAL				524.07
	Add 15 % Contractor's profit and overheads				78.61
	Cost of 10 metres				602.68
	Cost of 1 metre				60.26
	Say				60.25

19.5.8 450 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	day	0.66	368.00	242.88
0115	Coolie	day	0.81	368.00	298.08
	TOTAL				540.96
	Add 1 % Water charges				5.41
	TOTAL				546.37
	Add 15 % Contractor's profit and overheads				81.96
	Cost of 10 metres				628.33
	Cost of 1 metre				62.83
	Say				62.85

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :

19.6.1 100 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
1700	R.C.C. pipes NP2 class 100 mm dia (in 2 m. length = 5 Nos.)	metre	10.00	200.00	2000.00
1714	R.C.C. collars NP2 class 100 mm dia 5 Nos.	each	5.00	30.00	150.00
2275	Carriage of R.C.C. pipes 100 mm dia Cement of 5 joints = $5 \times 0.00065 = 0.00325$ cum = 0.0048 t say 0.005 tonne	100 metre	0.10	226.82	22.68
0367	Portland Cement (OPC-43 grade)	tonne	0.005	5700.00	28.50
2209	Carriage of Cement Fine sand for 5 joint = 0.0013×5 = 0.0065 cum = 0.006 cum	tonne	0.005	92.24	0.46
0983	Fine sand (zone IV)	cum	0.006	760.00	4.56
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.006	103.77	0.62
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.32	487.00	155.84
0124	Mason (brick layer) 2nd class	day	0.32	448.00	143.36
0114	Beldar	day	0.63	368.00	231.84
0101	Bhisti	day	0.16	407.00	65.12
	TOTAL				2802.98
	Add 1 % Water charges				28.03
	TOTAL				2831.01
	Add 15 % Contractor's profit and overheads				424.65
	Cost of 10 metres				3255.66
	Cost of 1 metre				325.56
	Say				325.55

19.6.2 150 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
1701	R.C.C. pipes NP2 class 150 mm dia (in 2 m. length = 5 Nos.)	metre	10.00	210.00	2100.00
1715	R.C.C. collars NP2 class 150 mm dia 5 Nos.	each	5.00	35.00	175.00
2281	Carriage of R.C.C. pipes 150 mm dia Cement of 5 joints = 5×0.0008 = 0.004 cum = 0.006 tonne	100 metre	0.10	378.03	37.80
0367	Portland Cement (OPC-43 grade)	tonne	0.006	5700.00	34.20
2209	Carriage of Cement Fine sand for 5 joint = 0.0016×5 = 0.008 cum	tonne	0.006	92.24	0.55
0983	Fine sand (zone IV)	cum	0.008	760.00	6.08
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.008	103.77	0.83
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.39	487.00	189.93
0124	Mason (brick layer) 2nd class	day	0.39	448.00	174.72
0114	Beldar	day	0.78	368.00	287.04

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.16	407.00	65.12
	TOTAL				3071.27
	Add 1 % Water charges				30.71
	TOTAL				3101.98
	Add 15 % Contractor's profit and overheads				465.30
	Cost of 10 metres				3567.28
	Cost of 1 metre				356.72
	Say				356.70

19.6.3 250 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL				
1702	R.C.C. pipes NP2 class 250 mm dia (in 2 m. length = 5 Nos.)	metre	10.00	260.00	2600.00
1716	R.C.C. collars NP2 class 250 mm dia 5 Nos.	each	5.00	50.00	250.00
2287	Carriage of R.C.C. pipes 250 mm dia Cement of 5 joints = 5x0.0012 = 0.006 cum = 0.009tonne	100 metre	0.10	873.84	87.38
0367	Portland Cement (OPC-43 grade)	tonne	0.009	5700.00	51.30
2209	Carriage of Cement	tonne	0.009	92.24	0.83
	Fine sand for 5 joint = 0.0024x5 = 0.012 cum				
0983	Fine sand (zone IV)	cum	0.012	760.00	9.12
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.012	103.77	1.25
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.54	487.00	262.98
0124	Mason (brick layer) 2nd class	day	0.54	448.00	241.92
0114	Beldar	day	1.50	368.00	552.00
0101	Bhisti	day	0.23	407.00	93.61
	TOTAL				4150.39
	Add 1 % Water charges				41.50
	TOTAL				4191.89
	Add 15 % Contractor's profit and overheads				628.78
	Cost of 10 metres				4820.67
	Cost of 1 metre				482.06
	Say				482.05

19.6.4 300 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL				
1703	R.C.C. pipes NP2 class 300 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	300.00	3000.00
1717	R.C.C. collars NP2 class 300 mm dia 4 Nos.	each	4.00	55.00	220.00
2290	Carriage of R.C.C. pipes 300 mm dia Cement of 4 joints = 4x0.00185 = 0.0074 cum = 0.011 tonne	100 metre	0.10	1080.08	108.01

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0367	Portland Cement (OPC-43 grade)	tonne	0.011	5700.00	62.70
2209	Carriage of Cement	tonne	0.011	92.24	1.01
	Fine sand for 4 joint = $0.0037 \times 4 = 0.0148$ say 0.015cum				
0983	Fine sand (zone IV)	cum	0.015	760.00	11.40
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.015	103.77	1.56
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.59	487.00	287.33
0124	Mason (brick layer) 2nd class	day	0.59	448.00	264.32
0114	Beldar	day	1.16	368.00	426.88
0101	Bhisti	day	0.20	407.00	81.40
	TOTAL				4464.61
	Add 1 % Water charges				44.65
	TOTAL				4509.26
	Add 15 % Contractor's profit and overheads				676.39
	Cost of 10 metres				5185.65
	Cost of 1 metre				518.56
	Say				518.55

19.6.5 450 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
1704	R.C.C. pipes NP2 class 450 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	400.00	4000.00
1718	R.C.C. collars NP2 class 450 mm dia 4 Nos.	each	4.00	100.00	400.00
2299	Carriage of R.C.C. pipes 450 & 500 mm dia	100 metre	0.10	2520.19	252.02
	Cement of 4 joints = $4 \times 0.0041 = 0.0164$ cum = 0.024 tonne				
0367	Portland Cement (OPC-43 grade)	tonne	0.024	5700.00	136.80
2209	Carriage of Cement	tonne	0.024	92.24	2.21
	Fine sand for 4 joint = $0.0082 \times 4 = 0.033$ cum				
0983	Fine sand (zone IV)	cum	0.033	760.00	25.08
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.033	103.77	3.42
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.75	487.00	365.25
0124	Mason (brick layer) 2nd class	day	0.75	448.00	336.00
0114	Beldar	day	1.50	368.00	552.00
0101	Bhisti	day	0.33	407.00	134.31
	TOTAL				6207.09
	Add 1 % Water charges				62.07
	TOTAL				6269.16
	Add 15 % Contractor's profit and overheads				940.37
	Cost of 10 metres				7209.53
	Cost of 1 metre				720.95
	Say				720.95

19.6.6 500 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
1705	R.C.C. pipes NP2 class 500 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	580.00	5800.00
1719	R.C.C. collars NP2 class 500 mm dia 4 Nos.	each	4.00	115.00	460.00
2299	Carriage of R.C.C. pipes 450 & 500 mm dia	100 metre	0.10	2520.19	252.02
	Cement of 4 joints = 4x0.0045 = 0.018 cum = 0.026 tonne				
0367	Portland Cement (OPC-43 grade)	tonne	0.026	5700.00	148.20
2209	Carriage of Cement	tonne	0.026	92.24	2.40
	Fine sand for 4 joints = 0.0089x4 = 0.0356 cum = 0.036 cum				
0983	Fine sand (zone IV)	cum	0.036	760.00	27.36
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.036	103.77	3.74
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.81	487.00	394.47
0124	Mason (brick layer) 2nd class	day	0.81	448.00	362.88
0114	Beldar	day	1.62	368.00	596.16
0101	Bhisti	day	0.33	407.00	134.31
	TOTAL				8181.54
	Add 1 % Water charges				81.82
	TOTAL				8263.36
	Add 15 % Contractor's profit and overheads				1239.50
	Cost of 10 metres				9502.86
	Cost of 1 metre				950.28
	Say				950.30

19.6.8 700 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
1707	R.C.C. pipes NP2 class 700 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1050.00	10500.00
1721	R.C.C. collars NP2 class 700 mm dia 4 Nos.	each	4.00	150.00	600.00
2303	Carriage of R.C.C. pipes 600, 700, 750 & 800 mm dia	100 metre	0.10	3780.28	378.03
	Cement of 4 joints = 4x0.0062 = 0.0248 cum = 0.037 tonne				
0367	Portland Cement (OPC-43 grade)	tonne	0.037	5700.00	210.90
2209	Carriage of Cement	tonne	0.037	92.24	3.41
	Fine sand for 4 joints = 0.0124x4 = 0.0496 cum = 0.05 cum				
0983	Fine sand (zone IV)	cum	0.05	760.00	38.00
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.05	103.77	5.19

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.03	487.00	501.61
0124	Mason (brick layer) 2nd class	day	1.03	448.00	461.44
0114	Beldar	day	2.06	368.00	758.08
0101	Bhisti	day	0.42	407.00	170.94
	TOTAL				13627.60
	Add 1 % Water charges				136.28
	TOTAL				13763.88
	Add 15 % Contractor's profit and overheads				2064.58
	Cost of 10 metres				15828.46
	Cost of 1 metre				1582.84
	Say				1582.85

19.6.9 800 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL				
1709	R.C.C. pipes NP2 class 800 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1170.00	11700.00
1723	R.C.C. collars NP2 class 800 mm dia 4 Nos.	each	4.00	200.00	800.00
2303	Carriage of R.C.C. pipes 600, 700, 750 & 800 mm dia	100 metre	0.10	3780.28	378.03
	Cement of 4 joints = 4x0.0072 = 0.0288 cum = 0.042 tonne				
0367	Portland Cement (OPC-43 grade)	tonne	0.042	5700.00	239.40
2209	Carriage of Cement	tonne	0.042	92.24	3.87
	Fine sand for 4 joints = 0.0143x4 = 0.0572 cum = 0.057 cum				
0983	Fine sand (zone IV)	cum	0.057	760.00	43.32
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.057	103.77	5.91
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.14	487.00	555.18
0124	Mason (brick layer) 2nd class	day	1.14	448.00	510.72
0114	Beldar	day	2.28	368.00	839.04
0101	Bhisti	day	0.42	407.00	170.94
	TOTAL				15246.41
	Add 1 % Water charges				152.46
	TOTAL				15398.87
	Add 15 % Contractor's profit and overheads				2309.83
	Cost of 10 metres				17708.70
	Cost of 1 metre				1770.87
	Say				1770.85

19.6.10 900 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL				
1710	R.C.C. pipes NP2 class 900 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1280.00	12800.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1724	R.C.C. collars NP2 class 900 mm dia 4 Nos.	each	4.00	235.00	940.00
2331	Carriage of R.C.C. pipes 900 mm dia Cement of 4 joints = 4x0.0082 = 0.0328 cum = 0.0488 t Say 0.049	100 metre	0.10	5670.42	567.04
0367	Portland Cement (OPC-43 grade)	tonne	0.049	5700.00	279.30
2209	Carriage of Cement Fine sand for 4 joints = 0.0164x4 = 0.066 cum	tonne	0.049	92.24	4.52
0983	Fine sand (zone IV)	cum	0.066	760.00	50.16
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.066	103.77	6.85
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.25	487.00	608.75
0124	Mason (brick layer) 2nd class	day	1.25	448.00	560.00
0114	Beldar	day	3.00	368.00	1104.00
0101	Bhisti	day	0.50	407.00	203.50
	TOTAL				17124.12
	Add 1 % Water charges				171.24
	TOTAL				17295.36
	Add 15 % Contractor's profit and overheads				2594.30
	Cost of 10 metres				19889.66
	Cost of 1 metre				1988.96
	Say				1988.95

19.6.11 1000 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre MATERIAL				
1711	R.C.C. pipes NP2 class 1000 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1590.00	15900.00
1725	R.C.C. collars NP2 class 1000 mm dia 4 Nos.	each	4.00	280.00	1120.00
2332	Carriage of R.C.C. pipes 1000 mm dia Cement of 4 joints = 4x0.0092 = 0.0368 cum = 0.055 tonne	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.055	5700.00	313.50
2209	Carriage of Cement Fine sand for 4 joints = 0.0185x4 = 0.074 cum	tonne	0.055	92.24	5.07
0983	Fine sand (zone IV)	cum	0.074	760.00	56.24
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.074	103.77	7.68
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.36	487.00	662.32
0124	Mason (brick layer) 2nd class	day	1.36	448.00	609.28
0114	Beldar	day	4.33	368.00	1593.44

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.50	407.00	203.50
	TOTAL				21227.09
	Add 1 % Water charges				212.27
	TOTAL				21439.36
	Add 15 % Contractor's profit and overheads				3215.90
	Cost of 10 metres				24655.26
	Cost of 1 metre				2465.52
	Say				2465.50

19.6.12 1100 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL				
1712	R.C.C. pipes NP2 class 1100 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1875.00	18750.00
1726	R.C.C. collars NP2 class 1100 mm dia 4 Nos.	each	4.00	300.00	1200.00
2333	Carriage of R.C.C. pipes 1100 mm dia Cement of 4 joints = 4x0.0103 =0.0412 cum = 0.061 tonne	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.061	5700.00	347.70
2209	Carriage of Cement	tonne	0.061	92.24	5.63
	Fine sand for 4 joints = 0.0206x4 = 0.0824 cum = 0.082 cum				
0983	Fine sand (zone IV)	cum	0.082	760.00	62.32
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.082	103.77	8.51
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.47	487.00	715.89
0124	Mason (brick layer) 2nd class	day	1.47	448.00	658.56
0114	Beldar	day	6.30	368.00	2318.40
0101	Bhisti	day	0.60	407.00	244.20
	TOTAL				25067.27
	Add 1 % Water charges				250.67
	TOTAL				25317.94
	Add 15 % Contractor's profit and overheads				3797.69
	Cost of 10 metress				29115.63
	Cost of 1 metre				2911.56
	Say				2911.55

19.6.13 1200 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metre				
	MATERIAL				
1713	R.C.C. pipes NP2 class 1200 mm dia (in 2.5 m. length = 4 Nos.)	metre	10.00	1677.00	16770.00
1727	R.C.C. collars NP2 class 1200 mm dia 4 Nos.	each	4.00	350.00	1400.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2334	Carriage of R.C.C. pipes 1200 mm dia Cement of 4 joints = 4x0.0114 = 0.0456 cum = 0.068 tonne	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.068	5700.00	387.60
2209	Carriage of Cement Fine sand for 4 joints = 0.0229x4 = 0.0916 cum = 0.092 cum	tonne	0.068	92.24	6.27
0983	Fine sand (zone IV)	cum	0.092	760.00	69.92
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand) LABOUR	cum	0.092	103.77	9.55
0123	Mason (brick layer) 1st class	day	1.59	487.00	774.33
0124	Mason (brick layer) 2nd class	day	1.59	448.00	712.32
0114	Beldar	day	8.67	368.00	3190.56
0101	Bhisti	day	0.67	407.00	272.69
	TOTAL				24349.30
	Add 1 % Water charges				243.49
	TOTAL				24592.79
	Add 15 % Contractor's profit and overheads				3688.92
	Cost of 10 metres				28281.71
	Cost of 1 metre				2828.17
	Say				2828.15

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :

19.7.1 Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :

19.7.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.8	Details of cost for 1 manhole Cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.51x1.41x0.20 m = 0.426 cum Say 0.43 cum Rate as per item no 4.1.8 of SH : Concrete Work Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement : 4 coarse sand) 4.32x0.23x0.35 m = 0.348 cum	cum	0.43	4478.15	1925.60(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Less for pipe $2 \times 3.14 \times (0.15\text{m})^2 \times 0.23\text{m}$ = (-) 0.008 cum Total = 0.340 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.34	4970.30	1689.90(A)
4.1.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching $2 \times 0.90 \times (0.80/2) \times (0.30+0.20)/2 = 0.18$ cum Less for pipe $1 \times 0.90 \times 3.14/4 \times (0.15\text{m})^2 =$ (-) 0.02 cum = 0.16 cum Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.16	5481.95	877.11(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement $3.40\text{m} \times 0.05\text{m} = 0.17$ sqm $2 \times \frac{1}{2} \times 0.80 \times 0.10\text{m} = 0.08$ sqm Total= 0.25 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	0.25	234.70	58.68(A)
5.3	Reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab : $1.36 \times 1.26 \times 0.15\text{m} = 0.257$ cum Less for cover $0.61 \times 0.455 \times 0.15\text{m} =$ (-) 0.042 cum = 0.215 cum Say 0.22 cum Rate as per item no 5.3 of SH : RCC Work	cum	0.22	7390.80	1625.98(A)
0115	Less labour for not lifting the materilas upto floor five level Coolie	day	-0.41	368.00	-150.88
5.22.1	Mild steel reinforcement for slab : 0.22 cum @ 48.06 kg/cum = 10.57 kg Rate as per item no. 5.22.1 of SH : RCC work	kg	10.57	55.30	584.52(A)
5.9.3	Form work = $0.90 \times 0.80 = 0.72$ sqm Less cover = $0.61 \times 0.455\text{m} =$ (-) 0.278 sqm = 0.442 sqm Say 0.44 sqm Rate as per item no 5.9.3 of SH : RCC Work	sqm	0.44	422.30	185.81(A)
0123	LABOUR Extra labour for making channel : Mason (brick layer) 1st class	day	0.06	487.00	29.22
0124	Mason (brick layer) 2nd class	day	0.06	448.00	26.88
1354	Rectangular cover 455x610 mm with frame (low duty) (inside)	each	1.00	1500.00	1500.00
9977	Carriage of C.I. cover & frame	L.S.	6.76	1.73	11.69
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.73	11.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries TOTAL Add 1 % Water charges on all except (A) i.e. on (8399.59 - 6947.60) = 1451.99 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8414.11 - 6947.60) = 1466.51 Cost of each Say	L.S.	13.52	1.73	23.39 8399.59 14.52 8414.11 219.98 8634.09 8634.10

19.7.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.8	Details of cost for 1 manhole Cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.51x1.41x0.20 m = 0.426 cum Say 0.43 cum Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.43	4478.15	1925.60(A)
6.36.1	Brick work with sewer bricks conforming to IS:4885 in cement mortar 1:4 (1 cement :4 coarse sand) 4.32x0.23x0.35 m = 0.348 cum Less for pipe 2x3.14x(0.15m) ² x0.23m = (-) 0.008 cum Total= 0.340 cum Rate as per item No 6.36.1 of SH : Brick Work	cum	0.34	5102.00	1734.68(A)
4.1.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15m) ² = (-) 0.02 cum Total= 0.16 cum Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.16	5481.95	877.11(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 3.40mx0.05m = 0.17 sqm 2x½x0.80x0.10m = 0.08 sqm Total= 0.25 sqm Rate as per item no 13.9.1 of SH : Finishing Reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab : 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042 cum = 0.215 cum Say 0.22 cum	sqm	0.25	234.70	58.68(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.3	Rate as per item no 5.3 of SH : RCC Work Less labour for not lifting the materilas upto floor five level	cum	0.22	7390.80	1625.98(A)
0115	Coolie	day	-0.41	368.00	-150.88
5.22.1	Mild steel reinforcement for slab : 0.22 cum @ 48.06 kg/cum = 10.57 kg Rate as per item no. 5.22.1 of SH : RCC work	kg	10.57	55.30	584.52(A)
5.9.3	Form work = 0.90x0.80 = 0.72 sqm = 0.442 sqm Say 0.44 sqm Less cover = 0.61x0.455m = (-) 0.278 sqm Rate as per item no 5.9.3 of SH : RCC Work LABOUR	sqm	0.44	422.30	185.81(A)
0123	Extra labour for making channel : Mason (brick layer) 1st class	day	0.06	487.00	29.22
0124	Mason (brick layer) 2nd class	day	0.06	448.00	26.88
1354	Rectangular cover 455x610 mm with frame (low duty) (inside)	each	1.00	1500.00	1500.00
9977	Carriage of C.I. cover & frame	L.S.	6.76	1.73	11.69
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				8444.37
	Add 1 % Water charges on all except (A) i.e. on (8444.37 - 6992.38) = 1451.99				14.52
	TOTAL				8458.89
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8458.89 - 6992.38) = 1466.51				219.98
	Cost of each				8678.87
	Say				8678.85

19.7.2 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :

19.7.2.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.8	Details of cost for 1 manhole MATERIAL Cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20 m = 0.547 cum Say 0.55 cum Rate as per item no 4.1.8 of SH : Concrete Work Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement : 4 coarse sand) 5.12x0.23x0.80 m = 0.942 cum Less for pipe 2x3.14x(0.15m) ² x0.23m = (-) 0.008 cum Total= 0.934 cum Say 0.93 cum	cum	0.55	4478.15	2462.98(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching $2 \times 1.20 \times (0.90/2) \times (0.30+0.20)/2 = 2.70$ cum Less for pipe $1.20 \times 3.14/4 \times (0.15\text{m})^2$ = (-) 0.021 cum Total= 0.249 cum say 0.25	cum	0.93	4970.30	4622.38(A)
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement $4.20\text{m} \times 0.50\text{m} = 2.10$ sqm $2 \times \frac{1}{2} \times 0.90 \times 0.10\text{m}$ = 2.19 sqm	cum	0.25	5481.95	1370.49(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab : $1.66 \times 1.36 \times 0.15\text{m} = 0.339$ cum Less for cover $0.7854 \times (0.50)^2 \times 0.15\text{m}$ = (-) 0.029 cum = 0.31 cum	sqm	2.19	234.70	513.99(A)
5.3	Rate as per item no 5.3 of SH : RCC Work Less labour for not lifting the materilas upto floor five level	cum	0.31	7390.80	2291.15(A)
0115	Coolie	day	-0.58	368.00	-213.44
	Mild steel reinforcement for slab : 0.31 cum @ 80.09 kg/cum = 24.83 kg	kg	24.83	55.30	1373.10(A)
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work Form work = $1.20 \times 0.90 = 1.08$ sqm Less cover = $3.14/4 \times (0.50)^2 = (-) 0.196$ sqm = 0.884 sqm Say 0.88 sqm	sqm	0.88	422.30	371.62(A)
5.9.3	Rate as per item no 5.9.3 of SH : RCC Work LABOUR	sqm	0.88	422.30	371.62(A)
	Extra labour for making channel :				
0123	Mason (brick layer) 1st class	day	0.08	487.00	38.96
0124	Mason (brick layer) 2nd class	day	0.08	448.00	35.84
1356	500 mm dia cover with frame (medium duty)	each	1.00	4750.00	4750.00
9977	Carriage of C.I. cover & frame	L.S.	6.76	1.73	11.69
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	16.64	1.73	28.79
	TOTAL				17669.24
	Add 1 % Water charges on all except (A) i.e. on (17669.24 - 13005.71) = 4663.53				46.64
	TOTAL				17715.88
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (17715.88 - 13005.71) = 4710.17				706.53
	Cost of each				18422.41
	Say				18422.40

19.7.2.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.8	<p>Details of cost for 1 manhole MATERIAL Cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20 m = 0.547 cum Say 0.55 cum Rate as per item no 4.1.8 of SH : Concrete Work</p>	cum	0.55	4478.15	2462.98(A)
6.36.1	<p>Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement : 4 coarse sand) 5.12x0.23x0.80 m = 0.942 cum Less for pipe 2x3.14x(0.15m)²x0.23m = (-) 0.008 cum = 0.934 cum Say 0.93 cum Rate as per item No 6.36.1 of SH : Brick Work</p>	cum	0.93	5102.00	4744.86(A)
4.1.3	<p>Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2) x (0.30+0.20)/2 = 2.70 cum Less for pipe 1.20x3.14/4x(0.15m)² = (-) 0.021 cum = 0.249 cum say 0.25 Rate as per item no. 4.1.3 of SH : Concrete Work</p>	cum	0.25	5481.95	1370.49(A)
13.9.1	<p>12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 4.20mx0.50m = 2.10 sqm 2x½x0.90x0.10m = 0.08sqm = 2.19 sqm Rate as per item no 13.9.1 of SH : Finishing</p>	sqm	2.19	234.70	513.99(A)
5.3	<p>Reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab : 1.66x1.36x0.15m = 0.339 cum Less for cover 0.7854x(0.50)²x0.15m = (-) 0.029 cum = 0.31 cum Rate as per item no 5.3 of SH : RCC Work Less labour for not lifting the materilas upto floor five level</p>	cum	0.31	7390.80	2291.15(A)
0115	Coolie	day	-0.58	368.00	-213.44
5.22.1	<p>Mild steel reinforcement for slab : 0.31 cum @ 80.09 kg/cum = 24.83 kg Rate as per item no. 5.22.1 of SH : RCC work</p>	kg	24.83	55.30	1373.10(A)
5.9.3	<p>Form work = 1.20x0.90 = 1.08 sqm Less cover = 3.14/4x(0.50)² = (-) 0.196 sqm = 0.884 sqm Say 0.88 sqm Rate as per item no 5.9.3 of SH : RCC Work</p>	sqm	0.88	422.30	371.62(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
	Extra labour for making channel :				
0123	Mason (brick layer) 1st class	day	0.08	487.00	38.96(A)
0124	Mason (brick layer) 2nd class	day	0.08	448.00	35.84
1356	500 mm dia cover with frame (medium duty)	each	1.00	4750.00	4750.00
9977	Carriage of C.I. cover & frame	L.S.	6.76	1.73	11.69
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	16.64	1.73	28.79
	TOTAL				17791.72
	Add 1 % Water charges on all except (A) i.e. on (17791.72 - 13128.19) = 4663.53				46.64
	TOTAL				17838.36
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (17838.36 - 13128.19) = 4710.17				706.53
	Cost of each				18544.89
	Say				18544.90

19.7.3 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) :

19.7.3.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 manhole				
	MATERIAL				
	Cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)				
4.1.8	1.81x1.51x0.20 m = 0.547 cum Say 0.55 cum Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.55	4478.15	2462.98(A)
	Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement : 4 coarse sand)				
	5.12x0.23x0.65 m = 0.765 cum 1x0.56x0.23x0.15 m = 0.019 cum 1x0.79x0.23x0.15 = 0.027 cum = 0.811 cum				
6.1.1	Less for pipe 2x3.14x(0.15m) ² x0.23m = (-) 0.008 cum = 0.803 cum Say 0.80 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.80	4970.30	3976.24(A)
	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2)x(0.30+0.20)/2 = 0.27 cum Less for pipe 1.20x3.14/4x(0.15m) ² = (-) 0.021 cum = 0.249 cum say 0.25				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 4.20m x 0.35m = 1.47 sqm 2 x 0.56 x 0.15 m = 0.17 sqm 2 x 1/2 x 0.90 x 0.10m = 0.09 sqm For fixing cover 0.96 x 0.96 m = 0.922 sqm = 2.652 sqm Less cover $3.14/4 \times (0.56)^2 = (-) 0.246$ sqm = 2.406 sqm Say 2.41 sqm	cum	0.25	5481.95	1370.49(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab : 1.66 x 1.36 x 0.15m = 0.339 cum Add extra concreting $1 \times (0.56 + 0.79) \times 0.15 \times 0.15$ m = 0.03 cum Total = 0.369 cum Less for cover $0.7854 \times (0.56)^2 \times 0.15$ m = (-) 0.037 cum = 0.332 cum Say 0.33 cum	sqm	2.41	234.70	565.63(A)
5.3	Rate as per item no 5.3 of SH : RCC Work Less labour for not lifting the materilas upto floor five level	cum	0.33	7390.80	2438.96(A)
0115	Coolie Steel reinforcement for slab @ 80.09 Kg/cum For 0.33 cum = 26.43 kg.	day	-0.62	368.00	-228.16
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work Form work inside area of man-hole 1.20 x 0.90 = 1.08 sqm Less cover = $3.14/4 \times (0.56)^2 = (-) 0.246$ sqm = 0.834 sqm Say 0.83 sqm	kg	26.43	55.30	1461.58(A)
5.9.3	Rate as per item no 5.9.3 of SH : RCC Work LABOUR Extra labour for making channel :	sqm	0.83	422.30	350.51(A)
0123	Mason (brick layer) 1st class	day	0.08	487.00	38.96
0124	Mason (brick layer) 2nd class	day	0.08	448.00	35.84
3860	560 mm dia cover with frame (Heavy duty)	each	1.00	9000.00	9000.00
9977	Carriage of C.I. cover & frame	L.S.	13.52	1.73	23.39
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	20.28	1.73	35.08
	TOTAL				21543.19
	Add 1 % Water charges on all except (A) i.e. on (21543.19 - 12626.39) = 8916.80				89.17
	TOTAL				21632.36
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (21632.36 - 12626.39) = 9005.97				1350.90
	Cost of each				22983.26
	Say				22983.25

19.7.3.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.8	<p>Details of cost for 1 manhole MATERIAL Cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20 m = 0.547 cum Say 0.55 cum Rate as per item no 4.1.8 of SH : Concrete Work</p>	cum	0.55	4478.15	2462.98(A)
6.36.1	<p>sewer bricks conforming to IS:4885 in cement mortar 1:4 (1 cement :4 coarse sand) 5.12x0.23x0.65 m = 0.765 cum 1x0.56x0.23x0.15 m = 0.019 cum 1x0.79x0.23x0.15 = 0.027 cum Total= 0.811 cum Less for pipe 2x3.14x(0.15m)²x0.23m = (-) 0.008 cum = 0.803 cum Say 0.80 cum Rate as per item No 6.36.1 of SH : Brick Work</p>	cum	0.8	5102.00	4081.60(A)
4.1.3	<p>Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2)x(0.30+0.20)/2 = 0.27 cum Less for pipe 1.20x3.14/4x(0.15m)² = (-) 0.021 cum = 0.249 cum say 0.25 Rate as per item no. 4.1.3 of SH : Concrete Work</p>	cum	0.25	5481.95	1370.49(A)
13.9.1	<p>12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 4.20mx0.35m = 1.47 sqm 2x0.56x0.15 m = 0.17 sqm 2x½x0.90x0.10m = 0.09 sqm For fixing cover 0.96x0.96 m =0.922 sqm Total= 2.652 sqm Less cover 3.14/4x(0.56)² = (-) 0.246 sqm = 2.406 sqm Say 2.41 sqm Rate as per item no 13.9.1 of SH : Finishing</p>	sqm	2.41	234.70	565.63(A)
5.3	<p>Reinforced cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab : 1.66x1.36x0.15m = 0.339 cum Add extra concreting 1x(0.56+0.79)x 0.15x0.15 m = 0.03 cum = 0.369 cum Less for cover 0.7854x(0.56)²x0.15m = (-) 0.037 cum = 0.332 cum Say 0.33 cum Rate as per item no 5.3 of SH : RCC Work Less labour for not lifting the materilas upto floor five level</p>	cum	0.33	7390.80	2438.96(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	-0.62	368.00	-228.16
5.22.1	Steel reinforcement for slab @ 80.09 Kg/cum For 0.33 cum = 26.43 kg Rate as per item no. 5.22.1 of SH : RCC work	kg	26.43	55.30	1461.58(A)
5.9.3	Form work inside area of man-hole 1.20x0.90 = 1.08 sqm Less cover = $3.14/4 \times (0.56)^2 = (-) 0.246$ sqm = 0.834 sqm Say 0.83 sqm Rate as per item no 5.9.3 of SH : RCC Work LABOUR	sqm	0.83	422.30	350.51(A)
0123	Extra labour for making channel : Mason (brick layer) 1st class	day	0.08	487.00	38.96
0124	Mason (brick layer) 2nd class	day	0.08	448.00	35.84
3860	560 mm dia cover with frame (Heavy duty)	each	1.00	9000.00	9000.00
9977	Carriage of C.I. cover & frame	L.S.	13.52	1.73	23.39
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	20.28	1.73	35.08
	TOTAL				21648.55
	Add 1 % Water charges on all except (A) i.e. on (21648.55 - 12731.75) = 8916.80				89.17
	TOTAL				21737.72
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (21737.72 - 12731.75) = 9005.97				1350.90
	Cost of each				23088.62
	Say				23088.60

19.8 Extra for depth for manholes :

19.8.1 Size 90x80 cm

19.8.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Details of cost for one meter MATERIAL Brick work with bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) 4.32x0.23x1.0 m = 0.994 cum Say 0.99 cum Rate as per item no. 6.1.1 of S.H : brick work	cum	0.99	4970.30	4920.60
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 3.40x1 m = 3.40 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	3.40	234.70	797.98
	TOTAL				5718.58
	Cost for one metre				5718.58
	Say				5718.60

19.8.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Details of cost for one meter MATERIAL Brick work with modular extruded brunt fly ash clay sewer bricks conforming to IS : 4885 in cement mortar 1:4 (1 cement : 4 coarse sand) 4.32x0.23x1.0 m = 0.994 cum Say 0.99 cum Rate as per item No 6.36.1 of SH : Brick Work	cum	0.99	5102.00	5050.98
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 3.40x1 m = 3.40 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	3.40	234.70	797.98
	TOTAL				5848.96
	Cost for one metre				5848.96
	Say				5848.95

19.8.2 Size 120x90 cm

19.8.2.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Details of cost for one meter MATERIAL Brick work with bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) 5.12x0.23x1.0 m = 1.178 cum Say 1.18 cum Rate as per item no. 6.1.1 of S.H : brick work	cum	1.18	4970.30	5864.95
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 4.20x1 m = 4.20 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	4.20	234.70	985.74
	TOTAL				6850.69
	Cost for one metre				6850.69
	Say				6850.70

19.8.2.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one meter MATERIAL Brick work with modular extruded brunt fly ash clay sewer bricks conforming to IS :4885 in cement mortar 1:4 (1 cement : 4 coarse sand) 5.12x0.23x1.0 m = 1.178 cum Say 1.18 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Rate as per item No 6.36.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 4.20x1 m = 4.20 sqm	cum	1.18	5102.00	6020.36
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Cost for one metre Say	sqm	4.20	234.70	985.74 7006.10 7006.10 7006.10

19.9 Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :

19.9.1 0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :

19.9.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	Details of cost for 1 manhole MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.67x1.67x0.225 m = 0.63 cum Rate as per item no 4.1.6 of SH : Concrete Work Brick work with bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) Curved on plan 3.14x1.14x0.074x0.23 = 0.061 3.14x(1.14+0.79)/2x0.711x0.23 = 0.496 Total= 0.557 Duct arch ring and portion of pipe 2x1/2x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x(0.15) ² x0.230 = 0.008 cum Total= 0.026 cum Net quantity 0.557-0.026 = 0.531 Say 0.53	cum	0.63	4814.55	3033.17(A)
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work Brick work in foundation with 7.5 class designation brick in cement mortar 1:4 (1 cement : 4 fine sand)	cum	0.53	4970.30	2634.26(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.9	2x½x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum Rate as per item no 6.9 of SH : Brick Work Cement concrete 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching : 3.14/4x(0.91+0.82)²x0.20 = 0.118 cum [(2x8.133)/360]x(4/3)x3.14x(0.45)³ =0.017 cum Total = 0.135 cum Less pipe : 0.91x3.14/4x(0.15)² = (-) 0.016 cum = 0.119 cum Say 0.12 cum	cum	0.02	8845.60	176.91(A)
4.1.3	Rate as per item no. 4.1.3 of SH : concrete Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d² x thickness 3.14/4x(1.020)²x0.15 m =0.123 cum Less cover 3.14/4x(0.28)² x 0.15 m = (-) 0.037 cum Total = 0.086 cum Say 0.09 cum	cum	0.12	5481.95	657.83(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 3.14x(0.80+0.56)/2x0.49 = 1.05 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(0.80)²/4-0.80x0.15+0.80x½x 3.14x0.15 = 0.57 sqm Total= 1.75 sqm	cum	0.09	6547.70	589.29(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing LABOUR	sqm	1.75	234.70	410.73(A)
0123	Extra labour for making channel : Mason (brick layer) 1st class	day	0.06	487.00	29.22
0124	Mason (brick layer) 2nd class	day	0.06	448.00	26.88
7135	S.F.R.C cover Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	CARRIAGE	L.S.	6.89	1.73	11.92
9999	Sundries	L.S.	16.9	1.73	29.24
	TOTAL				8519.45
	Add 1 % Water charges on all except (A) i.e. on (8519.45 - 7502.19) = 1017.26				10.17
	TOTAL				8529.62
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8529.62 - 7502.19) = 1027.43				154.11
	Cost of one manhole				8683.73
	Say				8683.75

19.9.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	<p>Details of cost for 1 manhole MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.67x1.67x0.225 m = 0.63 cum Rate as per item no 4.1.6 of SH : Concrete Work</p>	cum	0.63	4814.55	3033.17(A)
6.36.1	<p>Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) Curved on plan 3.14x1.14x0.074x0.23 = 0.061 3.14x(1.14+0.79)/2x0.711x0.23 = 0.496 = 0.557 Duct arch ring and portion of pipe 2x1/2x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x(0.15)²x0.230 = 0.008 cum Total= 0.026 cum Net quantity 0.557-0.026 = 0.531 Say 0.53 Rate as per item No 6.36.1 of SH : Brick Work</p>	cum	0.53	5102.00	2704.06(A)
6.37	<p>Brick work in arches with modular extruded brunt fly ash clay sewer bricks conforming to IS : 4885 in cement mortar 1:3 (1 cement : 3 fine sand) 2x1/2x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum Rate as per item No 6.37 of SH : Brick Work</p>	cum	0.02	8355.00	167.10(A)
4.1.3	<p>Cement concrete 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching : 3.14/4x(0.91+0.82)²x0.20 = 0.118 cum [(2x8.133)/360]x(4/3)x3.14x(0.45)³ =0.017 cum Total= 0.135 cum Less pipe : 0.91x3.14/4x(0.15)² = (-) 0.016 cum Total= 0.119 cum Say 0.12 cum Rate as per item no. 4.1.3 of SH : concrete Work</p>	cum	0.12	5481.95	657.83(A)
4.2.3	<p>Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d² x thickness 3.14/4x(1.020)²x0.15 m =0.123 cum Less cover 3.14/4x(0.28)² x 0.15 m = (-) 0.037 cum Total = 0.086 cum Say 0.09 cum Rate as per item no 4.2.3 of SH : Concrete Work</p>	cum	0.09	6547.70	589.29(A)
	<p>12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement</p>				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	$3.14 \times (0.80 + 0.56) / 2 \times 0.49 = 1.05$ sqm $3.14 \times 0.56 \times 0.075 = 0.13$ sqm Benching $3.14 \times (0.80)^2 / 4 - 0.80 \times 0.15 + 0.80 \times \frac{1}{2} \times 3.14 \times 0.15 = 0.57$ sqm Total= 1.75 sqm Rate as per item no 13.9.1 of SH : Finishing LABOUR	sqm	1.75	234.70	410.73(A)
0123	Extra labour for making channel : Mason (brick layer) 1st class	day	0.06	487.00	29.22
0124	Mason (brick layer) 2nd class	day	0.06	448.00	26.88
7135	S.F.R.C cover Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	CARRIAGE	L.S.	6.89	1.73	11.92
9999	Sundries	L.S.	16.90	1.73	29.24
	TOTAL				8579.44
	Add 1 % Water charges on all except (A) i.e. on (8579.44 - 7562.18) = 1017.26				10.17
	TOTAL				8589.61
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8589.61 - 7562.18) = 1027.43				154.11
	Cost of one manhole				8743.72
	Say				8743.70

19.10 Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m

19.10.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Detail of cost of 0.76 m depth Brick work in foundation with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone 20mm nominal size)	cum	0.63	4970.30	3131.29
4.1.3	Rate as per item no 4.1.3 of SH : Concrete Work 12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with neat cement.	cum	0.01	5481.95	54.82
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Cost for 0.76 metre Cost for 1.00 metre Say	sqm	2.33	234.70	546.85
					3732.96
					4911.78
					4911.80

19.10.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Detail of cost of 0.76 m extra depth Brick work with modular extruded burnt fire clay bricks in cement mortar 1:4 (1 cement : 4 coarse sand) Rate as per item No 6.36.1 of SH : Brick Work	cum	0.63	5102.00	3214.26
4.1.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone 20mm nominal size) Rate as per item no 4.1.3 of SH : Concrete Work	cum	0.01	5481.95	54.82
13.9.1	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement. Rate as per item no 13.9.1 of SH : Finishing Work	sqm	2.33	234.70	546.85
	Cost for 0.76 metre				3815.93
	Cost for 1.00 metre				5020.96
	Say				5020.95

19.11 Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :

19.11.1 1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :

19.11.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	Details of cost for 1 manhole MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.98x1.98x0.30 m = 1.178 cum Say 1.18 cum Rate as per item no 4.1.6 of SH : Concrete Work	cum	1.18	4814.55	5681.17(A)
	Brick work with bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) Curved on plan				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	$3.14 \times 1.45 \times 0.24 \times 0.23 = 0.251$ $3.14 \times (1.45 + 0.79) / 2 \times 1.32 \times 0.23 = 1.069$ Total = 1.320 Duct arch ring and portion of pipe $2 \times \frac{1}{2} \times 3.14 \times 0.25 \times 0.230 \times 0.10 \text{ m} = 0.018 \text{ cum}$ $2 \times 3.14 / 4 \times (0.15)^2 \times 0.230 = 0.008 \text{ cum}$ Total = 0.026 cum Net quantity $1.320 - 0.026 = 1.294$ Say 1.29 cum Rate as per item no 6.1.1 of SH : Brick Work Brick work in arches with 75 class designation brick in cement mortar 1:3 (1 cement : 3 fine sand) $2 \times \frac{1}{2} \times 3.14 \times 0.25 \text{ m} \times 0.230 \times 0.10 \text{ m}$ $= 0.018 \text{ cum}$ Say 0.02 cum	cum	1.29	4970.30	6411.69(A)
6.9	Rate as per item no 6.9 of SH : Brick Work Cement concrete 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching : $3.14 / 4 \times (1.22)^2 \times 0.20 = 0.234 \text{ cum}$ $[(2 \times 8.133) / 360] \times (4/3) \times 3.14 \times (0.61)^3$ $= 0.043 \text{ cum}$ Total = 0.277 cum Less pipe : $1.22 \times 3.14 / 4 \times (0.15)^2 (-)$ $= 0.0216 \text{ cum}$ Total = 0.2554 cum Say 0.26 cum	cum	0.02	8845.60	176.91(A)
4.1.3	Rate as per item no. 4.1.3 of SH : concrete Work Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : $3.14 / 4 \times d^2 \times \text{thickness}$ $3.14 / 4 \times (1.020)^2 \times 0.15 \text{ m} = 0.123 \text{ cum}$ Less cover $3.14 / 4 \times (0.28)^2 \times 0.15 \text{ m} :$ $(-) = 0.037 \text{ cum}$ Total = 0.086 cum Say 0.09 cum	cum	0.26	5481.95	1425.31(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement $3.14 \times (1.136 + 0.56) / 2 \times 1.216 = 3.241 \text{ sqm}$ $3.14 \times 0.56 \times 0.075 = 0.13 \text{ sqm}$ $3.14 \times (1.136)^2 / 4 - 1.136 \times 1 / 2 \times 3.14 \times 0.15$ $= 1.112 \text{ sqm}$ Total = 4.483 sqm Say 4.48 sqm	cum	0.09	6547.70	589.29(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing LABOUR Extra labour for making channel :	sqm	4.48	234.70	1051.46(A)
0123	Mason (brick layer) 1st class	day	0.10	487.00	48.70
0124	Mason (brick layer) 2nd class	day	0.10	448.00	44.80
	S.F.R.C manhole cover				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	CARRIAGE	L.S.	6.89	1.73	11.92
9999	Sundries	L.S.	16.9	1.73	29.24
	TOTAL				16390.49
	Add 1 % Water charges on all except (A) i.e. on (16390.49 - 15335.83) = 1054.66				10.55
	TOTAL				16401.04
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (16401.04 - 15335.83) = 1065.21				159.78
	Cost of one manhole				16560.82
	Say				16560.80

19.11.1.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	Details of cost for 1 manhole MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.98x1.98x0.30 m = 1.178 cum Say 1.18 cum Rate as per item no 4.1.6 of SH : Concrete Work	cum	1.18	4814.55	5681.17(A)
6.36.1	Brick work with modular extruded brunt fly ash clay sewer bricks in cement mortar 1:4 (1 cement : 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23 = 0.251 3.14x(1.45+0.79)/2x1.32x0.23 = 1.069 Total = 1.320 Duct arch ring and portion of pipe 2x½x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x(0.15)²x0.230 = 0.008 cum Total= 0.026 cum Net quantity 1.320-0.026 = 1.294 Say 1.29 cum Rate as per item No 6.36.1 of SH : Brick Work	cum	1.29	5102.00	6581.58(A)
6.37	Brick work in arches with modular extruded brunt fly ash clay sewer bricks in cement mortar 1:3 (1 cement : 3 fine sand) 2x½x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum Rate as per item No 6.37 of SH : Brick Work Cement concrete 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	0.02	8355.00	167.10(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	For benching : $3.14/4 \times (1.22)^2 \times 0.20 = 0.234 \text{ cum}$ $[(2 \times 8.133)/360] \times (4/3) \times 3.14 \times (0.61)^3 = 0.043 \text{ cum}$ Total= 0.277 cum Less pipe : $1.22 \times 3.14/4 \times (0.15)^2 (-) = 0.0216 \text{ cum}$ Total= 0.2554 cum Say 0.26 cum Rate as per item no. 4.1.3 of SH : concrete Work	cum	0.26	5481.95	1425.31(A)
4.2.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : $3.14/4 \times d^2 \times \text{thickness}$ $3.14/4 \times (1.020)^2 \times 0.15 \text{ m} = 0.123 \text{ cum}$ Less cover $3.14/4 \times (0.28)^2 \times 0.15 \text{ m} : (-) = 0.037 \text{ cum}$ Total= 0.086 cum Say 0.09 cum Rate as per item no 4.2.3 of SH : Concrete	cum	0.09	6547.70	589.29(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement $3.14 \times (1.136 + 0.56)/2 \times 1.216 = 3.241 \text{ sqm}$ $3.14 \times 0.56 \times 0.075 = 0.13 \text{ sqm}$ $3.14 \times (1.136)^2/4 - 1.136 \times 1/2 \times 3.14 \times 0.15 = 1.112 \text{ sqm}$ Total= 4.483 sqm Say 4.48 sqm Rate as per item no 13.9.1 of SH : Finishing LABOUR	sqm	4.48	234.70	1051.46(A)
0123	Extra labour for making channel : Mason (brick layer) 1st class	day	0.10	487.00	48.70
0124	Mason (brick layer) 2nd class	day	0.10	448.00	44.80
7135	S.F.R.C manhole cover and frame Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	CARRIAGE	L.S.	6.89	1.73	11.92
9999	Sundries	L.S.	16.9	1.73	29.24
	TOTAL				16550.57
	Add 1 % Water charges on all except (A) i.e. on (16550.57 - 15495.91) = 1054.66				10.55
	TOTAL				16561.12
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (16561.12 - 15495.91) = 1065.21				159.78
	Cost of one manhole				16720.90
	Say				16720.90

19.12 Extra depth for circular type manhole 1.22 m internal dia (at bottom) beyond 1.68 m to 2.29 m :

19.12.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Detail of cost of 0.61 m extra depth Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) Rate as per item no 6.1.1 of SH : Brick Work 12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement.	cum	0.66	4970.30	3280.40
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Cost for 0.61 metre Cost for 1.00 metre Say	sqm	2.56	234.70	600.83 3881.23 6362.67 6362.65

19.12.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Detail of cost of 0.61 m extra depth Brick work with modular extruded burnt fire clay bricks in cement mortar 1:4 (1 cement : 4 coarse sand) Rate as per item No 6.36.1 of SH : Brick Work 12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement.	cum	0.66	5102.00	3367.32
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Cost for 0.61 metre Cost for 1.00 metre Say	sqm	2.56	234.70	600.83 3968.15 6505.16 6505.15

19.13 Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :

19.13.1 2.30 m deep with SFRC Cover and frame (heavy duty HD- 20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :

19.13.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	<p>Details of cost for 1 manhole MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) $2.74 \times 2.74 \times 0.30 \text{ m} = 2.25 \text{ cum}$ Rate as per item no 4.1.6 of SH : Concrete Work</p>	cum	2.25	4814.55	10832.74(A)
6.1.1	<p>Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) Curved on plan $3.14 \times 1.98 \times 0.25 \times 0.46 = 0.716 \text{ cum}$ $3.14 \times (1.98 + 0.905) / 2 \times 0.345 \times 1.93 = 3.019 \text{ cum}$ Total = 3.735 cum Duct arch ring and portion of pipe $2 \times \frac{1}{2} \times 3.14 \times 0.25 \times 0.46 \times 0.10 \text{ m} = 0.036 \text{ cum}$ $2 \times 3.14 / 4 \times (0.15)^2 \times 0.460 = 0.016 \text{ cum}$ Total = 0.052 cum Net quantity $3.735 - 0.052 = 3.683 \text{ cum}$ Say 3.68 cum</p>	cum	3.68	4970.30	18290.70(A)
6.9	<p>Brick work in arches with 75 class designation brick in cement mortar 1:3 (1 cement : 3 fine sand) $2 \times \frac{1}{2} \times 3.14 \times 0.25 \text{ m} \times 0.460 \times 0.10 \text{ m} = 0.036 \text{ cum}$ Say 0.04 cum Rate as per item no 6.9 of SH : Brick Work</p>	cum	0.04	8845.60	353.82(A)
4.1.3	<p>Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching : $3.14 / 4 \times (1.52)^2 \times 0.20 = 0.363 \text{ cum}$ $[(2 \times 8.133) / 360] \times (4/3) \times 3.14 \times (0.76)^3 = 0.083 \text{ cum}$ Total = 0.446 cum Less pipe : $1.52 \times 3.14 / 4 \times (0.15)^2 (-) = 0.027 \text{ cum}$ Total = 0.419 cum Say 0.42 cum Rate as per item no. 4.1.3 of SH : concrete</p>	cum	0.42	5481.95	2302.42(A)
4.2.3	<p>Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : $3.14 / 4 \times d^2 \times \text{thickness}$ $3.14 / 4 \times (1.020)^2 \times 0.15 \text{ m} = 0.123 \text{ cum}$ Less cover $3.14 / 4 \times (0.28)^2 \times 0.15 \text{ m} : (-) = 0.037 \text{ cum}$ Total = 0.086 cum Say 0.09 cum Rate as per item no 4.2.3 of SH : Concrete 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement $3.14 \times (1.454 + 0.56) / 2 \times 1.799 = 5.694 \text{ sqm}$ $3.14 \times 0.56 \times 0.075 = 0.13 \text{ sqm}$</p>	cum	0.09	6547.70	589.29(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	Benching 3.14x(1.454) ² /4-1.454x0.15+1.454x1/2x 3.14x0.15 =1.786 sqm Total= 7.61 sqm	sqm	7.61	234.70	1786.07(A)
	Rate as per item no 13.9.1 of SH : Finishing LABOUR				
0123	Extra labour for making channel : Mason (brick layer) 1st class	day	0.10	487.00	48.70
0124	Mason (brick layer) 2nd class S.F.R.C cover	day	0.10	448.00	44.80
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	CARRIAGE	L.S.	6.89	1.73	11.92
9999	Sundries	L.S.	16.90	1.73	29.24
	TOTAL				35209.70
	Add 1 % Water charges on all except (A) i.e. on (35209.70 - 34155.04) = 1054.66				10.55
	TOTAL				35220.25
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (35220.25 - 34155.04) = 1065.21				159.78
	Cost of one manhole				35380.03
	Say				35380.05

19.13.1.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.6	Details of cost for 1 manhole MATERIAL Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 2.74x2.74x0.30 m = 2.25 cum Rate as per item no 4.1.6 of SH : Concrete Work	cum	2.25	4814.55	10832.74(A)
	Brick work with bricks modular extruded brunt fly ash clay sewer bricks in cement mortar 1:4 (1 cement : 4 coarse sand) Curved on plan 3.14x1.98x0.25x0.46 = 0.716 cum 3.14x(1.98+0.905)/2x0.345x1.93 = 3.019 cum Total= 3.735 cum Duct arch ring and portion of pipe 2x ¹ / ₂ x3.14x0.25mx0.46x0.10 m = 0.036 cum 2x3.14/4x(0.15) ² x0.460 = 0.016 cum Total= 0.052 cum Net quantity 3.735-0.052 = 3.683 cum Say 3.68 cum				
6.36.1	Rate as per item No 6.36.1 of SH : Brick Work Brick work in arches with modular extruded brunt fly ash clay sewer bricks in cement mortar 1:3 (1 cement : 3 fine sand)	cum	3.68	5102.00	18775.36(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.37	2x1/2x3.14x0.25 m x0.460x0.10 m = 0.036 cum Say 0.04 cum Rate as per item No 6.37 of SH : Brick Work Cement concrete 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching : 3.14/4x(1.52) ² x0.20 = 0.363 cum [(2x8.133)/360]x(4/3)x3.14x(0.76) ³ =0.083 cum Total= 0.446 cum Less pipe :1.52x3.14/4x(0.15) ² (-) = 0.027 cum = 0.419 cum Say 0.42 cum	cum	0.04	8355.00	334.20(A)
4.1.3	Rate as per item no. 4.1.3 of SH : concrete Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d ² x thickness 3.14/4x(1.020) ² x0.15 m =0.123 cum Less cover 3.14/4x(0.28) ² x 0.15 m : (-) = 0.037 cum Net Quantity= 0.086 cum Say 0.09 cum	cum	0.42	5481.95	2302.42(A)
4.2.3	Rate as per item no 4.2.3 of SH : Concrete 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 3.14x(1.454+0.56)/2x1.799 = 5.694 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(1.454) ² /4-1.454x0.15+1.454x1/2x 3.14x0.15 =1.786 sqm Total= 7.61 sqm	cum	0.09	6547.70	589.29(A)
13.9.1	Rate as per item no 13.9.1 of SH : Finishing LABOUR Extra labour for making channel :	sqm	7.61	234.70	1786.07(A)
0123	Mason (brick layer) 1st class	day	0.10	487.00	48.70
0124	Mason (brick layer) 2nd class	day	0.10	448.00	44.80
	S.F.R.C cover				
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	CARRIAGE	L.S.	6.89	1.73	11.92
9999	Sundries	L.S.	16.90	1.73	29.24
	TOTAL				35674.74
	Add 1 % Water charges on all except (A) i.e. on (35674.74 - 34620.08) = 1054.66				10.55
	TOTAL				35685.29
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (35685.29 - 34620.08) = 1065.21				159.78
	Cost of one manhole				35845.07
	Say				35845.05

19.14 Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m :

19.14.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Detail of cost of 1.88 m extra depth Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand) Rate as per item no 6.1.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement	cum	5.26	4970.30	26143.78
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Cost for 1.88 metre Cost for 1.00 metre Say	sqm	8.99	234.70	2109.95 28253.73 15028.57 15028.55

19.14.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.36.1	Detail of cost of 0.61 m extra depth Brick work with modular extruded burnt fly ash bricks in cement mortar 1:4 (1 cement: 4 coarse sand) Rate as per item No 6.36.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement	cum	5.26	5102.00	26836.52
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Cost for 0.61 metre Cost for 1.00 metre Say	sqm	8.99	234.70	2109.95 28946.47 15397.05 15397.05

19.15 Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :

19.15.1 With 20x20 mm square bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1006	Details of cost for one M.S foot rests MATERIAL M.S. 20 mm square bar 0.75 m @ 3.137 kg/m = 0.024	quintal	0.024	3675.00	88.20
9988	Mild steel square bars Carriage, painting, and other sundries	L.S.	1.82	1.73	3.15
0103	LABOUR for fabrication Blacksmith 2nd class	day	0.10	448.00	44.80
0114	Beldar Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.20x0.20x0.10 m = 0.004 cum	day	0.10	368.00	36.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.2.5	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	5992.75	23.97(A)
	LABOUR for fixing M.S. foot rests				
0123	Mason (brick layer) 1st class	day	0.02	487.00	9.74
0124	Mason (brick layer) 2nd class	day	0.02	448.00	8.96
0114	Beldar	day	0.05	368.00	18.40
	TOTAL				234.02
	Add 1 % Water charges on all except (A) i.e. on (234.02 - 23.97) = 210.05				2.10
	TOTAL				236.12
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (236.12 - 23.97) = 212.15				31.82
	Cost for 1 no.				267.94
	Say				267.95

19.15.2 With 20 mm diameter round bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rests				
	MATERIAL				
	M.S. round brass 20 mm dia 0.75 m @ 2.47kg 1 m = 0.018 q				
1003	Mild steel round bar above 12 mm dia	quintal	0.018	3575.00	64.35
9988	Carriage, painting, and other sundries	L.S.	1.82	1.73	3.15
	Labour for fabrication				
0103	Blacksmith 2nd class	day	0.10	448.00	44.80
0114	Beldar	day	0.10	368.00	36.80
	Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.20x0.20x0.10 m = 0.004 cum				
4.2.5	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	5992.75	23.97(A)
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.02	487.00	9.74
0124	Mason (brick layer) 2nd class	day	0.02	448.00	8.96
0114	Beldar	day	0.05	368.00	18.40
	TOTAL				210.17
	Add 1 % Water charges on all except (A) i.e. on (210.17 - 23.97) = 186.20				1.86
	TOTAL				212.03
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (212.03 - 23.97) = 188.06				28.21
	Cost for 1 no.				240.24
	Say				240.25

- 19.16 Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one no. MATERIAL				
7354	Plastic encapsuled M.S. foot rest 30x20x15 cm	each	1.00	115.00	115.00
9988	Carriage and other sundries Cement concrete 1:3:6 (0.30x0.20x15 = 0.009 cum)	L.S.	1.82	1.73	3.15
4.2.5	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.009	5992.75	53.93(A)
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.02	487.00	9.74
0124	Mason (brick layer) 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.05	368.00	18.40
	TOTAL				289.82
	Add 1 % Water charges on all except (A) i.e. on (289.82 - 53.93) = 235.89				2.36
	TOTAL				292.18
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (292.18 - 53.93) = 238.25				35.74
	Cost for 1 no.				327.92
	Say				327.90

- 19.17 Replacement of M.S. foot rests in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size):**

19.17.1 With 20x20 mm square bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rests MATERIAL				
	M.S. 20 mm square bar 0.75 m @ 3.137 kg/m =0.024 q				
1006	Mild steel square bars	quintal	0.024	3675.00	88.20
9988	Carriage,painting, and other sundries Labour for fabrication	L.S.	1.82	1.73	3.15
0103	Blacksmith 2nd class	day	0.10	448.00	44.80
0114	Beldar	day	0.10	368.00	36.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.2.5	Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.20x0.20x0.10 m = 0.004 cum Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	5992.75	23.97(A)
	LABOUR for dismantling old forts rest cutting holes and fixing new M.S. foot rests				
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0114	Beldar	day	0.1	368.00	36.80
	TOTAL				280.47
	Add 1 % Water charges on all except (A) i.e. on (280.47 - 23.97) = 256.50				2.57
	TOTAL				283.04
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (283.04 - 23.97) = 259.07				38.86
	Cost for 1 no.				321.90
	Say				321.90

19.17.2 With 20 mm diameter round bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one M.S foot rests				
	MATERIAL				
	M.S. round bars 20 mm dia 0.75 m @ 2.47 kg/m =0.018 q	quintal	0.018	3575.00	64.35
1003	Mild steel round bar above 12 mm dia	L.S.	1.82	1.73	3.15
9988	Carriage,painting, and other sundries				
	Labour for fabrication				
0103	Blacksmith 2nd class	day	0.10	448.00	44.80
0114	Beldar	day	0.10	368.00	36.80
	Cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.20x0.20x0.10 m = 0.004 cum Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	5992.75	23.97(A)
	LABOUR for dismantling old forts rest cutting holes and fixing new M.S. foot rests				
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				256.62
	Add 1 % Water charges on all except (A) i.e. on (256.62 - 23.97) = 232.65				2.33
	TOTAL				258.95
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (258.95 - 23.97) = 234.98				35.25
	Cost for 1 no.				294.20
	Say				294.20

19.18 Supplying and fixing C.I. cover without frame for manholes :**19.18.1 455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cover				
1355	MATERIAL Rectangular cover 455x610mm without frame (low duty)	each	1.00	1000.00	1000.00
9977	Carriage of C.I. Manhole cover	L.S.	7.15	1.73	12.37
	LABOUR				
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				1056.53
	Add 1 % Water charges				10.57
	TOTAL				1067.10
	Add 15 % Contractor's profit and overheads				160.07
	Cost for 1 cover				1227.17
	Say				1227.15

19.18.2 500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cover				
1357	MATERIAL 500 mm dia cover without frame (medium duty)	each	1.00	2300.00	2300.00
9977	Carriage of C.I. cover	L.S.	13.47	1.73	23.30
	LABOUR				
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				2367.46
	Add 1 % Water charges				23.67
	TOTAL				2391.13
	Add 15 % Contractor's profit and overheads				358.67
	Cost for 1 no.				2749.80
	Say				2749.80

19.18.3 560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cover				
3861	MATERIAL 560 mm dia cover without frame (Heavy duty)	each	1.00	5000.00	5000.00
9977	Carriage of C.I. cover	L.S.	16.12	1.73	27.89
	LABOUR				
0114	Beldar	day	0.12	368.00	44.16
	TOTAL				5072.05
	Add 1 % Water charges				50.72
	TOTAL				5122.77
	Add 15 % Contractor's profit and overheads				768.42
	Cost for 1 no.				5891.19
	Say				5891.20

19.19 Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality

19.19.1 L D- 2.5

19.19.1.1 Rectangular shape 600x450 mm internal dimensions

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7130	Details of cost for one no. MATERIAL Rectangular shape 600x450 mm precast R.C.C. manhole cover with frame - L.D. - 25 Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 1.00x0.85x0.15 = 0.1275 cum Less cover with frame 0.85x0.70x0.15 = (-) 0.0893 cum = 0.0382 cum Say 0.04 cum	each	1.00	700.00	700.00
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.04	5481.95	219.28(A)
9977	Carriage of R.C.C cover with frame	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				954.36
	Add 1 % Water charges on all except (A) i.e. on (954.36 - 219.28) = 735.08				7.35
	TOTAL				961.71
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (961.71 - 219.28) = 742.43				111.36
	Cost for 1 no.				1073.07
	Say				1073.05

19.19.1.2 Square shape 450 mm internal dimensions

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7131	Details of cost for one no. MATERIAL Square shape 450x450 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	1.00	600.00	600.00
9977	Carriage of manhole cover Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 0.725x0.725x0.15 = 0.0788 cum Less cover with frame 0.575x0.575x0.15 = (-) 0.0496 cum = 0.0292 cum Say 0.03 cum	L.S.	6.76	1.73	11.69
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.03	5481.95	164.46(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				799.54
	Add 1 % Water charges on all except (A) i.e. on (799.54 - 164.46) = 635.08				6.35
	TOTAL				805.89
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (805.89 - 164.46) = 641.43				96.21
	Cost for 1 no.				902.10
	Say				902.10

19.19.1.3 Circular shape 450 mm internal diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7132	Details of cost for one no. MATERIAL Circular shape 450 mm dia precast R.C.C. manhole cover with frame - L.D. - 25	each	1.00	600.00	600.00
9977	Carriage of manhole cover	L.S.	6.76	1.73	11.69
4.1.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) $3.14/4 \times (0.775)^2 \times 0.15 = 0.0708$ cum Less cover with frame $3.14/4 \times (0.625)^2 \times 0.15 = (-) 0.0460$ cum = 0.0248 cum Say 0.03 cum				
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.03	5481.95	164.46(A)
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				799.54
	Add 1 % Water charges on all except (A) i.e. on (799.54 - 164.46) = 635.08				6.35
	TOTAL				805.89
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (805.89 - 164.46) = 641.43				96.21
	Cost for 1 no.				902.10
	Say				902.10

19.19.2 M D - 10

19.19.2.1 Square shape 450 mm internal dimension

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7133	Details of cost for one no. MATERIAL Rectangular shape 500x500 mm precast R.C.C. manhole cover with frame - M.D. - 10	each	1.00	700.00	700.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of manhole cover Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 0.95x0.95x0.15 = 0.1354 cum Less cover with frame 0.80x0.80x0.15 = (-) 0.096 cum = 0.0394 cum Say 0.04 cum	L.S.	6.76	1.73	11.69
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.04	5481.95	219.28(A)
9999	Sundries	L.S.	16.64	1.73	28.79
	TOTAL				959.76
	Add 1 % Water charges on all except (A) i.e. on (959.76 - 219.28) = 740.48				7.40
	TOTAL				967.16
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (967.16 - 219.28) = 747.88				112.18
	Cost for 1 no.				1079.34
	Say				1079.35

19.19.2.2 Circular shape 500 mm internal diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7134	Details of cost for one no. MATERIAL Circular shape 500 mm dia precast R.C.C. manhole cover with frame - M.D. - 10	each	1.00	600.00	600.00
9977	Carriage of manhole cover Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 3.14/4x(0.95) ² x0.15 = 0.1064 cum Less cover with frame 3.14/4x(0.8) ² x0.15 = (-) 0.0754 cum = 0.031 cum Say 0.03 cum	L.S.	6.76	1.73	11.69
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.03	5481.95	164.46(A)
9999	Sundries	L.S.	16.64	1.73	28.79
	TOTAL				804.94
	Add 1 % Water charges on all except (A) i.e. on (804.94 - 164.46) = 640.48				6.40
	TOTAL				811.34
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (811.34 - 164.46) = 646.88				97.03
	Cost for 1 no.				908.37
	Say				908.35

19.19.3 H D - 20**19.19.3.1 Circular shape 560 mm internal diameter**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7135	Details of cost for one no. MATERIAL Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1.00	920.00	920.00
9977	Carriage of manhole cover Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) $3.14/4 \times (1.05)^2 \times 0.15 = 0.1299$ cum Less cover with frame $3.14/4 \times (0.9)^2 \times 0.15 = (-) 0.0955$ cum = 0.0344 cum Say 0.03 cum	L.S.	13.52	1.73	23.39
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.03	5481.95	164.46(A)
9999	Sundries	L.S.	20.28	1.73	35.08
	TOTAL				1142.93
	Add 1 % Water charges on all except (A) i.e. on (1142.93 - 164.46) = 978.47				9.78
	TOTAL				1152.71
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1152.71 - 164.46) = 988.25				148.24
	Cost for 1 no.				1300.95
	Say				1300.95

19.19.4 EHD - 35**19.19.4.1 Circular shape 560 mm internal dia**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7136	Details of cost for one no. MATERIAL Circular shape 560 mm dia precast R.C.C. manhole cover with frame - E.H.D. - 35	each	1.00	1225.00	1225.00
9977	Carriage of manhole cover Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) $3.14/4 \times (1.05)^2 \times 0.15 = 0.1299$ cum Less cover with frame $3.14/4 \times (0.9)^2 \times 0.15 = (-) 0.0955$ cum = 0.0344 cum Say 0.03 cum	L.S.	13.52	1.73	23.39
4.1.3	Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.03	5481.95	164.46(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	20.28	1.73	35.08
	TOTAL				1447.93
	Add 1 % Water charges on all except (A) i.e. on (1447.93 - 164.46) = 1283.47				12.83
	TOTAL				1460.76
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1460.76 - 164.46) = 1296.30				194.45
	Cost for 1 no.				1655.21
	Say				1655.20

19.20 Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5 kg

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1353	Details of cost for one cover MATERIAL C.I.cover without frame 300x300mm inside i.e.cover of 4.50 kg	each	1.00	225.00	225.00
9988	Carriage for cover	L.S.	2.70	1.73	4.67
0114	LABOUR Beldar	day	0.03	368.00	11.04
	TOTAL				240.71
	Add 1 % Water charges				2.41
	TOTAL				243.12
	Add 15 % Contractor's profit and overheads				36.47
	Cost for 1 cover				279.59
	Say				279.60

19.21 Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :

19.21.1 For pipes 100 to 250 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	Details of cost for one connection MATERIAL coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.30x0.30x0.23 m = 0.0207 cum Less pipe = 1/2x3.14x0.23x0.23x0.23 = 0.0096 cum = 0.0111 cum Say 0.01 cum Rate as per item no. 4.1.3 of SH : Concrete 12 mm cement plater 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement	cum	0.01	5481.95	54.82(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	2x0.35x0.35 =0.25sqm Rate as per item no 13.9.1 of SH : Finishing LABOUR (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)	sqm	0.25	234.70	58.68(A)
0123	Mason (brick layer) 1st class	day	0.12	487.00	58.44
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.25	368.00	92.00
9999	Add for delay sundries etc.	L.S.	20.15	1.73	34.86
	TOTAL				352.56
	Add 1 % Water charges on all except (A) i.e. on (352.56 - 113.50) = 239.06				2.39
	TOTAL				354.95
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (354.95 - 113.50) = 241.45				36.22
	Cost for 1 connection				391.17
	Say				391.15

19.21.2 For pipes 250 to 300 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	Details of cost for one connection MATERIAL Cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.35x0.35x0.30 m = 0.037 cum Less pipe = 1/2x3.14x0.30x0.30x0.30 = 0.021 cum = 0.016 cum Say 0.02 cum Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.02	5481.95	109.64(A)
13.9.1	12 mm cement plater 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement 2x0.40x0.40 =0.32 sqm Rate as per item no 13.9.1 of SH : Finishing LABOUR (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)	sqm	0.32	234.70	75.10(A)
0123	Mason (brick layer) 1st class	day	0.12	487.00	58.44
0124	Mason (brick layer) 2nd class	day	0.12	448.00	53.76
0114	Beldar	day	0.25	368.00	92.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Add for delay sundries etc.	L.S.	20.67	1.73	35.76
	TOTAL				424.70
	Add 1 % Water charges on all except (A) i.e. on (424.70 - 184.74) = 239.96				2.40
	TOTAL				427.10
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (427.10 - 184.74) = 242.36				36.35
	Cost for 1 connection				463.45
	Say				463.45

19.21.3 For pipes 350 to 450 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.3	Details of cost for one connection MATERIAL Cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.50x0.50x0.30 m = 0.075 cum Less pipe = 1/2x3.14x0.45x0.45x0.30 = 0.048 cum = 0.027 cum Say 0.03 cum Rate as per item no. 4.1.3 of SH : Concrete Work	cum	0.03	5481.95	164.46(A)
13.9.1	12 mm cement plater 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement 2x0.55x0.55 =0.605 sqm Say 0.60 sqm Rate as per item no 13.9.1 of SH : Finishing LABOUR (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)	sqm	0.60	234.70	140.82(A)
0123	Mason (brick layer) 1st class	day	0.16	487.00	77.92
0124	Mason (brick layer) 2nd class	day	0.16	448.00	71.68
0114	Beldar	day	0.33	368.00	121.44
9999	Add for delay sundries etc.	L.S.	26.91	1.73	46.55
	TOTAL				622.87
	Add 1 % Water charges on all except (A) i.e. on (622.87 - 305.28) = 317.59				3.18
	TOTAL				626.05
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (626.05 - 305.28) = 320.77				48.12
	Cost for 1 connection				674.17
	Say				674.15

19.22 Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all-round with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centering and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall, lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement : 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications :

19.22.1 100 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1617	Details of cost for one drop connection MATERIAL S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100mm dia = 38+30+33 =101 cm say 1 metre Length of pipe = 1m. Hence, Qty = 1 / 1.8 =0.55556 Nos	each	0.55556	1150.00	638.89
9977	Carriage of pipe Cutting charges	L.S.	1.43	1.73	2.47
18.83.2	Rate as per item no 18.83.2 of SH: Water supply	each cut	3.00	84.95	254.85(A)
1336	Clearing eye with chain and lid 100 mm dia	each	1.00	44.00	44.00
1621	S.C.I. plain bend 100 mm dia	each	1.00	350.00	350.00
1628	S.C.I. plain single equal junctions 100x100x100 mm dia Brick work in cement mortar 1:4 (1 cement : 4 coarse sand) 0.20x0.20x0.23 = 0.009 cum Less pipe 1/2x3.14x0.10x0.10x0.23 = 0.002 cum Net Qty= 0.009 - 0.002 = 0.007 cum	each	1.00	450.00	450.00
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.40x0.45x1.05 m = 0.189 cum 0.40x0.25x0.40 = 0.040 cum Total= 0.229 cum Less pipe portion 1/2x3.14x0.10x0.10x1.50 = 0.012 cum Toothing portion 2x0.40x0.05x0.10 m = 0.004 cum = 0.016 cum Net Qty= 0.229-0.016 = 0.213 cum Say 0.21 cum	cum	0.007	4970.30	34.79(A)
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement 1x0.25x0.25 m = 0.0625 Say 0.06 sqm	cum	0.21	3959.70	831.54(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	Rate as per item no 13.9.1 of SH : Finishing Providing lead caulked joints to 100 mm diameter pipe and special	sqm	0.06	234.70	14.08
12.39.1 9999	Rate as per item no. 12.39.1 of SH : Roofing Providing joint to S.W. pipe with cement mortar 1:1 (1 cement : 1 fine sand)	each	4.00	309.95	1239.80(A)
	Form work 1.30x1.05 m = 1.36 sqm	L.S.	26.91	1.73	46.55
5.9.2 9988	Rate as per item no 5.9.2 of SH : RCC Sundries including carriage of bends etc.	sqm	1.36	378.60	514.90(A)
	LABOUR For cutting holes 5 cm deep in alternate course of brick work benching and channel	L.S.	26.91	1.73	46.55
0123	Mason (brick layer) 1st class	day	0.70	487.00	340.90
0124	Mason (brick layer) 2nd class	day	0.70	448.00	313.60
0114	Beldar	day	2.70	368.00	993.60
	TOTAL				6116.52
	Add 1 % Water charges on all except (A) i.e. on (6116.52 - 2889.96) = 3226.56				32.27
	TOTAL				6148.79
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6148.79 - 2889.96) = 3258.83				488.82
	Cost of one drop connection				6637.61
	Say				6637.60

19.22.2 150 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1618	Details of cost for one drop connection MATERIAL S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 150mm dia = 34.5+30+37 =101.5cm say 1.00m Length of pipe = 1m. Hence, Qty = 1 / 1.8 =0.55556 No.s	each	0.55556	1750.00	972.23
9977	Carriage of pipe	L.S.	1.82	1.73	3.15
	Cutting charges				
18.83.4	Rate as per item no 18.83.4 of SH Water Supply	each cut	3.00	159.65	478.95(A)
1337	Clearing eye with chain and lid 150 mm dia	each	1.00	50.00	50.00
1622	S.C.I. plain bend 150 mm dia	each	1.00	400.00	400.00
7087	S.C.I. Tee 150 mm	each	1.00	600.00	600.00
	Brick work in cement mortar 1:4 (1 cement : 4 coarse sand) 0.20x0.20x0.23 = 0.009 cum Less pipe 1/2x3.14x0.15x0.15x0.23 = 0.004 cum Net Qty= 0.005 cum				
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size)	cum	0.005	4970.30	24.85(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	0.45x0.50x1.15 m = 0.259 cum 0.45x0.25x0.45 = 0.0510 cum = 0.310 cum Less pipe portion 1/4x3.14x0.15x0.15x1.50 = 0.027 cum Toothing portion 3x0.45x0.05x0.10 m = 0.004 cum = 0.027 + 0.004 = 0.031 cum Net Qty 0.310-0.031 = 0.279 cum Say 0.28 cum Rate as per item no 4.1.11 of SH : Concrete 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement	cum	0.28	3959.70	1108.72(A)
13.9.1	1x0.25x0.25 m = 0.0625 Say 0.06 sqm Rate as per item no 13.9.1 of SH : Finishing Providing lead caulked joints to 150 mm diameter pipe and special	sqm	0.06	234.70	14.08(A)
12.39.2 9999	Rate as per item no. 12.39.2 of SH : Roofing Providing joint to S.W. pipe with cement mortar 1:1 (1 cement : 1 fine sand) Form work 1.450x1.15 m = 1.67 sqm	each L.S.	4.00 39.91	430.75 1.73	1723.00(A) 69.04
5.9.2 9988	Rate as per item no 5.9.2 of SH : RCC Sundries including carriage of bends etc. LABOUR For cutting holes 45 holes 5 cm deep toothing in alternate course of brick work benching and making channel	sqm L.S.	1.67 34.06	378.60 1.73	632.26(A) 58.92
0123	Mason (brick layer) 1st class	day	0.85	487.00	413.95
0124	Mason (brick layer) 2nd class	day	0.85	448.00	380.80
0114	Beldar	day	3.50	368.00	1288.00
	TOTAL				8217.95
	Add 1 % Water charges on all except (A) i.e. on (8217.95 - 3981.86) = 4236.09				42.36
	TOTAL				8260.31
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8260.31 - 3981.86) = 4278.45				641.77
	Cost of one drop connection				8902.08
	Say				8902.10

19.23 Extra for depths beyond 60 cm of sand cast iron drop connection complete:

19.23.1 For 100 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1617	Details of cost for one metre MATERIAL S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100mm dia Length of pipe = 1m. Hence, Qty = 1 / 1.8 = 0.55556 Nos.	each	0.55556	1150.00	638.89

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of material and fixing charges Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.40x0.45x1.00 m = 0.18 cum Less pipe portion 1/2x3.14x0.10x0.10x1.00 = 0.008 cum Toothing portion 5x0.40x0.05x0.10 m = 0.010 cum Total= 0.018 cum Net Qty= 0.18-0.018 = 0.162 cum Say 0.16 cum	L.S.	13.39	1.73	23.16
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work Form work 1.30x1.00 m = 1.30 sqm	cum	0.16	3959.70	633.55(A)
5.9.2	Rate as per item no 5.9.2 of SH : RCC	sqm	1.30	378.60	492.18(A)
9999	Sundries LABOUR For cutting holes 5 cm deep in alternate course of brick work	L.S.	7.15	1.73	12.37
0123	Mason (brick layer) 1st class	day	0.04	487.00	19.48
0124	Mason (brick layer) 2nd class	day	0.04	448.00	17.92
0114	Beldar	day	0.04	368.00	14.72
	TOTAL				1852.27
	Add 1 % Water charges on all except (A) i.e. on (1852.27 - 1125.73) = 726.54				7.27
	TOTAL				1859.54
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1859.54 - 1125.73) = 733.81				110.07
	Cost of one drop connection				1969.61
	Say				1969.60

19.23.2 For 150 mm dia sand cast iron drop connection

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
1618	Details of cost for one metre MATERIAL S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 150mm dia Length of pipe = 1m. Hence, Qty = 1 / 1.8 = 0.55556 Nos.	each	0.55556	1750.00	972.23
9977	Carriage of material and fixing charges Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.45x0.50x1.00 m = 0.225 cum Less pipe portion 1/2x3.14x0.15x0.15x1.00 = 0.018 cum Toothing portion 5x0.45x0.05x0.10 m = 0.011 cum Total = 0.029 cum	L.S.	13.39	1.73	23.16

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	Net 0.225-0.029 = 0.196 cum Say 0.20 cum Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.20	3959.70	791.94(A)
5.9.2	Form work 1.45x1.00 m = 1.45 sqm Rate as per item no 5.9.2 of SH : RCC	sqm	1.45	378.60	548.97(A)
9999	Sundries LABOUR	L.S.	8.09	1.73	14.00
	For cutting 5 cm deep in alternate course of brick work				
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0114	Beldar	day	0.05	368.00	18.40
	TOTAL				2415.45
	Add 1 % Water charges on all except (A) i.e. on (2415.45 - 1340.91) = 1074.54				10.75
	TOTAL				2426.20
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2426.20 - 1340.91) = 1085.29				162.79
	Cost of one drop connection				2588.99
	Say				2589.00

19.24 Dismantling of manhole including R.C.C. top slab, C.I. cover with frame, including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :

19.24.1 Rectangular manhole 90x80 cm and 45 cm deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.2	Details of cost of a manhole 90x80 cm and 45 cm deep Dismantling of cement concrete 1:4:8 (1 cement : 4 coarse sand 8 : aggregate stone 40 mm nominal size) 1.51x1.41x0.20 m = 0.426 cum Say 0.43 cum Rate as per item no. 15.2.2 of SH : Dismantling and demolishing	cum	0.43	615.15	264.51(A)
15.7.4	Dismantling of secon class brick work in cement mortar 1:4 (1 cement : 4 coarse sand) 4.32x0.23x0.35 m = 0.348 cum Less for pipe 2x3.14x(0.15m) ² x0.23m = (-) 0.008 cum Net Qty 0.348 - 0.008 = 0.340 cum Rate as per item no. 15.7.4 of SH :dismantling and dimolishing	cum	0.34	842.75	286.54(A)
	Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.1	Less for pipe $1 \times 0.90 \times 3.14 / 4 \times (0.15\text{m})^2 = (-)$ 0.02 cum Net qty= 0.16 cum Rate as per item no. 15.2.1 of SH : Dismantling and demolishing	cum	0.16	997.05	159.53(A)
15.3	Dismantling of R.C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) For slab : $1.36 \times 1.26 \times 0.15\text{m} = 0.257$ cum Less for cover $0.61 \times 0.455 \times 0.15\text{m}$ = (-) 0.042 cum Net qty= 0.215 cum Say 0.22 cum Rate as per item no 15.3 of SH : Demolishing and dismantling	cum	0.22	1454.55	320.00(A)
9999	Removal of C.I. Cover with frame TOTAL Add 1 % Water charges on all except (A) i.e. on (1042.95 - 1030.58) = 12.37 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1043.07 - 1030.58) = 12.49 Cost of one no Say	L.S.	7.15	1.73	12.37 1042.95 0.12 1043.07 1.87 1044.94 1044.95

19.24.2 Rectangular manhole 120x90 cm and 90 cm deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.2	Details of cost of a manhole 120x90 and 90 cm deep Dismantling of cement concrete 1:4:8 (1 cement : 4 coarse sand 8 : aggregate stone 40 mm nominal size) $1.81 \times 1.51 \times 0.20\text{m} = 0.547$ cum Say 0.55 cum Rate as per item no. 15.2.2 of SH : Dismantling and demolishing	cum	0.55	615.15	338.33(A)
15.7.4	Dismantling of secon class brick work in cement mortar 1:4 (1 cement : 4 coarse sand) $5.12 \times 0.23 \times 0.80\text{m} = 0.942$ cum Less for pipe $2 \times 3.14 \times (0.15\text{m})^2 \times 0.23\text{m}$ = (-) 0.008 cum Net qty = 0.934 cum Say 0.93 cum Rate as per item no. 15.7.4 of SH :dismantling and dimolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) $2 \times 1.20 \times 0.90 \times (0.80/2) \times (0.30 + 0.20)/2$ = 2.70 cum Less for pipe $1.20 \times 3.14 / 4 \times (0.15\text{m})^2$ = (-) 0.021 cum = 0.249 cum say 0.25	cum	0.93	842.75	783.76(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.1	Rate as per item no. 15.2.1 of SH : Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) For slab : 1.66x1.36x0.15m = 0.339 cum Less for cover $3.14/4 \times (0.50)^2 \times 0.15m = (-) 0.029$ cum Net qty = 0.31 cum	cum	0.25	997.05	249.26(A)
15.3	Rate as per item no 15.3 of SH : Demolishing and dismantling	cum	0.31	1454.55	450.91(A)
9999	Removal of C.I. Cover with frame	L.S.	7.15	1.73	12.37
	TOTAL				1834.63
	Add 1 % Water charges on all except (A) i.e. on (1834.63 - 1822.26) = 12.37				0.12
	TOTAL				1834.75
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1834.75 - 1822.26) = 12.49				1.87
	Cost of one no				1836.62
	Say				1836.60

19.24.3 Rectangular arch type manhole 140x90 cm and 2.45 m deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.2	Details of cost of a manhole 140x90 cm and 2.45 m deep Dismantling of cement concrete 1:4:8 (1 cement : 4 coarse sand 8 : aggregate stone 40 mm nominal size) $2.16m \times 1.66m \times 0.20m = 0.72$ cum Rate as per item no. 15.2.2 of SH : Dismantling and demolishing Dismantling of second class brick work in cement mortar 1:4 (1 cement : 4 coarse sand) Brick work in item $5.52m \times 0.23m \times 1.20m = 1.524$ cum $3.92m \times 0.23m \times 1.15m = 1.037$ cum = 2.561 cum Deduct arch ring and portion of pipe $2 \times \frac{1}{2} \times 3.14 \times 0.25m \times 0.23 \times 0.1m = 0.018$ cum $2 \times 3.14/4 \times (0.15)^2 \times 0.23m = 0.008$ cum = (-) 0.026 cum Net qty = 2.561 - 0.026 = 2.535 cum Say 2.54 cum Brick work in arch $\frac{1}{2} \times 3.14 \times 1.13 \times 0.80 \times 0.23m = 0.327$ cum $2 \times \frac{1}{2} \times 3.14 \times 0.25m \times 0.23 \times 0.1m = 0.018$ cum = 0.345 cum Say 0.35 cum Net qty = 2.54+0.35 = 2.89 cum	cum	0.72	615.15	442.91(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.7.4	Rate as per item no. 15.7.4 of SH :dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) $2 \times 1.4 \times 0.90 / 2 \times (0.20 + 0.30) / 2 = 0.315$ cum Less pipe $1.4 \times 3.14 / 4 \times (0.15)^2 = (-) 0.025$ cum Net qty = 0.290 cum	cum	2.89	842.75	2435.55(A)
15.2.1	Rate as per item no. 15.2.1 of SH : Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) $1.36 \times 1.06 \times 0.15 = 0.216$ cum Less cover $3.14 / 4 \times (0.50)^2 \times 0.15 \text{m} = (-) 0.029$ cum = 0.187 cum Say 0.19 cum	cum	0.29	997.05	289.14(A)
15.3	Rate as per item no 15.3 of SH : Demolishing and dismantling	cum	0.19	1454.55	276.36(A)
9999	Removal of C.I. Cover with frame	L.S.	7.15	1.73	12.37
9999	Removal of M.S foot rest	L.S.	8.06	1.73	13.94
	TOTAL				3470.27
	Add 1 % Water charges on all except (A) i.e. on (3470.27 - 3443.96) = 26.31				0.26
	TOTAL				3470.53
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3470.53 - 3443.96) = 26.57				3.99
	Cost of one no				3474.52
	Say				3474.50

19.24.4 Circular manhole 122 cm diameter and 1.68 m deep

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.1	Details of cost of a manhole 1.22 m internal diameter 1.68 m deep Dismantling of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 aggregate stone 40 mm nominal size) $1.98 \times 1.98 \times 0.30 \text{ m} = 1.178$ cum Say 1.18 cum Rate as per item no 15.2.1 of SH : Dismantling Dismantling of second class brick work in cement mortar 1:4 (1 cement : 4 coarse sand 8) Curved on plan $3.14 \times 1.45 \times 0.24 \times 0.23 = 0.251$ $3.14 \times (1.45 + 0.79) / 2 \times 1.32 \times 0.23 = 1.069$ = 1.320 Duct arch ring and portion of pipe $2 \times \frac{1}{2} \times 3.14 \times 0.25 \times 0.23 \times 0.10 \text{ m} = 0.018$ cum $2 \times 3.14 / 4 \times (0.15)^2 \times 0.23 = 0.008$ cum = 0.026 cum	cum	1.18	997.05	1176.52(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.7.4	Net quantity $1.320 - 0.026 = 1.294$ Say 1.29 cum Brick work in arches $2 \times 1/2 \times 3.14 \times 0.25 \text{ m} \times 0.230 \times 0.10 \text{ m}$ $= 0.018 \text{ cum}$ Say 0.02 cum Total = $1.294 + 0.02 = 1.1.314 \text{ cum}$ Say 1.131 cum				
15.7.4	Rate as per item no. 15.7.4 of SH :dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching : $3.14/4 \times (1.22)^2 \times 0.20 = 0.234 \text{ cum}$ $[(2 \times 8.133)/360] \times (4/3) \times 3.14 \times (0.61)^3$ Total = 0.043 cum $0.024 + 0.043 = 0.277 \text{ cum}$ Less pipe : $1.22 \times 3.14/4 \times (0.15)^2 (-)$ $= 0.0216 \text{ cum}$ Net Qty. = $0.277 - 0.0216 = 0.26 \text{ cum}$ In cover fixing $0.7854 \times 1.020 \times 1.020 \times 0.15 \text{ m}$ $= 0.123 \text{ cum}$ Less cover $3.14/4 \times (0.28)^2 \times 0.15 \text{ m} : (-)$ $= 0.037 \text{ cum}$ $= 0.086 \text{ cum}$ Say 0.09 cum Total = $0.26 + 0.09 = 0.35 \text{ cum}$	cum	1.31	842.75	1104.00(A)
15.2.1	Rate as per item no 15.2.1 of SH : Demolishing and dismantling	cum	0.35	997.05	348.97(A)
9999	Removal of S.F.R.C cover with frame size 560 mm diameter (medium duty)	L.S.	7.15	1.73	12.37
9999	Removal of M.S. foot rests	L.S.	8.06	1.73	13.94
	TOTAL				2655.80
	Add 1 % Water charges on all except (A) i.e. on $(2655.80 - 2629.49) = 26.31$				0.26
	TOTAL				2656.06
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on $(2656.06 - 2629.49)$ $= 26.57$				3.99
	Cost of one no				2660.05
	Say				2660.05

19.25 Extra for depth of manholes dismantled :

19.25.1 Rectangular manhole 90x80 cm and beyond 45 cm depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.7.4	Details of cost for one metre Dismantling of second class brick work in cement mortar 1:5 (1 Cement : 5 fine sand) $4.32 \times 0.23 \times 1.0 \text{ m} = 0.994 \text{ cum}$ Say 0.99 cum Rate as per item no. 15.7.4 of SH :dismantling and demolishing	cum	0.99	842.75	834.32(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Removing of M.S. foot rests TOTAL	L.S.	1.82	1.73	3.15 837.47
	Add 1 % Water charges on all except (A) i.e. on (837.47 - 834.32) = 3.15 TOTAL				0.03 837.50
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (837.50 - 834.32) = 3.18 Cost for one metre Say				0.48 837.98 838.00

19.25.2 Rectangular manhole 120x90 cm and beyond 90 cm depth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.7.4	Details of cost for one metre Dismantling of second class brick work in cement mortar 1:5 (1 Cement : 5 fine sand) 5.12x0.23x1.0m = 1.178 cum Say 1.18 cum				
9999	Rate as per item no. 15.7.4 of SH :dismantling and demolishing Removing of M.S. foot rests TOTAL	cum L.S.	1.18 1.82	842.75 1.73	994.45(A) 3.15 997.60
	Add 1 % Water charges on all except (A) i.e. on (997.60 - 994.45) = 3.15 TOTAL				0.03 997.63
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (997.63 - 994.45) = 3.18 Cost for one metre Say				0.48 998.11 998.10

19.25.3 Rectangular arch type manhole 140x90 cm and beyond 2.45 m depth (up to 4.25 m depth)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of dismantling one manhole 4.25m deep Dismantling IInd class brick work in cement mortar 1:4 (1 Cement : 4 Coarse sand) for 2.45 depth Qty for 2.45m depth 5.52mx0.23mx1.20m = 1.524 cum 3.92mx0.23mx1.15m = 1.037 cum Total = 2.561 cum Deduct arch ring and portion of pipe 2x1/2x3.14x0.25mx0.23x0.1m = 0.018 cum 2x3.14/4(0.15) ² x0.23m = 0.008 cum Total deduction= = (-) 0.026 cum Net 2.561 - 0.026 = 2.535 cum Say 2.54 cum Qty in arch				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.7.4	$\frac{1}{2} \times 3.14 \times 1.13 \times 0.80 \times 0.23 \text{m} = 0.327 \text{ cum}$ $2 \times \frac{1}{2} \times 3.14 \times 0.25 \text{m} \times 0.23 \times 0.1 \text{m} = 0.018 \text{ cum}$ Total = 0.345 cum Say 0.35 cum Total for 4.45 m depth 2.54 + 0.35 = 2.89 cum Qty for 4.25m depth $5.52 \text{m} \times 0.23 \text{m} \times 1.20 \text{m} = 1.524 \text{ cum}$ $3.92 \text{m} \times 0.23 \text{m} \times 2.95 \text{m} = 2.660 \text{ cum}$ Total = 4.184 cum Deduct arch ring and portion of pipe $2 \times \frac{1}{2} \times 3.14 \times 0.70 \text{m} \times 0.23 \times 0.1 \text{m} = 0.051 \text{ cum}$ $2 \times 3.14 / 4 \times (0.60)^2 \times 0.23 = 0.130 \text{ cum}$ Total deduction = (-) 0.181 cum Net 4.184 - 0.181 = 4.003 cum Say 4.00 cum Qty in arch $\frac{1}{2} \times 3.14 \times 1.13 \times 0.80 \times 0.23 \text{m} = 0.327 \text{ cum}$ $2 \times \frac{1}{2} \times 3.14 \times 0.70 \text{m} \times 0.23 \times 0.1 \text{m} = 0.051 \text{ cum}$ Total = 0.378 cum Say 0.38 cum Total for 2.25 m depth = 4.0 + 0.38 = 4.38 cum Net difference = 4.38 - 2.89 = 1.49 cum Rate as per item no. 15.7.4 of SH :dismantling and demolishing Dismantling cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40mm nominal size) Qty for 4.25m depth $2 \times 1.4 \times (0.90/2) \times (0.65 + 0.75) / 2 = 0.882 \text{ cum}$ Less pipe : $1.4 \times 3.14 / 4 \times (0.60)^2 (-) = 0.396 \text{ cum}$ = 0.486 cum Say 0.49 cum Qty for 2.45m depth $2 \times 1.4 \times (0.90/2) \times (0.20 + 0.30) / 2 = 0.315 \text{ cum}$ Less pipe : $1.4 \times 3.14 / 4 \times (0.15)^2 (-) = 0.025 \text{ cum}$ = 0.290 cum Say 0.29 cum Net difference = 0.49 - 0.29 = 0.20 cum Rate as per item no 15.2.1 of SH : Demolishing and dismantling Cost for 1.8 metre depth Cost for 1 metre depth Say	cum	1.49	842.75	1255.70(A)
15.2.1	Rate as per item no 15.2.1 of SH : Demolishing and dismantling Cost for 1.8 metre depth Cost for 1 metre depth Say	cum	0.20	997.05	199.41(A) 1455.11 808.39 808.40

19.25.4 Circular manhole 122 cm diameter and beyond 1.68 m depth (up to 2.29 m depth)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.2.1	Details o cost of dismantling one manhole 2.29m deep Dismantling cement concrete 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) $1.98 \times 1.98 \times 0.30 = 1.178 \text{ cum. Say 1.18 cum.}$ (Rate as per item No.15.2.1 of SH. dismantling and Demolishing) Dismantling IInd class brick work in cement mortar 1:4 (1 Cement : 4 Coarse sand)	cum	1.18	997.05	1176.52(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.7.4	Curved on plan $3.14 \times 1.45 \times 0.85 \times 0.23 = 0.891$ $3.14 \times (1.45 + 0.79) / 2 \times 1.32 \times 0.23 = 1.069$ Total = 0.891 + 1.069 = 1.96 cum Duct arch ring and portion of pipe $2 \times 1/2 \times 3.14 \times 0.25 \times 0.23 \times 0.10 \text{ m} = 0.018 \text{ cum}$ $2 \times 3.14 / 4 \times (0.15)^2 \times 0.23 = 0.008 \text{ cum}$ Total deduction = 0.026 cum Net quantity 1.96 - 0.026 = 1.934 Say 1.93 cum Qty in arch $2 \times 1/2 \times 3.14 \times 0.25 \text{ m} \times 0.23 \times 0.10 \text{ m}$ = 0.018 cum Say 0.02 cum Total = 1.93 + 0.02 = 1.97 cum Rate as per item no 15.7.4 of SH : Dismantling and demolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size For benching : $3.14 / 4 \times (1.22)^2 \times 0.20 = 0.234 \text{ cum}$ $[(2 \times 8.133) / 360] \times (4/3) \times 3.14 \times (0.61)^3$ = 0.043 cum = 0.277 cum Less pipe : $1.22 \times 3.14 / 4 \times (0.15)^2 (-) = 0.0216 \text{ cum}$ Net qty = 0.254 cum Say 0.26 cum For fixing cover : $3.14 / 4 \times d^2 \times \text{thickness}$ $0.7854 \times 1.020 \times 1.020 \times 0.15 \text{ m} = 0.123 \text{ cum}$ Less cover $3.14 / 4 \times (0.28)^2 \times 0.15 \text{ m} : (-)$ = 0.037 cum Net qty = 0.086 cum Say 0.09 cum Total = 0.26 + 0.09 = 0.35 cum Rate as per item no 15.2.1 of SH : Dismantling	cum	1.97	842.75	1660.22(A)
15.2.1	SH : Dismantling	cum	0.35	997.05	348.97(A)
9999	Removal of SFRC cover	L.S.	7.15	1.73	12.37
9999	Removal of M.S. foot rests	L.S.	8.09	1.73	14.00
19.24.4	Deduct cost of dismantling manhole 1.68m deep Rate as per Item No.19.24.4 of SH: DRAINAGE TOTAL Add 1 % Water charges on all except (A) i.e. on (552.03 - 525.66) = 26.37 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (552.29 - 525.66) = 26.63 Cost of manhole 0.61m depth Cost per metre depth Say	each	-1.00	2660.05	-2660.05(A)
					552.03
					0.26
					552.29
					3.99
					556.28
					911.93
					911.95

19.26 Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately) :

19.26.1 Rectangular manhole 90x80 cm with rectangular cover 600 x 450 mm of grade LD - 2.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.3	Details of cost for one manhole Dismantling of R.C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 aggregate stone 20 mm nominal size) = 1.36x1.26x0.15 = 0.257 cum Less cover with frame portion 0.85x0.70x0.15 =(-) 0.089 cum Net qty=0.168 cum Say 0.17 cum Rate as per item no. 15.3 of	cum	0.17	1454.55	247.27(A)
9999	SH : Dismantling and demolishing Removal of R.C.C cover and frame Removal of R.C.C work 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For raised slab = 1.36x1.26x0.15 = 0.257 cum Less portion cover with frame = 0.85x0.70x0.15 =(-) 0.089 cum Net qty = 0.168 cum Say 0.17 cum	L.S.	7.15	1.73	12.37
5.3	Rate as per item no. 5.3 of SH : RCC work Form work = 0.90x0.80 = 0.72 sqm Less cover = 0.60x0.45 =(-) 0.27 sqm Net qty = 0.45 sqm	cum	0.17	7390.80	1256.44(A)
5.9.3	Rate as per item no 5.9.3 of SH : RCC work	sqm	0.45	422.30	190.04(A)
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				1729.51
	Add 1 % Water charges on all except (A) i.e. on (1729.51 - 1693.75) = 35.76				0.36
	TOTAL				1729.87
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1729.87 - 1693.75) = 36.12				5.42
	Cost of one no				1735.29
	Say				1735.30

19.26.2 Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD - 10

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one manhole Dismantling of R.C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 aggregate stone 20 mm nominal size) 1.66x1.36x0.15 = 0.339 cum Less for R.C.C cover with frame 3.14/4x(0.80) ² x0.15 =(-) 0.075 cum Net qty 0.264 cum Say 0.26 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.3 9999	Rate as per item no. 15.3 of SH : Dismantling and demolishing Removal of R.C.C cover and frame R.C.C work 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x1.36x0.15 = 0.339 cum Less portion cover with frame = 3.14/4x0.80x0.80x0.15 =(-) 0.075 cum Net qty= 0.264 cum Say 0.26 cum	cum L.S.	0.26 7.15	1454.55 1.73	378.18(A) 12.37
5.3	Rate as per item no 5.3 of SH : RCC Work Form work = 1.2x0.90 = 1.08 sqm Less cover = 3.14/4x(0.50) ² =(-) 0.196 sqm Net qty= 0.884 sqm Say .88 sqm	cum	0.26	7390.80	1921.61(A)
5.9.3 9999	Rate as per item no 5.9.3 of SH : RCC work Sundries TOTAL Add 1 % Water charges on all except (A) i.e. on (2712.57 - 2671.41) = 41.16 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2712.98 - 2671.41) = 41.57 Cost of one no Say	sqm L.S.	0.88 16.64	422.30 1.73	371.62(A) 28.79 2712.57 0.41 2712.98 6.24 2719.22 2719.20

19.26.3 Rectangular manhole 120x90 cm with circular cover 560 mm dia of grade HD - 20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.3 9999	Details of cost for one manhole Dismantling of R.C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 aggregate stone 20 mm nominal size) 1.66x1.36x0.15 = 0.339 cum Less for R.C.C cover with frame 3.14/4x(0.90) ² x0.15 =(-) 0.095 cum Net qty 0.244 cum Say 0.24 cum Rate as per item no 15.3 of SH : Dismantling and demolishing Removal of R.C.C cover and frame R.C.C work 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x1.36x0.15 = 0.339 cum Less portion cover with frame = 3.14/4x0.90x0.90x0.15 =(-) 0.095 cum Net qty= 0.244 cum Say 0.24 cum	cum L.S.	0.24 7.15	1454.55 1.73	349.09(A) 12.37
5.3	Rate as per item no 5.3 of SH : RCC Work Form work = 1.2x0.90 = 1.08 sqm Less cover = 3.14/4x(0.56) ² =(-) 0.246 sqm Net qty= 0.834 sqm Say .83 sqm	cum	0.24	7390.80	1773.79(A)
5.9.3	Rate as per item no 5.9.3 of SH : RCC work	sqm	0.83	422.30	350.51(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	20.28	1.73	35.08
	TOTAL				2520.84
	Add 1 % Water charges on all except (A) i.e. on (2520.84 - 2473.39) = 47.45				0.47
	TOTAL				2521.31
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (2521.31 - 2473.39) = 47.92				7.19
	Cost of one no				2528.50
	Say				2528.50

19.26.4 Circular manhole 140 cm dia with circular cover 600 mm dia of grade EHD - 35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
15.3	Details of cost for one manhole Dismantling of C.C slab of 1:2:4 (1 cement : 2 coarse sand : 4 aggregate stone 20 mm nominal size) = $3.14/4 \times (0.985)^2 \times 0.15 = 0.114$ cum Less cover = $3.14/4 \times (0.90)^2 \times 0.15$ =(-) 0.095 cum Net qty= 0.019 cum Say 0.02 cum Rate as per item no. 15.3 of	cum	0.02	1454.55	29.09(A)
9999	SH : Dismantling and demolishing Removal of R.C.C cover and frame	L.S.	8.06	1.73	13.94
4.2.3	C.C work 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) $3.14/4 \times (0.985)^2 \times 0.15 = 0.114$ cum Less portion cover with frame = $3.14/4 \times (0.90)^2 \times 0.15 = (-) 0.095$ cum Net qty= 0.019 cum Say 0.02 cum Rate as per item no 4.2.3 of SH : Concrete Work	cum	0.02	6547.70	130.95(A)
9999	Sundries	L.S.	20.28	1.73	35.08
	TOTAL				209.06
	Add 1 % Water charges on all except (A) i.e. on (209.06 - 160.04) = 49.02				0.49
	TOTAL				209.55
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (209.55 - 160.04) = 49.51				7.43
	Cost of one no				216.98
	Say				217.00

19.27 Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :

19.27.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one chamber MATERIAL Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.11mx1.06mx0.15 m= 0.176 cum Say 0.18 cum				
4.1.11	Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.18	3959.70	712.75(A)
	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) 2.82 m x 0.23m x0.45 m = 0.29 cum				
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.29	4970.30	1441.39(A)
	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement Wall : 1.90x0.45 m = 0.855 sqm Bed : 0.45x0.50 m = 0.225 sqm Total= 1.080 sqm				
13.9.1	Rate as per item no 13.9.1 of SH : Finishing	sqm	1.08	234.70	253.48(A)
	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 2.82x0.23x0.15 m = 0.097 cum Say 0.10 cum				
4.2.3	Rate as per item no 4.2.3 of SH : Concrete Form work	cum	0.10	6547.70	654.77(A)
	3.50x0.15 m = 0.525 sqm Say 0.53 sqm				
5.9.2	Rate as per item no 5.9.2 of SH : RCC	sqm	0.53	378.60	200.66(A)
7380	Pre-cast R.C.C. grating with frame				
	500x450 mm horizontal grating	each	1.00	650.00	650.00
9977	Carriage of R.C.C. grating	L.S.	7.15	1.73	12.37
9999	Fixing R.C.C. grating	L.S.	5.33	1.73	9.22
	TOTAL				3934.64
	Add 1 % Water charges on all except (A) i.e. on (3934.64 - 3263.05) = 671.59				6.72
	TOTAL				3941.36
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3941.36 - 3263.05) = 678.31				101.75
	Cost of one chamber				4043.11
	Say				4043.10

19.28 Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :

19.28.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	Details of cost for one chamber Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.06mx1.06mx0.15 m= 0.17 cum Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.17	3959.70	673.15(A)
6.1.1	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) 2.72 m x 0.23m x0.70 m = 0.438 cum Deduct opening 0.45x0.23x0.10 m = 0.01 cum Block $3 \times (0.075)^3 = 0.001$ cum Total deduction = 0.011 cum Net qty. = 0.438 (-) 0.011 = 0.427 cum Say 0.43 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.43	4970.30	2137.23(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement Wall : 1.80x0.70 m = 1.26 sqm Bed : 0.45x0.45 m = 0.202 sqm Top : 0.45x0.20 m = 0.09 sqm Sides : 2x0.20x0.10 m = 0.04 sqm Total= 1.592 sqm Deduct opening 0.45x0.10 m = 0.045 sqm Net qty. = 1.592 (-) 0.045 = 1.547 cum Say 1.55 cum Rate as per item no 13.9.1 of SH : Finishing	sqm	1.55	234.70	363.79(A)
4.2.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) Block = $3 \times (0.75)^3 = 0.001$ cum Rate as per item no 4.2.3 of SH : Concrete	cum	0.001	6547.70	6.55(A)
5.3	R.C.C. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 0.91x0.91x0.075 m = 0.062 cum Say 0.06 cum Rate as per item no. 5.3 of SH : RCC work Less labour for not lifting the materilas upto floor five level	cum	0.06	7390.80	443.45(A)
0115	Coolie Form work 0.45x0.45 m = 0.202 sqm 0.45x0.20 m = 0.09 sqm outside slab : 3.40x0.075 m = 0.255 sqm Total= 0.547 sqm Say 0.55 sqm	day	-0.113	368.00	-41.58

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.9.2	Rate as per item no 5.9.2 of SH : RCC Mild steel reinforcement for R.C.C work 0.062 cum @ 80 kg/cum = 4.96 kg	sqm	0.55	378.60	208.23(A)
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work	kg	4.96	55.30	274.29(A)
7381	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	1.00	245.00	245.00
9999	Fixing and carriage of R.C.C. grating TOTAL	L.S.	20.67	1.73	35.76
	Add 1 % Water charges on all except (A) i.e. on (4345.87 - 4106.69) = 239.18 TOTAL				2.39
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4348.26 - 4106.69) = 241.57 Cost of one chamber Say				4348.26 36.24 4384.50 4384.50

19.29 Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :

19.29.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	Details of cost for one chamber Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.71mx1.11mx0.15 m = 0.285 cum Say 0.29 cum Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.29	3959.70	1148.31(A)
6.1.1	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) 1.91 m x 0.23m x0.45 m = 0.199 cum 2.20mx0.23mx0.70 m = 0.354 cum Total= 0.553 cum Deduct lintel portion 2x0.23x0.20x0.20 m = (-) 0.018 cum Nte Qty= 0.0535 cum Say 0.54 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.54	4970.30	2683.96(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement Wall : 1.80x0.70 m = 1.26 sqm Wall : 1.40x0.45 m = 0.63 sqm Bed : 1.10x0.50 m = 0.55 sqm Total= 2.44 sqm Deduct 2x0.20x0.20 m = (-) 0.08 sqm Net Qty= 2.36 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	2.36	234.70	553.89(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.2.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) Block = 1.92x0.23x0.15 = 0.07 cum Rate as per item no 4.2.3 of SH : Concrete Work	cum	0.07	6547.70	458.34(A)
5.3	R.C.C. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 0.88x0.96x0.075 m = 0.063 cum Say 0.06 cum Rate as per item no. 5.3 of SH : RCC work Less labour for not lifting the materilas upto floor five level	cum	0.06	7390.80	443.45(A)
0115	Coolie	day	-0.113	368.00	-41.58
5.13	R.C.C. 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in lintels 1x0.96x0.20x0.20 m = 0.04 cum Rate as per item no. 5.13 of SH : RCC work Form work	cum	0.04	9330.20	373.21(A)
5.9.2	Slab bottom 0.50x0.65 m = 0.325 sqm Outer periphery 3.50x0.075 m = 0.263 sqm 2.20x0.15 m = 0.330 sqm = 0.918 sqm Say 0.91 sqm Rate as per item no 5.9.2 of SH : RCC Mild steel reinforcement for R.C.C work (0.06+0.04) = 0.10 cum @ 80 kg/cum = 8.00 kg	sqm	0.91	378.60	344.53(A)
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work	kg	8.00	55.30	442.40(A)
7380	Precast R.C.C. grating with frame 500x450 mm horizontal grating	each	1.00	650.00	650.00
9977	Carriage of R.C.C. grating	L.S.	7.15	1.73	12.37
7381	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	1.00	245.00	245.00(A)
9999	Labour for fixing precast R.C.C. grating and frame	L.S.	34.06	1.73	58.92
	TOTAL				7372.80
	Add 1 % Water charges on all except (A) i.e. on (7372.80 - 6448.09) = 924.71				9.25
	TOTAL				7382.05
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (7382.05 - 6448.09) = 933.96				140.09
	Cost of one chamber				7522.14
	Say				7522.15

19.30 Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 coarse sand(Zone-III) : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:

19.30.1 Inside dimensions 455x610 mm and 45 cm deep for single pipe line :

19.30.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	Details of cost for one chamber Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.22mx1.065mx0.15 m= 0.195 cum Say .20 cum Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.20	3959.70	791.94(A)
6.1.1	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) 3.05 m x 0.23m x0.30 m = 0.210 cum Less pipe 2x3.14/4x(0.10) ² x0.23 m = (-) 0.004 cum Net Qty= 0.206 cum Say 0.21 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.21	4970.30	1043.76(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement Wall : 2.13x0.30 m = 0.639 sqm Bed : 0.61x0.455 m = 0.278 sqm Total= 0.917 sqm Less pipe 2x3.14/4x(0.10) ² = (-) 0.016 sqm Net Qty= 0.901 sqm Say 0.90 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	0.90	234.70	211.23(A)
4.2.3	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 3.05x0.23x0.15 = 0.105 cum say 0.11 cum Rate as per item no 4.2.3 of SH : Concrete Work	cum	0.11	6547.70	720.25(A)
5.9.2	Form work Outer periphery 3.73x0.15 m = 0.56 sqm Rate as per item no 5.9.2 of SH : RCC	sqm	0.56	378.60	212.02(A)
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1.00	1500.00	1500.00
9977	Carriage of C.I.cover and frame	L.S.	7.15	1.73	12.37
9999	Painting of C.I. Cover and frame with coal tar	L.S.	7.15	1.73	12.37

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				4527.33
	Add 1 % Water charges on all except (A) i.e. on (4527.33 - 2979.20) = 1548.13				15.48
	TOTAL				4542.81
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (4542.81 - 2979.20) = 1563.61				234.54
	Cost of one chamber				4777.35
	Say				4777.35

19.30.2 Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :

19.30.2.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	Details of cost of one no. Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.31mx1.11mx0.15 m= 0.22 cum Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.22	3959.70	871.13(A)
6.1.1	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement : 4 fine sand) 3.32 m x 0.23m x0.30 m = 0.229 cum Less pipe 3x3.14x(0.10) ² x0.23 m = (-) 0.005 cum Net Qty= 0.224 cum Say 0.22 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.22	4970.30	1093.47(A)
13.9.1	12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement Wall : 2.40x0.30 m = 0.72 sqm Bed : 0.70x0.50 m = 0.35 sqm = 1.07 sqm Less pipe 3x3.14/4x(0.10) ² = (-) 0.02 sqm Net Qty= 1.05 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	1.05	234.70	246.44(A)
5.3	R.C.C 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.16x0.96x0.15 = 0.167 cum Deduct cover 0.61x0.45x0.15 m = (-) 0.042 cum Net Qty= 0.125 cum Say 0.13 cum Rate as per item no. 5.3 of SH : RCC work	cum	0.13	7390.80	960.80(A)
5.9.2	Less labour for not lifting the materilas upto floor five level Rate as per item no 5.9.2 of SH : RCC M.S.reinforcement for slab 0.13 cum @ 48.06 kg/cum = 6.25 kg	sqm	0.67	378.60	253.66(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie Form work Inside area of chamber : 0.70x0.50 m = 0.35 sqm Outer periphery 4.00x0.15 m = 0.60 sqm = 0.95 sqm Deduct cover : 0.61x0.455 m = (-) 0.278 sqm = 0.672 sqm Say 0.67 sqm	day	-0.24	368.00	-88.32
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work	kg	6.25	55.30	345.63(A)
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1.00	1500.00	1500.00
9977	Carriage of C.I. Cover and frame	L.S.	7.15	1.73	12.37
9999	Painting of C.I. Cover and frame with coal tar	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				5230.94
	Add 1 % Water charges on all except (A) i.e. on (5230.94 - 3771.13) = 1459.81				14.60
	TOTAL				5245.54
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (5245.54 - 3771.13) = 1474.41				221.16
	Cost of one chamber				5466.70
	Say				5466.70

19.30.3 Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :

19.30.3.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4.1.11	Details of cost of one chamber Cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.46mx1.21mx0.15 m= 0.26 cum Rate as per item no 4.1.11 of SH : Concrete Work	cum	0.26	3959.70	1029.52(A)
6.1.1	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) 3.82 m x 0.23m x0.30 m = 0.26 cum Less pipe 5x3.14x(0.10) ² x0.23 m = (-) 0.009 cum Net Qty= 0.255 cum Say 0.26 cum Rate as per item no 6.1.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement Wall : 2.90x0.30 m = 0.87 sqm Bed : 0.85x0.60 m = 0.51 sqm Total= 1.38 sqm Less pipe 5x3.14/4x(0.10) ² = (-) 0.04 sqm Net Qty= 1.34 sqm	cum	0.26	4970.30	1292.28(A)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
13.9.1	Rate as per item no 13.9.1 of SH : Finishing R.C.C 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.31x1.06x0.15 = 0.208 cum Deduct cover 0.61x0.455x0.15 m = (-) 0.042 cum Net Qty= 0.166 cum Say 0.17 cum	sqm	1.34	234.70	314.50(A)
5.3	Rate as per item no. 5.3 of SH : RCC work Less labour for not lifting the materilas upto floor five level	cum	0.17	7390.80	1256.44(A)
0115	Coolie Form work Inside area of chamber : 0.85x0.60 m = 0.511 sqm Outer periphery 4.50x0.15 m = 0.675 sqm Total= 1.186 sqm Deduct cover : 0.61x0.455 m = (-) 0.278 sqm Net Qty= 0.908 sqm Say 0.91 sqm	day	-0.32	368.00	-117.76
5.9.2	Rate as per item no 5.9.2 of SH : RCC M.S.reinforcement for slab for 0.17 cum @ 48.06 kg/cum = 48.06x0.17cum = 8.17 kg	sqm	0.91	378.60	344.53(A)
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work	kg	8.17	55.30	451.80(A)
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1.00	1500.00	1500.00
9977	Carriage of C.I. Cover and frame	L.S.	7.15	1.73	12.37
9999	Painting of C.I. Cover and frame with coal tar	L.S.	7.15	1.73	12.37
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				6119.44
	Add 1 % Water charges on all except (A) i.e. on (6119.44 - 4689.07) = 1430.37				14.30
	TOTAL				6133.74
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (6133.74 - 4689.07) = 1444.67				216.70
	Cost of one chamber				6350.44
	Say				6350.45

19.31 Extra for depth beyond 45 cm of brick masonry chamber :

19.31.1 For 455x610 mm size

19.31.1.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one metre Brick work in bricks of clas designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) 3.05 m x 0.23m x1.00 m = 0.70 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Rate as per item no 6.1.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand finished with floating coat of neat cement Wall : 2.13x1.00 m = 2.13 sqm	cum	0.70	4970.30	3479.21
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Cost per metre Say	sqm	2.13	234.70	499.91 3979.12 3979.12 3979.10

19.31.2 For 500x700 mm size

19.31.2.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Details of cost for one metre Brick work in bricks of clas designation 75 in cement mortar 1:5 (1 cement : 5 fine sand) 3.32 m x 0.23m x1.00 m = 0.76 cum Rate as per item no 6.1.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand finished with floating coat of neat cement Wall : 2.40x1.00 m = 2.40 sqm	cum	0.76	4970.30	3777.43
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Cost per metre Say	sqm	2.40	234.70	563.28 4340.71 4340.71 4340.70

19.31.3 For 600x850 mm size

19.31.3.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
6.1.1	Details of cost for one metre Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand) 3.82 m x 0.23m x1.00 m = 0.88 cum Rate as per item no 6.1.1 of SH : Brick Work 12 mm cement plaster 1:3 (1 cement : 3 coarse sand finished with floating coat of neat cement Wall : 2.90x1.00 m = 2.90 sqm	cum	0.88	4970.30	4373.86
13.9.1	Rate as per item no 13.9.1 of SH : Finishing TOTAL Cost per metre Say	sqm	2.9	234.70	680.63 5054.49 5054.49 5054.50

19.32 Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.

19.32.1 With common burnt clay F.P.S. (non modular) bricks of class designation 7.5

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one soak pit				
	Earth work in excavation including disposal of surplus earth $3.14/4 \times (2.5)^2 \times 3\text{m} = 14.73$ cum				
2.8.1	Rate as per item no. 2.8.1 of SH: Earth work	cum	14.73	166.40	2451.07(A)
2.26.1	Rate as per item no. 2.26.1 of SH : Earth work = $3.14/4 \times (2.5)^2 \times 1.5\text{ m} = 7.37$ cum	cum	7.37	51.75	381.40(A)
	2nd class bricks perimetre = $4 \times 0.35 = 1.40$ m Area = $1.40 \times 2.925\text{ m} = 4.1$ sqm Number of brick = $4.1 \times 487 \times 0.066 = 131.78$ Wastage 10% = 13.718 Total= 144.96 Say 145 numbers				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	0.145	4500.00	652.50
	Brick bats = $3.14/4 \times (1.2)^2 \times 2.925\text{m} = 3.33$ cum Deduct = $0.45 \times 0.45 \times 2.925\text{ m} = 0.59$ cum Net qty= 2.74 cum				
0362	Brick bats	cum	2.74	500.00	1370.00
	Brick aggregate 50 to 80 mm nominal size = $3.14 \times 1.50 \times 0.03 \times 2.925\text{ m} = 4.13$ cum				
0285	Brick Aggregate (Single size) : 63 mm nominal size	cum	4.13	750.00	3097.50
	Brick aggregate 40 mm nominal size = $3.14 \times 2.15 \times 0.35 \times 2.925\text{ m} = 6.91$ cum				
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	6.91	750.00	5182.50
1854	Stoneware pipes grade A (60 cm long) 100 mm dia	each	3.00	50.00	150.00
	Carriage of brick bats and aggregate				
2260	Carriage of Brick aggregate	cum	13.78	112.79	1554.28
2201	Carriage of Bricks	1000 Nos	0.145	276.72	40.12
9999	Single matting $2.5 \times 2.5\text{ m} = 6.25$ sqm	L.S.	112.14	1.73	194.00
	Precast R.C.C.slabs 7.5 cm thick in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) $0.45 \times 0.45 \times 0.075\text{ m} = 0.02$ cum				
5.12	Rate as per item no 5.12 of SH : RCC Reinforcement @ 80 kg/cum = $0.02 \times 80 = 1.6$ kg	cum	0.02	6972.10	139.44(A)
5.22.1	Rate as per item no. 5.22.1 of SH : RCC work 2nd class brick edging laid length wise with half brick depth $3.14 \times 2.6\text{ m} = 8.17$ m	kg	1.60	55.30	88.48(A)
16.8.1	Rate as per item no. 16.8.1 of SH : Road work LABOUR	metre	8.17	36.20	295.75(A)
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
0124	Mason (brick layer) 2nd class	day	0.50	448.00	224.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	3.00	368.00	1104.00
0115	Coolie	day	3.00	368.00	1104.00
	TOTAL				18272.54
	Add 1 % Water charges on all except (A) i.e. on (18272.54 - 3356.14) = 14916.40				149.16
	TOTAL				18421.70
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (18421.70 - 3356.14) = 15065.56				2259.83
	Cost of one soak pit				20681.53
	Say				20681.55

19.33 Constructing soak pit 1.20x1.20x1.20 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2.8.1	Details of cost for one soak pit Earth work in excavation including disposal of surplus earth 1.2x1.2x1.2m = 1.73 cum (Rate as per item no. 2.8.1 of SH: Earth work)	cum	1.73	166.40	287.87(A)
0362	Brick bats 1.2x1.2x1.2 = 1.73 cum	cum	1.73	500.00	865.00
2260	Carriage of Brick aggregate	cum	1.73	112.79	195.13
16.8.1	Rate as per item no. 16.8.1 of SH : Road work	metre	5.20	36.20	188.24(A)
1854	Second class brick edging laid length wise with half brick depth Stoneware pipes grade A (60 cm long) 100 mm dia	each	2.00	50.00	100.00
9999	Sundries LABOUR For filling brick bats	L.S.	25.84	1.73	44.70
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries	L.S.	13.52	1.73	23.39
	TOTAL				1888.33
	Add 1 % Water charges on all except (A) i.e. on (1888.33 - 476.11) = 1412.22				14.12
	TOTAL				1902.45
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1902.45 - 476.11) = 1426.34				213.95
	Cost of one soak pit				2116.40
	Say				2116.40

19.34 Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :

19.34.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of one no.				
	MATERIAL				
7128	S.W. intercepting trap 100 mm dia	each	1.00	190.00	190.00
9977	Carriage of trap	L.S.	1.04	1.73	1.80
0367	Portland Cement (OPC-43 grade)	tonne	0.0013	5700.00	7.41
2209	Carriage of Cement	tonne	0.0013	92.24	0.12
0983	Fine sand (zone IV)	cum	0.001	760.00	0.76
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.001	103.77	0.10
1881	Spun yarn	kilogram	0.09	50.00	4.50
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.02	487.00	9.74
0124	Mason (brick layer) 2nd class	day	0.02	448.00	8.96
0114	Beldar	day	0.06	368.00	22.08
0101	Bhisti	day	0.02	407.00	8.14
	TOTAL				253.61
	Add 1 % Water charges				2.54
	TOTAL				256.15
	Add 15 % Contractor's profit and overheads				38.42
	Cost of one no.				294.57
	Say				294.55

19.34.2 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost of one no.				
	MATERIAL				
7129	S.W. intercepting trap 150 mm dia	each	1.00	250.00	250.00
9977	Carriage of trap	L.S.	2.08	1.73	3.60
0367	Portland Cement (OPC-43 grade)	tonne	0.0019	5700.00	10.83
2209	Carriage of Cement	tonne	0.0019	92.24	0.18
0983	Fine sand (zone IV)	cum	0.0014	760.00	1.06
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.0014	103.77	0.15
1881	Spun yarn	kilogram	0.18	50.00	9.00
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.03	487.00	14.61
0124	Mason (brick layer) 2nd class	day	0.03	448.00	13.44
0114	Beldar	day	0.08	368.00	29.44
0101	Bhisti	day	0.03	407.00	12.21
	TOTAL				344.52
	Add 1 % Water charges				3.45
	TOTAL				347.97
	Add 15 % Contractor's profit and overheads				52.20
	Cost of one no.				400.17
	Say				400.15

19.35 Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete

19.35.1 450 mm dia RCC pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1728	RCC pipe 450 mm dia NP-3 spigot	metre	10.00	1496.00	14960.00
2299	Carriage of R.C.C. pipes 450 & 500 mm dia	100 metre	0.10	2520.19	252.02
0367	Portland Cement (OPC-43 grade)	tonne	0.012	5700.00	68.40
2209	Carriage of Cement	tonne	0.012	92.24	1.11
0983	Fine sand (zone IV)	cum	0.017	760.00	12.92
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.017	103.77	1.76
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.375	487.00	182.63
0124	Mason (brick layer) 2nd class	day	0.375	448.00	168.00
0114	Beldar	day	2.41	368.00	886.88
0101	Bhisti	day	0.33	407.00	134.31
	TOTAL				16668.03
	Add 1 % Water charges				166.68
	TOTAL				16834.71
	Add 15 % Contractor's profit and overheads				2525.21
	Detail of cost for 10 metre				19359.92
	Rate per metre				1935.99
	Say				1936.00

19.35.2 600 mm dia RCC pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1729	RCC pipe 600 mm dia NP-3 spigot	metre	10.00	1995.00	19950.00
2303	Carriage of R.C.C. pipes 600, 700, 750 & 800 mm dia	100 metre	0.10	3780.28	378.03
0367	Portland Cement (OPC-43 grade)	tonne	0.016	5700.00	91.20
2209	Carriage of Cement	tonne	0.016	92.24	1.48
0983	Fine sand (zone IV)	cum	0.022	760.00	16.72
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.022	103.77	2.28
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.46	487.00	224.02
0124	Mason (brick layer) 2nd class	day	0.46	448.00	206.08
0114	Beldar	day	1.83	368.00	673.44
0101	Bhisti	day	0.33	407.00	134.31
	TOTAL				21677.56
	Add 1 % Water charges				216.78
	TOTAL				21894.34
	Add 15 % Contractor's profit and overheads				3284.15
	Detail of cost for 10 metre				25178.49
	Rate per metre				2517.84
	Say				2517.85

19.35.3 900 mm dia RCC pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1730	RCC pipe 900 mm dia NP-3 spigot	metre	10.00	3150.00	31500.00
2331	Carriage of R.C.C. pipes 900 mm dia	100 metre	0.10	5670.42	567.04
0367	Portland Cement (OPC-43 grade)	tonne	0.025	5700.00	142.50
2209	Carriage of Cement	tonne	0.025	92.24	2.31
0983	Fine sand (zone IV)	cum	0.033	760.00	25.08
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.033	103.77	3.42
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.625	487.00	304.38
0124	Mason (brick layer) 2nd class	day	0.625	448.00	280.00
0114	Beldar	day	3.00	368.00	1104.00
0101	Bhisti	day	0.50	407.00	203.50
	TOTAL				34132.23
	Add 1 % Water charges				341.32
	TOTAL				34473.55
	Add 15 % Contractor's profit and overheads				5171.03
	Detail of cost for 10 metre				39644.58
	Rate per metre				3964.45
	Say				3964.45

19.35.4 1000 mm dia RCC pipes. (Laying by manual/ machanical means)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1731	RCC pipe 1000 mm dia NP-3 spigot	metre	10.00	3885.00	38850.00
2332	Carriage of R.C.C. pipes 1000 mm dia	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.028	5700.00	159.60
2209	Carriage of Cement	tonne	0.028	92.24	2.58
0983	Fine sand (zone IV)	cum	0.037	760.00	28.12
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.037	103.77	3.84
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.68	487.00	331.16
0124	Mason (brick layer) 2nd class	day	0.68	448.00	304.64
0114	Beldar	day	4.33	368.00	1593.44
0101	Bhisti	day	0.50	407.00	203.50
	TOTAL				42232.94
	Add 1 % Water charges				422.33
	TOTAL				42655.27
	Add 15 % Contractor's profit and overheads				6398.29
	Detail of cost for 10 metre				49053.56
	Rate per metre				4905.35
	Say				4905.35

19.35.5 1200 mm dia RCC pipes. (Laying by manual/ machanical means)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1732	RCC pipe 1200 mm dia NP-3 spigot	metre	10.0	5040.00	50400.00
2334	Carriage of R.C.C. pipes 1200 mm dia	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.034	5700.00	193.80
2209	Carriage of Cement	tonne	0.034	92.24	3.14
0983	Fine sand (zone IV)	cum	0.046	760.00	34.96
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.046	103.77	4.77
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.795	487.00	387.17
0124	Mason (brick layer) 2nd class	day	0.795	448.00	356.16
0114	Beldar	day	8.67	368.00	3190.56
0101	Bhisti	day	0.67	407.00	272.69
	TOTAL				55599.31
	Add 1 % Water charges				555.99
	TOTAL				56155.30
	Add 15 % Contractor's profit and overheads				8423.30
	Detail of cost for 10 metre				64578.60
	Rate per metre				6457.86
	Say				6457.85

19.35.6 1800 mm dia RCC pipes. (Laying by manual/ machanical means)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1733	RCC pipe 1800 mm dia NP-3 spigot	metre	10.00	9450.00	94500.00
2336	Carriage of RCC pipe above 1200 mm dia and upto 1800 mm dia	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.049	5700.00	279.30
2209	Carriage of Cement	tonne	0.049	92.24	4.52
0983	Fine sand (zone IV)	cum	0.055	760.00	41.80
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.055	103.77	5.71
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.15	487.00	560.05
0124	Mason (brick layer) 2nd class	day	1.15	448.00	515.20
0114	Beldar	day	13.00	368.00	4784.00
0101	Bhisti	day	1.00	407.00	407.00
	TOTAL				101853.64
	Add 1 % Water charges				1018.54
	TOTAL				102872.18
	Add 15 % Contractor's profit and overheads				15430.83
	Detail of cost for 10 metre				118303.01
	Rate per metre				11830.30
	Say				11830.30

19.36 Providing and laying Non Pressure NP-4 class (Heavy duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete

19.36.1 450 mm dia RCC pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1734	RCC pipe 450 mm dia NP-4 spigot	metre	10.0	1733.00	17330.00
2299	Carriage of R.C.C. pipes 450 & 500 mm dia	100 metre	0.10	2520.19	252.02
0367	Portland Cement (OPC-43 grade)	tonne	0.012	5700.00	68.40
2209	Carriage of Cement	tonne	0.012	92.24	1.11
0983	Fine sand (zone IV)	cum	0.017	760.00	12.92
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.017	103.77	1.76
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.375	487.00	182.63
0124	Mason (brick layer) 2nd class	day	0.375	448.00	168.00
0114	Beldar	day	2.41	368.00	886.88
0101	Bhisti	day	0.33	407.00	134.31
	TOTAL				19038.03
	Add 1 % Water charges				190.38
	TOTAL				19228.41
	Add 15 % Contractor's profit and overheads				2884.26
	Detail of cost for 10 metre				22112.67
	Rate per metre				2211.26
	Say				2211.25

19.36.2 600 mm dia RCC pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1735	RCC pipe 600 mm dia pipe NP-4 spigot	metre	10.0	2310.00	23100.00
2303	Carriage of R.C.C. pipes 600, 700, 750 & 800 mm dia	100 metre	0.10	3780.28	378.03
0367	Portland Cement (OPC-43 grade)	tonne	0.016	5700.00	91.20
2209	Carriage of Cement	tonne	0.016	92.24	1.48
0983	Fine sand (zone IV)	cum	0.022	760.00	16.72
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.022	103.77	2.28
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.46	487.00	224.02
0124	Mason (brick layer) 2nd class	day	0.46	448.00	206.08
0114	Beldar	day	1.83	368.00	673.44
0101	Bhisti	day	0.33	407.00	134.31
	TOTAL				24827.56
	Add 1 % Water charges				248.28
	TOTAL				25075.84
	Add 15 % Contractor's profit and overheads				3761.38
	Detail of cost for 10 metre				28837.22
	Rate per metre				2883.72
	Say				2883.70

19.36.3 900 mm dia RCC pipes.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1736	RCC pipe 900 mm dia pipe NP-4 spigot	metre	10.0	4494.00	44940.00
2331	R.C.C. pipes 900 mm dia	100 metre	0.10	5670.42	567.04
0367	Portland Cement (OPC-43 grade)	tonne	0.025	5700.00	142.50
2209	Carriage of Cement	tonne	0.025	92.24	2.31
0983	Fine sand (zone IV)	cum	0.033	760.00	25.08
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.033	103.77	3.42
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.625	487.00	304.38
0124	Mason (brick layer) 2nd class	day	0.625	448.00	280.00
0114	Beldar	day	3.00	368.00	1104.00
0101	Bhisti	day	0.5	407.00	203.50
	TOTAL				47572.23
	Add 1 % Water charges				475.72
	TOTAL				48047.95
	Add 15 % Contractor's profit and overheads				7207.19
	Detail of cost for 10 metre				55255.14
	Rate per metre				5525.51
	Say				5525.50

19.36.4 1000 mm dia RCC pipes.(Laying by manual/ machanical means)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1737	RCC pipe 1000 mm dia pipe NP-4 spigot	metre	10.0	5565.00	55650.00
2332	Carriage of R.C.C. pipes 1000 mm dia	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.028	5700.00	159.60
2209	Carriage of Cement	tonne	0.028	92.24	2.58
0983	Fine sand (zone IV)	cum	0.037	760.00	28.12
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.037	103.77	3.84
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.68	487.00	331.16
0124	Mason (brick layer) 2nd class	day	0.68	448.00	304.64
0114	Beldar	day	4.33	368.00	1593.44
0101	Bhisti	day	0.5	407.00	203.50
	TOTAL				59032.94
	Add 1 % Water charges				590.33
	TOTAL				59623.27
	Add 15 % Contractor's profit and overheads				8943.49
	Detail of cost for 10 metre				68566.76
	Rate per metre				6856.67
	Say				6856.65

19.36.5 1200 mm dia RCC pipes. (Laying by manual/ mechanical means)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1738	RCC pipe 1200 mm dia pipe NP-4 spigot	metre	10.0	6510.00	65100.00
2334	Carriage of R.C.C. pipes 1200 mm dia	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.034	5700.00	193.80
2209	Carriage of Cement	tonne	0.034	92.24	3.14
0983	Fine sand (zone IV)	cum	0.046	760.00	34.96
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.046	103.77	4.77
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.795	487.00	387.17
0124	Mason (brick layer) 2nd class	day	0.795	448.00	356.16
0114	Beldar	day	8.67	368.00	3190.56
0101	Bhisti	day	0.67	407.00	272.69
	TOTAL				70299.31
	Add 1 % Water charges				702.99
	TOTAL				71002.30
	Add 15 % Contractor's profit and overheads				10650.35
	Detail of cost for 10 metre				81652.65
	Rate per metre				8165.26
	Say				8165.25

19.36.6 1800 mm dia RCC pipes. (Laying by manual/ mechanical means)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail for 10 metre				
	MATERIALS :				
1739	RCC pipe 1800 mm dia pipe NP-4 spigot	metre	10.0	13650.00	136500.00
2336	RCC pipe above 1200 mm dia and upto 1800 mm dia	100 metre	0.10	7560.57	756.06
0367	Portland Cement (OPC-43 grade)	tonne	0.049	5700.00	279.30
2209	Carriage of Cement	tonne	0.049	92.24	4.52
0983	Fine sand (zone IV)	cum	0.055	760.00	41.80
2261	Carriage of Fine sand (1 part badarpur sand : 2 parts jamuna sand)	cum	0.055	103.77	5.71
	LABOUR				
0123	Mason (brick layer) 1st class	day	1.15	487.00	560.05
0114	Beldar	day	13.00	368.00	4784.00
0101	Bhisti	day	1.00	407.00	407.00
	TOTAL				143338.44
	Add 1 % Water charges				1433.38
	TOTAL				144771.82
	Add 15 % Contractor's profit and overheads				21715.77
	Detail of cost for 10 metre				166487.59
	Rate per metre				16648.75
	Say				16648.75

SUB HEAD : 20.0
PILE WORK

20.1 Providing, driving with hydraulic piling rigs with power units and installing driven cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap) :

20.1.1 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete - $3.14/4 \times 0.40^2 \times 20 = 2.51$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	2.51	6446.45	16180.59(A)
9999	Sundries	L.S.	521.08	1.73	901.47
7181	C.I. pile shoe of 80 kg per pile	kilogram	80.00	50.00	4000.00
	@ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	35.00	45.00	1575.00
	@ 35 kg per pile				
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.36	34000.00	12240.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				35822.02
	Add 1 % Water charges on all except (A) i.e. on (35822.02 - 16180.59) = 19641.43				196.41
	TOTAL				36018.43
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (36018.43 - 16180.59) = 19837.84				2975.68
	Cost of 20 metre pile				38994.11
	Cost of 1 metre pile				1949.70
	Say				1949.70

20.1.2 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete - $3.14/4 \times 0.45^2 \times 20 = 3.18$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	3.18	6446.45	20499.71(A)
9999	Sundries	L.S.	392.70	1.73	679.37
7181	C.I. pile shoe of 80 kg per pile	kilogram	80.00	50.00	4000.00
	@ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	35.00	45.00	1575.00
	@ 35 kg per pile				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0024	MACHINERY Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.48	34000.00	16320.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				43999.04
	Add 1 % Water charges on all except (A) i.e. on (43999.04 - 20499.71) = 23499.33				234.99
	TOTAL				44234.03
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (44234.03 - 20499.71) = 23734.32				3560.15
	Cost of 20 metre pile				47794.18
	Cost of 1 metre pile				2389.70
	Say				2389.70

20.1.3 500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.50^2 \times 20 = 3.925$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	3.925	6446.45	25302.32(A)
9999	Sundries	L.S.	530.00	1.73	916.90
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe of 35 kg per pile @ 35 kg per pile	kilogram	35.00	45.00	1575.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.60	34000.00	20400.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				53119.18
	Add 1 % Water charges on all except (A) i.e. on (53119.18 - 25302.32) = 27816.86				278.17
	TOTAL				53397.35
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (53397.35 - 25302.32) = 28095.03				4214.25
	Cost of 20 metre pile				57611.60
	Cost of 1 metre pile				2880.58
	Say				2880.60

20.1.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.55^2 \times 20 = 4.75$ cum	cum	4.75	6446.45	30620.64(A)
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work				
9999	Sundries	L.S.	371.88	1.73	643.35
7181	C.I. pile shoe of 80 kg per pile	kilogram	80.00	50.00	4000.00
	@ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	35.00	45.00	1575.00
	@ 35 kg per pile				
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.60	34000.00	20400.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				58163.95
	Add 1 % Water charges on all except (A) i.e. on (58163.95 - 30620.64) = 27543.31				275.43
	TOTAL				58439.38
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (58439.38 - 30620.64) = 27818.74				4172.81
	Cost of 20 metre pile				62612.19
	Cost of 1 metre pile				3130.60
	Say				3130.60

20.1.5 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.75^2 \times 15 = 6.62$ cum	cum	6.62	6446.45	42675.50(A)
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work				
9999	Sundries	L.S.	573.57	1.73	992.28
7181	C.I. pile shoe of 80 kg per pile	kilogram	80.00	50.00	4000.00
	@ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	35.00	45.00	1575.00
	@ 35 kg per pile				
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.70	34000.00	23800.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.14	487.00	68.18

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	3.50	368.00	1288.00
	TOTAL				74548.96
	Add 1 % Water charges on all except (A) i.e. on (74548.96 - 42675.50) = 31873.46				318.73
	TOTAL				74867.69
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (74867.69 - 42675.50) = 32192.19				4828.83
	Cost of 15 metre pile				79696.52
	Cost of 1 metre pile				5313.10
	Say				5313.10

20.1.6 1000 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 m length of pile				
	MATERIAL				
5.33.1	Concrete 3.14/4x1.00 ² x10 = 7.85 cum	cum	7.85	6446.45	50604.63(A)
9999	Rate as per item no 5.33.1 of SH : RCC Work	L.S.	897.89	1.73	1553.35
7181	Sundries	kilogram	80.00	50.00	4000.00
	C.I. pile shoe of 80 kg per pile @ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile @ 35 kg per pile	kilogram	35.00	45.00	1575.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.68	34000.00	23120.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.16	487.00	77.92
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				82552.90
	Add 1 % Water charges on all except (A) i.e. on (82552.90 - 50604.63) = 31948.27				319.48
	TOTAL				82872.38
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (82872.38 - 50604.63) = 32267.75				4840.16
	Cost of 10 metre pile				87712.54
	Cost of 1 metre pile				8771.25
	Say				8771.25

20.1.7 1200 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL				
5.33.1	Concrete 3.14/4x1.2 ² x10 = 10.17 cum	cum	10.17	6446.45	65560.40(A)
	Rate as per item no 5.33.1 of SH : RCC Work				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	733.37	1.73	1268.73
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe of 35 kg per pile @ 35 kg per pile	kilogram	35.00	45.00	1575.00
0024	MACHINERY Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.67	34000.00	22780.00
0025	LABOUR Hire and running charges of light crane. Work supervisor	day	0.06	2500.00	150.00
0130	Mistry	day	0.18	487.00	87.66
0114	Beldar	day	4.50	368.00	1656.00
	TOTAL				97077.79
	Add 1 % Water charges on all except (A) i.e. on (97077.79 - 65560.40) = 31517.39				315.17
	TOTAL				97392.96
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (97392.96 - 65560.40) = 31832.56				4774.88
	Cost of 9 metre pile				102167.84
	Cost of 1 metre pile				11351.98
	Say				11352.00

20.1.8 1500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile MATERIAL				
5.33.1	Concrete $3.14/4 \times 1.5^2 \times 9 = 15.90$ cum	cum	15.90	6446.45	102498.56(A)
9999	Rate as per item no 5.33.1 of SH : RCC Work Sundries	L.S.	1113.48	1.73	1926.32
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe of 35 kg per pile @ 35 kg per pile	kilogram	35.00	45.00	1575.00
0024	MACHINERY Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.77	34000.00	26180.00
0025	LABOUR Hire and running charges of light crane. Work supervisor	day	0.10	2500.00	250.00
0130	Mistry	day	0.20	487.00	97.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	5.00	368.00	1840.00
	TOTAL				138367.28
	Add 1 % Water charges on all except (A) i.e. on (138367.28 - 102498.56) = 35868.72				358.69
	TOTAL				138725.97
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (138725.97 - 102498.56) = 36227.41				5434.11
	Cost of 9 metre pile				144160.08
	Cost of 1 metre pile				16017.78
	Say				16017.80

20.2 Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by percussion drilling using Direct mud circulation (DMC) or Bailer and chisel technique by tripod and mechanical Winch Machine all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap).

Note: Truck Mounted rotary/TMR/Tubewell boring machine shall not be used .

20.2.1 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.45^2 \times 20 = 3.18$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	3.18	6446.45	20499.71(A)
7183	Bentonite	tonne	0.25	3100.00	775.00
9999	Sundries	L.S.	230.69	1.73	399.09
	MACHINERY				
0015	Hire and running charges of Tripod and Mechanical Winch machine complete with power unit and accessories	day	0.94	2000.00	1880.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.38	4200.00	1596.00
0018	Hire and running charges of loader	day	0.30	6000.00	1800.00
0017	Hire and running charges of tipper	day	0.30	1800.00	540.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	2.50	368.00	920.00
	TOTAL				28618.24
	Add 1 % Water charges on all except (A) i.e. on (28618.24 - 20499.71) = 8118.53				81.19
	TOTAL				28699.43
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (28699.43 - 20499.71) = 8199.72				1229.96
	Cost of 20 metre pile				29929.39
	Cost of 1 metre pile				1496.46
	Say				1496.45

20.2.2 500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
5.33.1	Concrete $3.14/4 \times 0.50^2 \times 20 = 3.925 \text{ cum}$	cum	3.925	6446.45	25302.32(A)
7183	Rate as per item no 5.33.1 of SH : RCC Work	tonne	0.28	3100.00	868.00
9999	Bentonite	L.S.	87.95	1.73	152.15
	Sundries				
	MACHINERY				
0015	Hire and running charges of Tripod and Mechanical Winch machine complete with power unit and accessories	day	1.20	2000.00	2400.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.38	4200.00	1596.00
0017	Hire and running charges of tipper	day	0.30	1800.00	540.00
0018	Hire and running charges of loader	day	0.30	6000.00	1800.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	2.50	368.00	920.00
	TOTAL				33786.91
	Add 1 % Water charges on all except (A) i.e. on (33786.91 - 25302.32) = 8484.59				84.85
	TOTAL				33871.76
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (33871.76 - 25302.32) = 8569.44				1285.42
	Cost of 20 metre pile				35157.18
	Cost of 1 metre pile				1757.85
	Say				1757.85

20.2.3 600 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
5.33.1	Concrete $3.14/4 \times 0.60^2 \times 20 = 5.65 \text{ cum}$	cum	5.65	6446.45	36422.44(A)
	Rate as per item no 5.33.1 of SH : RCC Work				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7183	Bentonite	tonne	0.33	3100.00	1023.00
9999	Sundries	L.S.	317.43	1.73	549.15
0015	MACHINERY Hire and running charges of Tripod and Mechanical Winch machine complete with power unit and accessories	day	1.50	2000.00	3000.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.38	4200.00	1596.00
0017	Hire and running charges of tipper	day	0.30	1800.00	540.00
0018	Hire and running charges of loader	day	0.30	6000.00	1800.00
	LABOUR Work supervisor				
0130	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				46243.03
	Add 1 % Water charges on all except (A) i.e. on (46243.03 - 36422.44) = 9820.59				98.21
	TOTAL				46341.24
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (46341.24 - 36422.44) = 9918.80				1487.82
	Cost of 20 metre pile				47829.06
	Cost of 1 metre pile				2391.45
	Say				2391.45

20.2.4 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15 m length of pile				
	MATERIAL				
5.33.1	Concrete 3.14/4x0.75 ² x15 = 6.62 cum	cum	6.62	6446.45	42675.50(A)
7183	Rate as per item no 5.33.1 of SH : RCC Work				
7183	Bentonite	tonne	0.30	3100.00	930.00
9999	Sundries	L.S.	131.58	1.73	227.63
	MACHINERY				
0015	Hire and running charges of Tripod and Mechanical Winch machine complete with power unit and accessories	day	1.40	2000.00	2800.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.75	4200.00	3150.00
0017	Hire and running charges of tipper	day	0.30	1800.00	540.00
0018	Hire and running charges of loader	day	0.30	6000.00	1800.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.14	487.00	68.18
0114	Beldar	day	3.50	368.00	1288.00
	TOTAL				53629.31
	Add 1 % Water charges on all except (A) i.e. on (53629.31 - 42675.50) = 10953.81				109.54
	TOTAL				53738.85
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (53738.85 - 42675.50) = 11063.35				1659.50
	Cost of 15 metre pile				55398.35
	Cost of 1 metre pile				3693.22
	Say				3693.20

20.2A Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by Crawler mounted, telescopic boom hydraulic piling Rig all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap).

Note: Truck Mounted rotary/TMR/Tube well boring machine shall not be used.

20.2A.1 600 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile MATERIAL				
5.33.1	Concrete $3.14/4 \times 0.60^2 \times 20 = 5.65$ cum	cum	5.65	6446.45	36422.44(A)
7183	Rate as per item no 5.33.1 of SH : RCC Work	tonne	0.33	3100.00	1023.00
9999	Bentonite	L.S.	317.43	1.73	549.15
	Sundries				
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.75	34000.00	25500.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.38	4200.00	1596.00
0018	Hire and running charges of loader	day	0.30	6000.00	1800.00
0017	Hire and running charges of tipper	day	0.30	1800.00	540.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				68743.03
	Add 1 % Water charges on all except (A) i.e. on (68743.03 - 36422.44) = 32320.59				323.21
	TOTAL				69066.24
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (69066.24 - 36422.44) = 32643.80				4896.57
	Cost of 20 metre pile				73962.81
	Cost of 1 metre pile				3698.14
	Say				3698.15

20.2A.2 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 15 m length of pile MATERIAL				
5.33.1	Concrete $3.14/4 \times 0.75^2 \times 15 = 6.62$ cum	cum	6.62	6446.45	42675.50(A)
7183	Rate as per item no 5.33.1 of SH : RCC Work	tonne	0.30	3100.00	930.00
9999	Bentonite	L.S.	131.58	1.73	227.63
	Sundries				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0024	MACHINERY Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.70	34000.00	23800.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.75	4200.00	3150.00
0018	Hire and running charges of loader	day	0.30	6000.00	1800.00
0017	Hire and running charges of tipper	day	0.30	1800.00	540.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.14	487.00	68.18
0114	Beldar	day	3.50	368.00	1288.00
	TOTAL				74629.31
	Add 1 % Water charges on all except (A) i.e. on (74629.31 - 42675.50) = 31953.81				319.54
	TOTAL				74948.85
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (74948.85 - 42675.50) = 32273.35				4841.00
	Cost of 15 metre pile				79789.85
	Cost of 1 metre pile				5319.32
	Say				5319.30

20.2A.3 1000 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 m length of pile				
	MATERIAL				
	Concrete 3.14/4x1.00 ² x10 = 7.85 cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	7.85	6446.45	50604.63(A)
7183	Bentonite	tonne	0.35	3100.00	1085.00
9999	Sundries	L.S.	175.89	1.73	304.29
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.69	34000.00	23460.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.75	4200.00	3150.00
0018	Hire and running charges of loader	day	0.40	6000.00	2400.00
0017	Hire and running charges of tipper	day	0.40	1800.00	720.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.16	487.00	77.92
0114	Beldar	day	4.00	368.00	1472.00
	TOTAL				83423.84
	Add 1 % Water charges on all except (A) i.e. on (83423.84 - 50604.63) = 32819.21				328.19
	TOTAL				83752.03
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (83752.03 - 50604.63) = 33147.40				4972.11
	Cost of 10 metre pile				88724.14
	Cost of 1 metre pile				8872.41
	Say				8872.40

20.2A.4 1200 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 1.20^2 \times 9 = 10.17$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	10.17	6446.45	65560.40(A)
7183	Bentonite	tonne	0.385	3100.00	1193.50
9999	Sundries	L.S.	290.79	1.73	503.07
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.67	34000.00	22780.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.75	4200.00	3150.00
0018	Hire and running charges of loader.	day	0.50	6000.00	3000.00
0017	Hire and running charges of tipper	day	0.50	1800.00	900.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.18	487.00	87.66
0114	Beldar	day	4.50	368.00	1656.00
	TOTAL				98980.63
	Add 1 % Water charges on all except (A) i.e. on (98980.63 - 65560.40) = 33420.23				334.20
	TOTAL				99314.83
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (99314.83 - 65560.40) = 33754.43				5063.16
	Cost of 9 metre pile				104377.99
	Cost of 1 metre pile				11597.55
	Say				11597.55

20.2A.5 1500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 9 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 1.50^2 \times 9 = 15.90$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	15.90	6446.45	102498.56(A)
7183	Bentonite	tonne	0.45	3100.00	1395.00
9999	Sundries	L.S.	593.48	1.73	1026.72
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.77	34000.00	26180.00
0025	Hire and running charges of light crane.	day	0.10	2500.00	250.00
0026	Hire and running charges of bentonite pump.	day	0.96	4200.00	4032.00
0018	Hire and running charges of loader	day	0.75	6000.00	4500.00
0017	Hire and running charges of tipper	day	0.75	1800.00	1350.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.25	487.00	121.75

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	5.00	368.00	1840.00
	TOTAL				143194.03
	Add 1 % Water charges on all except (A) i.e. on (143194.03 - 102498.56) = 40695.47				406.95
	TOTAL				143600.98
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (143600.98 - 102498.56) = 41102.42				6165.36
	Cost of 9 metre pile				149766.34
	Cost of 1 metre pile				16640.70
	Say				16640.70

20.3 Boring with hydraulic piling rigs with power units, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) :

20.3.1 300 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL				
	R.C.C				
	Stem $-3.14/4 \times (0.30)^2 \times 9.625 = 0.680$ cum				
	Bulb $-3.14/4 \times (0.75)^2 \times 0.075 = 0.033$ cum				
	$2 \times 3.14/4 \times (0.525)^2 \times 0.150 = 0.065$ cum				
	$= 0.778$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	0.778	6446.45	5015.34(A)
7183	Bentonite	tonne	0.08	3100.00	248.00
9999	Sundries	L.S.	410.92	1.73	710.89
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.36	34000.00	12240.00
0025	Hire and running charges of light crane.	day	0.03	2500.00	75.00
0026	Hire and running charges of bentonite pump.	day	0.02	4200.00	84.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				19148.19
	Add 1 % Water charges on all except (A) i.e. on (19148.19 - 5015.34) = 14132.85				141.33
	TOTAL				19289.52
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (19289.52 - 5015.34) = 14274.18				2141.13
	Cost of 20 metre pile				21430.65
	Cost of 1 metre pile				2143.06
	Say				2143.05

20.3.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL R.C.C Stem $-3.14/4 \times (0.40)^2 \times 9.30 = 1.169$ cum Bulb $-3.14/4 \times (1.00)^2 \times 0.1 = 0.079$ cum $2 \times 3.14/4 \times (0.7)^2 \times 0.30 = 0.23$ cum $= 1.478$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	1.478	6446.45	9527.85(A)
7183	Bentonite	tonne	0.15	3100.00	465.00
9999	Sundries	L.S.	276.82	1.73	478.90
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.36	34000.00	12240.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.02	4200.00	84.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				23720.71
	Add 1 % Water charges on all except (A) i.e. on (23720.71 - 9527.85) = 14192.86				141.93
	TOTAL				23862.64
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (23862.64 - 9527.85) = 14334.79				2150.22
	Cost of 10 metre pile				26012.86
	Cost of 1 metre pile				2601.28
	Say				2601.30

20.3.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres MATERIAL R.C.C Stem $-3.14/4 \times (0.45)^2 \times 9.212 = 1.465$ cum Bulb $-3.14/4 \times (1.125)^2 \times 0.113 = 0.112$ cum $2 \times 3.14/4 \times (0.788)^2 \times 0.337 = 0.329$ cum $= 1.906$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	1.906	6446.45	12286.93(A)
7183	Bentonite	tonne	0.19	3100.00	589.00
9999	Sundries	L.S.	194.81	1.73	337.02
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.36	34000.00	12240.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.02	4200.00	84.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	LABOUR Work supervisor				
	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				26461.91
	Add 1 % Water charges on all except (A) i.e. on (26461.91 - 12286.93) = 14174.98				141.75
	TOTAL				26603.66
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (26603.66 - 12286.93) = 14316.73				2147.51
	Cost of 10 metre pile				28751.17
	Cost of 1 metre pile				2875.11
	Say				2875.10

20.3.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 metres				
	MATERIAL				
	R.C.C				
	Stem $-3.14/4 \times (0.50)^2 \times 9.125 = 1.792$ cum				
	Bulb $-3.14/4 \times (1.25)^2 \times 0.125 = 0.153$ cum				
	$2 \times 3.14/4 \times (0.875)^2 \times 0.375 = 0.451$ cum				
	= 2.396 cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	2.40	6446.45	15471.48(A)
7183	Bentonite	tonne	0.20	3100.00	620.00
9999	Sundries	L.S.	208.15	1.73	360.10
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.36	34000.00	12240.00
0025	Hire and running charges of light crane.	day	0.06	2500.00	150.00
0026	Hire and running charges of bentonite pump.	day	0.02	4200.00	84.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.08	487.00	38.96
0114	Beldar	day	2.00	368.00	736.00
	TOTAL				29700.54
	Add 1 % Water charges on all except (A) i.e. on (29700.54 - 15471.48) = 14229.06				142.29
	TOTAL				29842.83
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (29842.83 - 15471.48) = 14371.35				2155.70
	Cost of 10 metre pile				31998.53
	Cost of 1 metre pile				3199.85
	Say				3199.85

20.4 Extra over single under ream for providing additional bulbs in under reamed piles, under specified diameter(only the nos. of extra bulbs are to be paid)

20.4.1 300 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb.				
	MATERIAL				
	Bulb - 0.033 cum	cum	0.033	6446.45	212.73(A)
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work				
7183	Bentonite	tonne	0.003	3100.00	9.30
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.02	34000.00	680.00
0025	Hire and running charges of light crane.	day	0.01	2500.00	25.00
0026	Hire and running charges of bentonite pump.	day		0.01	4200.00
42.00					
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.02	487.00	9.74
0114	Beldar	day	1.00	368.00	368.00
	Total				1346.77
	Add 1 % Water charges on all except (A) i.e. on (1346.77 - 212.73) = 1134.04				11.34
	Total				1358.11
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1358.11 - 212.73) = 1145.38				171.81
	Cost of 1 bulb				1529.92
	Say				1529.90

20.4.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb.				
	MATERIAL				
	Bulb - 0.063 cum	cum	0.063	6446.45	406.13
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work				
7183	Bentonite	tonne	0.006	3100.00	18.60
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.02	34000.00	680.00
0025	Hire and running charges of light crane.	day	0.01	2500.00	25.00
0026	Hire and running charges of bentonite pump.	day	0.01	4200.00	42.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.02	487.00	9.74

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.00	368.00	368.00
	Total				1549.47
	Add 1 % Water charges on all except (A) i.e. on (1549.47 - 406.13) = 1143.34				11.43
	Total				1560.90
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1560.90 - 406.13) = 1154.77				173.22
	Cost of 1 bulb				1734.12
	Say				1734.10

20.4.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb.				
	MATERIAL				
	Bulb - 0.081 cum	cum	0.081	6446.45	522.16(A)
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work				
7183	Bentonite	tonne	0.008	3100.00	24.80
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.02	34000.00	680.00
0025	Hire and running charges of light crane.	day	0.01	2500.00	25.00
0026	Hire and running charges of bentonite pump.	day	0.01	4200.00	42.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.02	487.00	9.74
0114	Beldar	day	1.00	368.00	368.00
	Total				1671.70
	Add 1 % Water charges on all except (A) i.e. on (1671.70 - 522.16) = 1149.54				11.50
	Total				1683.20
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1683.20 - 522.16) = 1161.04				174.16
	Cost of 1 bulb				1857.36
	Say				1857.35

20.4.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 bulb.				
	MATERIAL				
	Bulb - 0.102 cum	cum	0.102	6446.45	657.54(A)
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work				
7183	Bentonite	tonne	0.01	3100.00	31.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	day	0.02	34000.00	680.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0025	Hire and running charges of light crane.	day	0.01	2500.00	25.00
0026	Hire and running charges of bentonite pump.	day	0.02	4200.00	84.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.02	487.00	9.74
0114	Beldar	day	1.00	368.00	368.00
	Total				1855.28
	Add 1 % Water charges on all except (A) i.e. on (1855.28 - 657.54) = 1197.74				11.98
	Total				1867.26
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1867.26 - 657.54) = 1209.72				181.46
	Cost of 1 bulb				2048.72
	Say				2048.70

20.5 Providing, driving with vibrating pile driving hammer complete with power units & accessories and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M-25 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia, 40 mm for grouting with cement sand grouting of mix 1:2 (1cement : 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.1 400 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $-3.14/4 \times (0.40)^2 \times 20 = 2.51$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	2.51	6446.45	16180.59(A)
	Add				
5.19	Rate as per item no 5.19 of SH : RCC	cum	2.51	9534.25	23930.97(A)
5.1.3	Deduct Rate as per item no 5.1.3 SH : RCC	cum	-2.51	5772.65	-14489.35(A)
3.7	Cement mortar 1:2 for grout				
	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	5551.75	138.79
9999	Sundries	L.S.	442.00	1.73	764.66
7181	C.I. pile shoe of 80 kg per pile	kilogram	80.00	50.00	4000.00
	@ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	35.00	45.00	1575.00
	@35 kg per pile				
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	day	0.38	35000.00	13300.00
0028	Hire and running charges of crane 20 tonne capacity.	day	0.06	9300.00	558.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	LABOUR Work supervisor				
	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				47121.10
	Add 1 % Water charges on all except (A) i.e. on (47121.10 - 25622.21) = 21498.89				214.99
	TOTAL				47336.09
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (47336.09 - 25622.21) = 21713.88				3257.08
	Cost of 20 metre pile				50593.17
	Cost of 1 metre pile				2529.65
	Say				2529.65

20.5.2 450 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
5.33.1	Concrete $-3.14/4 \times (0.45)^2 \times 20 = 3.18$ cum	cum	3.18	6446.45	20499.71(A)
5.19	Rate as per item no 5.33.1 of SH : RCC Work	cum	3.18	9534.25	30318.92(A)
5.1.3	Add Rate as per item no 5.1.3 SH : RCC	cum	3.18	9534.25	30318.92(A)
5.1.3	Deduct Rate as per item no 5.1.3 SH : RCC	cum	-3.18	5772.65	-18357.03(A)
3.7	Cement mortar 1:2 for grout				
	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	5551.75	138.79
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.73	764.66
7181	C.I. pile shoe of 80 kg per pile	kilogram	80.00	50.00	4000.00
	@ 80 kg per pile				
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	35.00	45.00	1575.00
	@ 35 kg per pile				
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	day	0.38	35000.00	13300.00
0028	Hire and running charges of crane 20 tonne capacity.	day	0.06	9300.00	558.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	1.08	487.00	525.96
0114	Beldar	day	10.78	368.00	3967.04
	TOTAL				57291.05
	Add 1 % Water charges on all except (A) i.e. on (57291.05 - 32461.60) = 24829.45				248.29
	TOTAL				57539.34
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (57539.34 - 32461.60) = 25077.74				3761.66
	Cost of 20 metre pile				61301.00
	Cost of 1 metre pile				3065.05
	Say				3065.05

20.5.3 500 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile MATERIAL				
	Concrete $-3.14/4 \times (0.50)^2 \times 20 = 3.925$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	3.925	6446.45	25302.32(A)
5.19	Add Rate as per item no 5.19 SH : RCC	cum	3.925	9534.25	37421.93(A)
5.1.3	Deduct Rate as per item no 5.1.3 SH : RCC	cum	-3.925	5772.65	-22657.65(A)
3.7	Cement mortar 1:2 for grout				
	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	5551.75	138.79
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.73	764.66
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	45.00	1575.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	day	0.38	35000.00	13300.00
0028	Hire and running charges of crane 20 tonne capacity.	day	0.06	9300.00	558.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				61565.49
	Add 1 % Water charges on all except (A) i.e. on (61565.49 - 40066.60) = 21498.89				214.99
	TOTAL				61780.48
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (61780.48 - 40066.60) = 21713.88				3257.08
	Cost of 20 metre pile				65037.56
	Cost of 1 metre pile				3251.87
	Say				3251.85

20.5.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile MATERIAL				
	Concrete $-3.14/4 \times (0.55)^2 \times 20 = 4.75$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	4.75	6446.45	30620.64(A)
5.19	Add Rate as per item no 5.19 SH : RCC	cum	4.75	9534.25	45287.69(A)
5.1.3	Deduct Rate as per item no 5.1.3 SH : RCC	cum	-4.75	5772.65	-27420.09(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	5551.75	138.79
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.73	764.66
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe @ 35 kg per pile	kilogram	35.00	45.00	1575.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0027	MACHINERY Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	day	0.38	35000.00	13300.00
0028	Hire and running charges of crane 20 tonne capacity.	day	0.06	9300.00	558.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				69987.13
	Add 1 % Water charges on all except (A) i.e. on (69987.13 - 48488.24) = 21498.89				214.99
	TOTAL				70202.12
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (70202.12 - 48488.24) = 21713.88				3257.08
	Cost of 20 metre pile				73459.20
	Cost of 1 metre pile				3672.96
	Say				3672.95

20.5.5 750 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $-3.14/4 \times (0.75)^2 \times 20 = 10.88$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	10.88	6446.45	70137.38(A)
5.19	Add Rate as per item no 5.19 SH : RCC	cum	10.88	9534.25	103732.64(A)
5.1.3	Deduct Rate as per item no 5.1.3 SH : RCC	cum	-10.88	5772.65	-62806.43(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	5551.75	138.79
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.73	764.66
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe of 35 kg per pile @ 35 kg per pile	kilogram	35.00	45.00	1575.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	day	0.38	35000.00	13300.00
0028	Hire and running charges of crane 20 tonne capacity.	day	0.06	9300.00	558.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				132562.48
	Add 1 % Water charges on all except (A) i.e. on (132562.48 - 111063.59) = 21498.89				214.99
	TOTAL				132777.47
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (132777.47 - 111063.59) = 21713.88				3257.08
	Cost of 20 metre pile				136034.55
	Cost of 1 metre pile				6801.72
	Say				6801.70

20.5.6 1000 mm dia piles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $-3.14/4 \times (1.00)^2 \times 20 = 15.70$ cum				
5.33.1	Rate as per item no 5.33.1 of SH : RCC Work	cum	15.7	6446.45	101209.27(A)
5.19	Add Rate as per item no 5.19 SH : RCC	cum	15.7	9534.25	149687.73(A)
5.1.3	Deduct Rate as per item no 5.1.3 SH : RCC	cum	-15.7	5772.65	-90630.61(A)
3.7	Rate as per Item Number 3.7 of SH: Mortars	cum	0.025	5551.75	138.79
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.73	764.66
7181	C.I. pile shoe of 80 kg per pile @ 80 kg per pile	kilogram	80.00	50.00	4000.00
7182	M.S. clamps for pile shoe of 35 kg per pile @ 35 kg per pile	kilogram	35.00	45.00	1575.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	day	0.38	35000.00	13300.00
0028	Hire and running charges of crane 20 tonne capacity.	day	0.06	9300.00	558.00
	LABOUR				
	Work supervisor				
0130	Mistry	day	0.12	487.00	58.44
0114	Beldar	day	3.00	368.00	1104.00
	TOTAL				181765.28
	Add 1 % Water charges on all except (A) i.e. on (181765.28 - 160266.39) = 21498.89				214.99
	TOTAL				181980.27
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (181980.27 - 160266.39) = 21713.88				3257.08
	Cost of 20 metre pile				185237.35
	Cost of 1 metre pile				9261.86
	Say				9261.85

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform by Kentledge/Anchor piles method and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.

20.6.1 Single pile upto 50 tonne Safe capacity

20.6.1.1 Initial test (Test Load 2.5 times the Safe capacity)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7246	Details of cost for 1 test Verticle load testing (INITIAL) of piles in accordance with IS : 2911 (Part-IV) including installation of loading platform and prepration of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification and upto 50MT capacity pile. of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification and upto 50MT capacity pile. TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost per test Say	per test	1.00	33200.00	33200.00
					33200.00
					332.00
					33532.00
					5029.80
					38561.80
					38561.80

20.6.1.2 Routine test (Test Load 1.5 times the Safe capacity)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7249	Details of cost for 1 test Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including prepration of pile head etc. for Single pile upto 50 tonne capacity TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost per test Say	per test	1.00	15000.00	15000.00
					15000.00
					150.00
					15150.00
					2272.50
					17422.50
					17422.50

20.6.2 Single pile above 50 tonne and upto 100 tonne Safe capacity

20.6.2.1 Initial test (Test Load 2.5 times the Safe capacity)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7247	Details of cost for 1 test Verticle load testing (INITIAL) of piles in accordance with IS : 2911 (Part-IV)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & above 50MT and upto 100MT. and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & above 50 tonne and up to 100 tonne TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost per test Say	per test	1.00	40300.00	40300.00 40300.00 403.00 40703.00 6105.45 46808.45 46808.45

20.6.2.2 Routine test (Test Load 1.5 times the Safe capacity)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7250	Details of cost for 1 test Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including preparation of pile head etc. for Single pile above 50 tonne capacity pile and upto 100 tonne capacity pile TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Cost per test Say	per test	1.00	23000.00	23000.00 23000.00 230.00 23230.00 3484.50 26714.50 26714.50

20.6.3 Group of two or more piles upto 50 tonne Safe capacity

20.6.3.1 Initial test (Test Load 2.5 times the Safe capacity)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7248	Details of cost for 1 test Verticle load testing (INITIAL) of piles in accordance with IS : 2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & group of two or more upto 50MT. and preparation of pile head or construction of test cap and dismantling of test cap after	per test	1.00	48500.00	48500.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	test etc. complete as per specification & group of two or more up to 50 tonne				
	TOTAL				48500.00
	Add 1 % Water charges				485.00
	TOTAL				48985.00
	Add 15 % Contractor's profit and overheads				7347.75
	Cost per test				56332.75
	Say				56332.75

20.6.3.2 Routine test (Test Load 1.5 times the Safe capacity)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7251	Details of cost for 1 test Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including preperation of pile head etc. for Group of two piles upto 50 tonne capacity each	per test	1.00	29500.00	29500.00
	TOTAL				29500.00
	Add 1 % Water charges				295.00
	TOTAL				29795.00
	Add 15 % Contractor's profit and overheads				4469.25
	Cost per test				34264.25
	Say				34264.25

20.7 Cyclic vertical load testing of pile in accordance with IS Code of practice IS: 2911 (part IV) by Kentledge method including preparation of pile head etc for.

20.7.1 Single pile

20.7.1.1 Upto 50 tonne Safe capacity pile

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7249	Details of cost for 1 test Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including preperation of pile head etc. for Single pile upto 50 tonne capacity	per test	1.00	15000.00	15000.00
	TOTAL				15000.00
	Add 1 % Water charges				150.00
	TOTAL				15150.00
	Add 15 % Contractor's profit and overheads				2272.50
	Cost per test				17422.50
	Say				17422.50

20.7.1.2 Above 50 tonne and upto 100 tonne Safe capacity pile

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7250	Details of cost for 1 test Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including prepration of pile head etc. for Single pile above 50 tonne capacity pile and upto 100 tonne capacity pile	per test	1.00	23000.00	23000.00
	TOTAL				23000.00
	Add 1 % Water charges				230.00
	TOTAL				23230.00
	Add 15 % Contractor's profit and overheads				3484.50
	Cost per test				26714.50
	Say				26714.50

20.7.2 Group of two or more piles**20.7.2.1 Upto 400 tonne Safe capacity of group**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7251	Details of cost for 1 test Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including prepration of pile head etc. for Group of two piles upto 50 tonne capacity each	per test	1.00	29500.00	29500.00
	TOTAL				29500.00
	Add 1 % Water charges				295.00
	TOTAL				29795.00
	Add 15 % Contractor's profit and overheads				4469.25
	Cost per test				34264.25
	Say				34264.25

20.8 Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :**20.8.1 Upto 50 tonne capacity pile**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7252	Details of cost for 1 test Lateral load testing of single pile in accordance with IS : 2911 part -IV for determining safe allowable lateral load on pile. Upto 50 tonne capacity	per test	1.00	15000.00	15000.00
	TOTAL				15000.00
	Add 1 % Water charges				150.00
	TOTAL				15150.00
	Add 15 % Contractor's profit and overheads				2272.50
	Cost per test				17422.50
	Say				17422.50

20.8.2 Above 50 tonne and upto 100 tonne capacity pile

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7253	Details of cost for 1 test Lateral load testing of single pile in accordance with IS : 2911 part -IV for determining safe allowable lateral load on pile. Above 50 tonne capacity	per test	1.00	23600.00	23600.00
	TOTAL				23600.00
	Add 1 % Water charges				236.00
	TOTAL				23836.00
	Add 15 % Contractor's profit and overheads				3575.40
	Cost per test				27411.40
	Say				27411.40

20.9 Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0081	Detail of cost for one pit test (Ten pits in one day) MATERIAL Pile Integrity testing equipment	day	0.10	3000.00	300.00
0160	LABOUR Technician	day	0.10	775.00	77.50
0161	Helper (Technician)	day	0.10	368.00	36.80
9999	Miscellaneous Reporting charges	L.S.	100.67	1.73	174.16
9977	Transportation and consumables etc.	L.S.	33.56	1.73	58.06
	TOTAL				646.52
	Add 1 % Water charges				6.47
	TOTAL				652.99
	Add 15 % Contractor's profit and overheads				97.95
	Cost per test				750.94
	Say				750.95

SUB HEAD : 21.0
ALUMINIUM WORK

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :

21.1.1 For fixed portion

21.1.1.1 Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.02 kg MATERIAL (i) External member of the frame (Jindal section no 4605) $V = 2 \times 2.40 = 4.80 \text{ m}$ $H = 2 \times 3 \times 0.95 = 5.70 \text{ m}$ $= 10.50 \text{ m @ } 1.653 \text{ kg/m} = 17.36 \text{ kg}$ (ii) Internal member of the frame (Jindal section no 4604) $V = 2 \times 2.40 = 4.80 \text{ m}$ $H = 1 \times 3 \times 0.95 = 2.85 \text{ m}$ $= 7.65 \text{ m @ } 1.692 \text{ kg/m} = 12.94 \text{ kg}$ (iii) Aluminium snap beading on both side (Jindal section no 4407) $2 \times 6 \times 2 (1.14 + 0.95) = 50.16 \text{ m}$ Snap beading = $50.16 \text{ m @ } 0.176 \text{ kg/m} = 8.33 \text{ kg}$ (iv) Angle cleat $38 \times 38 \times 4.8 \text{ mm}$ 50 mm long $18 \times 0.05 = 0.900 \text{ m @ } 0.985 \text{ kg/m} = 0.89 \text{ kg}$ Sub total = 40.02 kg Add 5% wastage = 2.00 kg Total = 42.02 kg				
7306	Aluminium T or L sections	kilogram	42.02	200.00	8404.00
0589	(v) C.P. brass /stainless steel screws 20 mm for cleat angle $18 \times 4 = 72 \text{ Nos}$	100 Nos	0.72	170.00	122.40
7389	Chromium plated Brass screws 20 mm (vi)				
9977	Anodising 15 microns on aluminium sections (vii)	kilogram	42.02	40.00	1680.80
	Carriage of material	L.S.	52.00	1.73	89.96
	LABOUR				
	For fabrication of frame				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	407.00	407.00
0114	Beldar	day	1.00	368.00	368.00
0100	Bandhani	day	0.05	407.00	20.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fasteners and sundries	L.S.	100.00	1.73	173.00
	TOTAL				12239.51
	Add 1 % Water charges				122.40
	TOTAL				12361.91
	Add 15 % Contractor's profit and overheads				1854.29
	Cost for 40.02 kg				14216.20
	Cost for 1 kg				355.22
	Say				355.20

21.1.1.2 Powder coated aluminium (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.02 kg MATERIAL (i) External member of the frame (Jindal section no 4605) $V = 2 \times 2.40 = 4.80$ m $H = 2 \times 3 \times 0.95 = 5.70$ m $= 10.50$ m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) $V = 2 \times 2.40 = 4.80$ m $H = 1 \times 3 \times 0.95 = 2.85$ m $= 7.65$ m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) $2 \times 6 \times 2 (1.14 + 0.95) = 50.16$ m Snap beading = 50.16 m @ 0.176 kg/m $= 8.33$ kg (iv) Angle cleat 38x38x4.8 mm 50 mm long $18 \times 0.05 = 0.900$ m @ 0.985 kg/m = 0.89 kg Sub total = 40.02 kg Add 5% wastage = 2.00 kg Total = 42.02 kg				
7306	Aluminium T or L sections	kilogram	42.02	200.00	8404.00
	(v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 Nos				
0589	Chromium plated Brass screws 20 mm	100 Nos	0.72	170.00	122.40
	(vi) Epoxy				
7392	Powder coating 50 microns on aluminium sections	kilogram	42.02	64.00	2689.28
	(vii)				
9977	Carriage of material LABOUR	L.S.	52.00	1.73	89.96
	For fabrication of frame				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	407.00	407.00
0114	Beldar	day	1.00	368.00	368.00
0100	Bandhani	day	0.05	407.00	20.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fasteners and sundries	L.S.	100.00	1.73	173.00
	TOTAL				13247.99
	Add 1 % Water charges				132.48
	TOTAL				13380.47
	Add 15 % Contractor's profit and overheads				2007.07
	Cost for 40.02 kg				15387.54
	Cost for 1 kg				384.49
	Say				384.50

21.1.1.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 40.02 kg MATERIAL (i) External member of the frame (Jindal section no 4605) $V = 2 \times 2.40 = 4.80$ m $H = 2 \times 3 \times 0.95 = 5.70$ m $= 10.50$ m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) $V = 2 \times 2.40 = 4.80$ m $H = 1 \times 3 \times 0.95 = 2.85$ m $= 7.65$ m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) $2 \times 6 \times 2 (1.14 + 0.95) = 50.16$ m Snap beading = 50.16 m @ 0.176 kg/m $= 8.33$ kg (iv) Angle cleat 38x38x4.8 mm 50 mm long $18 \times 0.05 = 0.900$ m @ 0.985 kg/m = 0.89 kg Sub total = 40.02 kg Add 5% wastage = 2.00 kg Total = 42.02 kg				
7306	Aluminium T or L sections	kilogram	42.02	200.00	8404.00
0589	(v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 Nos	100 Nos	0.72	170.00	122.40
7393	(vi) Chromium plated Brass screws 20 mm				
	(vii) Polyester powder coating 50 microns on aluminium sections	kilogram	42.02	70.00	2941.40
9977	Carriage of material	L.S.	52.00	1.73	89.96
	LABOUR For fabrication of frame				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	407.00	407.00
0114	Beldar	day	1.00	368.00	368.00
0100	Bandhani	day	0.05	407.00	20.35

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners and sundries	L.S.	100.00	1.73	173.00
	TOTAL				13500.11
	Add 1 % Water charges				135.00
	TOTAL				13635.11
	Add 15 % Contractor's profit and overheads				2045.27
	Cost for 40.02 kg				15680.38
	Cost for 1 kg				391.81
	Say				391.80

21.1.2 For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)

21.1.2.1 Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.21 kg MATERIAL (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg (iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg (v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m @ 0.176 kg/m = 2.51 kg (vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg Total = 21.65 kg				
7306	Aluminium T or L sections (viii)	kilogram	21.65	200.00	4330.00
0689	Anodised Aluminium butt hinges 100x75x4 mm (ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12 Total = 92 Nos	10 Nos	0.40	400.00	160.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0589	Chromium plated Brass screws 20 mm (x)	100 Nos	0.92	170.00	156.40
7389	Anodising 15 microns on aluminium sections (xi)	kilogram	21.65	40.00	866.00
9977	Carriage of material (xii) Neoprene/ EPDM gasket in groove of meeting style	L.S.	31.20	1.73	53.98
7390	Neoprene/EPDM rubber gasket	metre	2.35	20.00	47.00
	LABOUR				
	For fabrication				
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	407.00	407.00
0114	Beldar	day	0.50	368.00	184.00
0100	Bandhani	day	0.40	407.00	162.80
	For fixing the shutter including hinges :				
0111	Carpenter 1st class	day	0.20	487.00	97.40
0114	Beldar	day	0.50	368.00	184.00
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	50.00	1.73	86.50
	TOTAL				7222.08
	Add 1 % Water charges				72.22
	TOTAL				7294.30
	Add 15 % Contractor's profit and overheads				1094.15
	Cost for 20.21 kg				8388.45
	Cost for 1 kg				415.06
	Say				415.05

21.1.2.2 Powder coated aluminium (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.21 kg MATERIAL				
	(i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg				
	(ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg				
	(iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg				
	(iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg				
	(v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg				
	(vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m @ 0.176 kg/m = 2.51 kg				
	(vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg				
	Sub total = 20.62 kg				
	Add 5% wastage = 1.03 kg				
	Total = 21.65 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7306	Aluminium T or L sections (viii)	kilogram	21.65	200.00	4330.00
0689	Anodised Aluminium butt hinges 100x75x4 mm (ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12 Total = 92 Nos	10 Nos	0.40	400.00	160.00
0589	Chromium plated Brass screws 20 mm (x) Epoxy	100 Nos	0.92	170.00	156.40
7392	Powder coating 50 microns on aluminium sections (xi)	kilogram	21.65	64.00	1385.60
9977	Carriage of material (xii) Neoprene/ EPDM rubber gasket in groove of meeting style	L.S.	31.20	1.73	53.98
7390	Neoprene/EPDM rubber gasket LABOUR	metre	2.35	20.00	47.00
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	407.00	407.00
0114	Beldar	day	0.50	368.00	184.00
0100	Bandhani	day	0.40	407.00	162.80
	For fixing the shutter including hinges :				
0111	Carpenter 1st class	day	0.20	487.00	97.40
0114	Beldar	day	0.50	368.00	184.00
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	50.00	1.73	86.50
	TOTAL				7741.68
	Add 1 % Water charges				77.42
	TOTAL				7819.10
	Add 15 % Contractor's profit and overheads				1172.87
	Cost for 20.21 kg				8991.97
	Cost for 1 kg				444.92
	Say				444.90

21.1.2.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20.21 kg MATERIAL (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg (iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	(v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m @ 0.176 kg/m = 2.51 kg (vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg Total = 21.65 kg				
7306	Aluminium T or L sections (viii)	kilogram	21.65	200.00	4330.00
0689	Anodised Aluminium butt hinges 100x75x4 mm (ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12 Total = 92 Nos	10 Nos	0.40	400.00	160.00
0589	Chromium plated Brass screws 20 mm (x)	100 Nos	0.92	170.00	156.40
7393	Polyester powder coating 50 microns on aluminium sections (xi)	kilogram	21.65	70.00	1515.50
9977	Carriage of material (xii) Neoprene/ EPDM rubber gasket in groove of meeting style	L.S.	31.20	1.73	53.98
7390	Neoprene/EPDM rubber gasket LABOUR For fabrication	metre	2.35	20.00	47.00
0116	Fitter (grade 1)	day	1.00	487.00	487.00
0139	Skilled Beldar (for floor rubbing etc.)	day	1.00	407.00	407.00
0114	Beldar	day	0.50	368.00	184.00
0100	Bandhani	day	0.40	407.00	162.80
0111	For fixing the shutter including hinges : Carpenter 1st class	day	0.20	487.00	97.40
0114	Beldar	day	0.50	368.00	184.00
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	50.00	1.73	86.50
	TOTAL				7871.58
	Add 1 % Water charges				78.72
	TOTAL				7950.30
	Add 15 % Contractor's profit and overheads				1192.55
	Cost for 20.21 kg				9142.85
	Cost for 1 kg				452.39
	Say				452.40

21.2 Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.

21.2.1 Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7477	Details of cost for 7 sqm MATERIAL 12 mm thick particle board = 7.00 sqm Add 5% wastage = 0.35 sqm Total = 7.35 sqm Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade) 12 mm thick	sqm	7.35	563.00	4138.05
9977	Carriage of particle board	L.S.	13.65	1.73	23.61
9999	Sundries & screws etc.	L.S.	27.30	1.73	47.23
	LABOUR				
0112	Carpenter 2nd class	day	0.90	448.00	403.20
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				4980.09
	Add 1 % Water charges				49.80
	TOTAL				5029.89
	Add 15 % Contractor's profit and overheads				754.48
	Cost for 7 sqm				5784.37
	Cost for 1 sqm				826.33
	Say				826.35

21.2.2 Pre-laminated particle board with decorative lamination on both sides

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7480	Details of cost for 7 sqm MATERIAL 12 mm thick particle board = 7.00 sqm Add 5% wastage = 0.35 sqm Total = 7.35 sqm Prelaminated particle board with both sides decorative lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade) 12 mm thick	sqm	7.35	596.00	4380.60
9977	Carriage of particle board	L.S.	13.65	1.73	23.61
9999	Sundries & screws etc.	L.S.	27.30	1.73	47.23
	LABOUR				
0112	Carpenter 2nd class	day	0.90	448.00	403.20

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				5222.64
	Add 1 % Water charges				52.23
	TOTAL				5274.87
	Add 15 % Contractor's profit and overheads				791.23
	Cost for 7 sqm				6066.10
	Cost for 1 sqm				866.58
	Say				866.60

21.3 Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):

21.3.1 With float glass panes of 4.0 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 sqm				
	MATERIAL				
	Float Glass panes 4.0 mm thick = 1.00 sqm				
	Add for wastage & breakage @ 10% = 0.10 sqm				
	Total =1.10 sqm				
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).	sqm	1.10	286.00	314.60
9977	Carriage of glass	L.S.	2.42	1.73	4.19
7390	Neoprene/EPDM rubber gasket	metre	6.00	20.00	120.00
	LABOUR				
0112	Carpenter 2nd class	day	0.23	448.00	103.04
0114	Beldar	day	0.23	368.00	84.64
9988	Sundries and carriage of gasket	L.S.	6.89	1.73	11.92
	TOTAL				638.39
	Add 1 % Water charges				6.38
	TOTAL				644.77
	Add 15 % Contractor's profit and overheads				96.72
	Cost for 1 sqm				741.49
	Say				741.50

21.3.2 With float glass panes of 5.50 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 sqm				
	MATERIAL				
	Glass panes 5.50 mm thick = 1.00 sqm				
	Add for wastage & breakage @ 10% = 0.10 sqm				
	Total =1.00 sqm				
2407	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm).	sqm	1.10	490.00	539.00
9977	Carriage of glass	L.S.	3.33	1.73	5.76
7390	Neoprene/EPDM rubber gasket	metre	6.00	20.00	120.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0112	Carpenter 2nd class	day	0.23	448.00	103.04
0114	Beldar	day	0.23	368.00	84.64
9988	Sundries and carriage of gasket	L.S.	6.89	1.73	11.92
	TOTAL				864.36
	Add 1 % Water charges				8.64
	TOTAL				873.00
	Add 15 % Contractor's profit and overheads				130.95
	Cost for 1 sqm				1003.95
	Say				1003.95

21.3.3 With float glass panes of 8 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 sqm				
	MATERIAL				
	Float Glass panes 8.0 mm thick = 1.00 sqm				
	Add for wastage & breakage @ 10%				
	= 0.10 sqm				
	Total =1.10 sqm				
2408	Float glass sheet of nominal thickness 8 mm.(weight not less than 20.00 kg/sqm).	sqm	1.10	605.00	665.50
9977	Carriage of glass	L.S.	4.84	1.73	8.37
7390	Neoprene/EPDM rubber gasket	metre	6.00	20.00	120.00
	LABOUR				
0112	Carpenter 2nd class	day	0.23	448.00	103.04
0114	Beldar	day	0.23	368.00	84.64
9988	Sundries and carriage of gasket	L.S.	6.89	1.73	11.92
	TOTAL				993.47
	Add 1 % Water charges				9.93
	TOTAL				1003.40
	Add 15 % Contractor's profit and overheads				150.51
	Cost for 1 sqm				1153.91
	Say				1153.90

21.4 Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.

21.4.1 With stainless steel cover plate minimum 1.25 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one number				
	MATERIAL				
7394	Double action hydraulic floor spring with stainless steel cover plate	each	1.00	1550.00	1550.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	CARRIAGE	L.S.	13.00	1.73	22.49
9999	Sundries and screws	L.S.	26.00	1.73	44.98
4.1.3	Cement concrete 1:2:4 Rate as per item no. 4.1.3 of SH : concrete work	cum	0.002	5481.95	10.96(A)
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.08	487.00	38.96
0124	Mason (brick layer) 2nd class	day	0.08	448.00	35.84
0112	Carpenter 2nd class	day	0.01	448.00	4.48
0114	Beldar	day	0.17	368.00	62.56
	TOTAL				1770.27
	Add 1 % Water charges on all except (A) i.e. on (1770.27 - 10.96) = 1759.31				17.59
	TOTAL				1787.86
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1787.86 - 10.96) = 1776.90				266.54
	Cost for each				2054.40
	Say				2054.40

21.4.2 With brass cover plate minimum 1.25 mm thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7396	Details of cost for one number MATERIAL Double action hydraulic floor spring with brass cover plate	each	1.00	1700.00	1700.00
9977	CARRIAGE	L.S.	13.00	1.73	22.49
9999	Sundries and screws	L.S.	26.00	1.73	44.98
4.1.3	Cement concrete 1:2:4 Rate as per item no. 4.1.3 of SH : concrete work	cum	0.002	5481.95	10.96(A)
	LABOUR				
	For cutting hole and making it good				
0123	Mason (brick layer) 1st class	day	0.08	487.00	38.96
0124	Mason (brick layer) 2nd class	day	0.08	448.00	35.84
0112	Carpenter 2nd class	day	0.01	448.00	4.48
0114	Beldar	day	0.17	368.00	62.56
	TOTAL				1920.27
	Add 1 % Water charges on all except (A) i.e. on (1920.27 - 10.96) = 1909.31				19.09
	TOTAL				1939.36
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1939.36 - 10.96) = 1928.40				289.26
	Cost for each				2228.62
	Say				2228.60

- 21.5 Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with stainless steel rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws all complete as per approved architectural drawings and direction of the Engineer-in-charge (level adjusting hangers, ceiling cleats and expansion hold fasteners to be paid for separately).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	<p>Details of cost for 6.35 kg (2.40x2.40 = 5.76 sqm) MATERIAL (i) Aluminium main runner - assuming Tee of size 35x23.5x1.5 mm @ 600 mm centre to centre 3x2.40 m = 7.20 m Extra for light fittings 2x1.20 m = 2.40 m Total= 9.60 m @ 0.247 kg/m = 2.370 kg Aluminium cross runner - assuming Tee of size 35x23.5x1.5 mm @ 600 mm centre to centre 3x4x0.60 m = 7.20 m (-) 2x0.30 = (-) 0.60 m Total=6.60 m @ 0.247 kg/m = 1.630 kg Perimeter angle aluminium - assuming size 25.4x25.4x1.63 mm @ 600 mm centre to centre 4x2.40 m = 9.60 m @ 0.213 kg/m = 2.045 kg (ii) CLEATS Aluminium angle- assuming size 25.4x25.4x1.63 mm Extra for light fittings =3x2x2 = 12.00 Corner = 4.00 For joining runners = 42.00 Total = 58.00x0.025 = 1.45 m @ 0.213 kg/m = 0.309 kg Sub total = 2.370 + 1.630 + 2.045 + 0.309 =6.354 kg Add 5% wastage = 0.318 kg Aluminium T or L sections</p>				
7306	Aluminium T or L sections	kilogram	6.67	200.00	1334.40
	(iii) C.P. brass/ stainless steel screws 20 mm for angle cleats				
0589	Chromium plated Brass screws 20 mm	100 Nos	0.0116	170.00	1.97
	(iv) Rawl plug for fixing perimeter angles				
7048	Rawl plug 50 mm (designation 10 no.)	each	24.00	10.00	240.00
	Epoxy				
7392	Powder coating 50 microns on aluminium sections	kilogram	6.67	64.00	426.88
	(vi)				
9977	Carriage of material	L.S.	13.00	1.73	22.49
	(vii)				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	C.P. brass screws for fixing frame with suspenders LABOUR For fabrication and erection	L.S.	13.00	1.73	22.49
0111	Carpenter 1st class	day	0.64	487.00	311.68
0114	Beldar	day	0.64	368.00	235.52
9999	Scaffolding and sundries	L.S.	13.00	1.73	22.49
	TOTAL				2617.92
	Add 1 % Water charges				26.18
	TOTAL				2644.10
	Add 15 % Contractor's profit and overheads				396.62
	Cost for 6.35 kg				3040.72
	Cost for 1 kg				478.85
	Say				478.85

21.6 Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200mm length), fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3mm size 60 mm long and stainless steel expandable dash fastener of 12.5 mm dia and 50 mm long, complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7395	Details of cost for 23 nos (hangers in 2.40 mx 2.40 m = 5.76 sqm)one number MATERIAL 6 mm dia G.I. adjustable hangers including clips (upto 1.20 metre length). For light fitting 2x4 = 8.00 For runners = 15.00 total = 23.00 6 mm dia. G.I. adjustable hangers including clips (upto 1.2 m length) Ceiling cleats G.I. flat 40X3 mm 60mm long 23x0.06 = 1.38 m @ 0.95kg/m = 1.31kg Add 5% wastage = 0.07 kg Total = 1.38 kg say 0.014 q	each	23.00	20.00	460.00
0992	Galvanised steel plain sheets	quintal	0.014	5600.00	78.40
7388	Dash hold fastener 12.5 mm dia, 40 mm long with 6 mm dia bolt	each	23.00	12.00	276.00
9977	Carriage of materials LABOUR	L.S.	5.20	1.73	9.00
0111	Carpenter 1st class	day	0.35	487.00	170.45
0114	Beldar	day	0.27	368.00	99.36
	TOTAL				1093.21
	Add 1 % Water charges				10.93
	TOTAL				1104.14
	Add 15 % Contractor's profit and overheads				165.62
	Cost for 23 hangers				1269.76
	Cost for one hanger				55.20
	Say				55.20

21.7 Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving dash fastener, over expansion joints on vertical surfaces/ceiling floors, the fixing on plate in one row on one side of joint only shall be done with stainless steel dash fasteners of 8 mm dia and 75 mm long bolt including providing aluminium washers 2 mm thick & 15 mm dia , at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete as per direction of Engineer-in-charge.

21.7.1 Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7.00 kg MATERIAL Anodised aluminium sheet 2.5 mm thick, 170 mm wide 5.88 m x0.17 m = 1.00 sqm @ 7.00 kg/ sqm = 7.00 kg Add 5% wastage = 0.35 kg Total = 7.35 kg				
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	7.35	225.00	1653.75
7389	Anodising 15 microns on aluminium sections	kilogram	7.35	40.00	294.00
7347	Cadmium plated full threaded steel screws (30x4 mm dia.)	100 Nos	0.30	28.00	8.40
7348	Aluminium washer 2 mm thick 15 mm dia	100 Nos	0.30	10.00	3.00
8776	Stainless steel dash fastener of 8 mm dia and 75 mm long bolt	each	30.00	14.00	420.00
9977	Carriage of materials LABOUR	L.S.	6.50	1.73	11.25
0112	Carpenter 2nd class	day	0.392	448.00	175.62
0114	Beldar	day	0.392	368.00	144.26
9999	Sundries including machine work	L.S.	21.45	1.73	37.11
	TOTAL				2747.39
	Add 1 % Water charges				27.47
	TOTAL				2774.86
	Add 15 % Contractor's profit and overheads				416.23
	Cost for 7.00 kg				3191.09
	Cost for 1 kg				455.87
	Say				455.85

21.7.2 Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 7.00 kg MATERIAL Anodised aluminium sheet 2.5 mm thick, 170 mm wide 5.88 m x0.17 m = 1.00 sqm @ 7.00 kg/ sqm = 7.00 kg				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 5% wastage = 0.35 kg Total = 7.35 kg				
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	7.35	225.00	1653.75
7392	Powder coating 50 microns on aluminium sections	kilogram	7.35	64.00	470.40
7347	Cadmium plated full threaded steel screws (30x4 mm dia.)	100 Nos	0.30	28.00	8.40
7348	Aluminium washer 2 mm thick 15 mm dia	100 Nos	0.30	10.00	3.00
8776	Stainless steel dash fastener of 8 mm dia and 75 mm long bolt	each	30.00	14.00	420.00
9977	Carriage of materials LABOUR	L.S.	6.50	1.73	11.25
0112	Carpenter 2nd class	day	0.392	448.00	175.62
0114	Beldar	day	0.392	368.00	144.26
9999	Sundries including machine work	L.S.	21.45	1.73	37.11
	TOTAL				2923.79
	Add 1 % Water charges				29.24
	TOTAL				2953.03
	Add 15 % Contractor's profit and overheads				442.95
	Cost for 7.00 kg				3395.98
	Cost for 1 kg				485.14
	Say				485.15

21.8 Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.

21.8.1 Upto 5mm depth and 5 mm width

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 metre				
	MATERIAL				
8646	Silicon sealant (i/c 5% wastage)	cartridge	0.087	100.00	8.70
8654	Masking tape	metre	2.00	2.30	4.60
9999	Sundries & profile	L.S.	2.60	1.73	4.50
9999	LABOUR	L.S.	20.80	1.73	35.98
	TOTAL				53.78
	Add 1 % Water charges				0.54
	TOTAL				54.32
	Add 15 % Contractor's profit and overheads				8.15
	Cost for 1 metre				62.47
	Cost for 1 metre				62.47
	Say				62.45

21.9 Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.

21.9.1 For fixed portion

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7391	Details of cost for 41.09 kg Difference in cost of Anodising 25 microns on aluminium sections	kilogram	41.09	50.00	2054.50
7389	Anodising 15 microns on aluminium sections	kilogram	-41.09	40.00	-1643.60
	Total				410.90
	Add 1 % Water charges				4.11
	TOTAL				415.01
	Add 15 % Contractor's profit and overheads				62.25
	Cost for 41.09 kg				477.26
	Cost for 1 kg				11.61
	Say				11.60

21.9.2 For shutters of doors, windows & ventilators

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7391	Details of cost for 21.65 kg Difference in cost of Anodising 25 microns on aluminium sections	kilogram	21.65	50.00	1082.50
7389	Anodising 15 microns on aluminium sections	kilogram	-21.65	40.00	-866.00
	Total				216.50
	Add 1 % Water charges				2.17
	TOTAL				218.67
	Add 15 % Contractor's profit and overheads				32.80
	Cost for 21.65kg				251.47
	Cost for 1 kg				11.61
	Say				11.60

21.10 Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 sqm MATERIAL Hermetically sealed double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap = 1.00 sqm. Add for wastage & breakage @ 10% = 0.10 sqm Total = 1.10 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8648	Hermetically sealed double glazed unit made with 6 mm thick clear float glass both side having 12 mm air gap	sqm	1.10	2108.00	2318.80
9977	Carriage of glass	L.S.	6.66	1.73	11.52
7390	Neoprene/EPDM rubber gasket	metre	6.00	20.00	120.00
	LABOUR				
	Glazier /				
0112	Carpenter 2nd class	day	0.23	448.00	103.04
0114	Beldar	day	0.46	368.00	169.28
9988	Sundries and carriage of gasket	L.S.	6.89	1.73	11.92
	TOTAL				2734.56
	Add 1 % Water charges				27.35
	TOTAL				2761.91
	Add 15 % Contractor's profit and overheads				414.29
	Cost for 1 sqm				3176.20
	Say				3176.20

21.11 Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.

21.11.1 205 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost sor 10 nos.				
	MATERIAL				
8649	Stainless steel (SS 304 grade) adjustable friction window stay 205 x 19 mm	each	10.00	169.00	1690.00
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.40	32.00	12.80
9977	CARRIAGE	L.S.	2.73	1.73	4.72
	LABOUR				
0112	Carpenter 2nd class	day	0.14	448.00	62.72
0114	Beldar	day	0.14	368.00	51.52
	TOTAL				1821.76
	Add 1 % Water charges				18.22
	TOTAL				1839.98
	Add 15 % Contractor's profit and overheads				276.00
	Cost for 10 nos				2115.98
	Cost for each				211.59
	Say				211.60

21.11.2 255 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost sor 10 nos.				
	MATERIAL				
8650	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19mm	each	10.00	219.00	2190.00
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.40	32.00	12.80
9977	CARRIAGE	L.S.	2.73	1.73	4.72

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0112	LABOUR Carpenter 2nd class	day	0.14	448.00	62.72
0114	Beldar	day	0.14	368.00	51.52
	TOTAL				2321.76
	Add 1 % Water charges				23.22
	TOTAL				2344.98
	Add 15 % Contractor's profit and overheads				351.75
	Cost for 10 nos				2696.73
	Cost for each				269.67
	Say				269.65

21.11.3 355 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost sor 10 nos.				
	MATERIAL				
8651	Stainless steel (SS 304 grade) adjustable friction window stay 355 x 19 mm	each	10.00	191.00	1910.00
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.40	32.00	12.80
9977	CARRIAGE	L.S.	2.73	1.73	4.72
	LABOUR				
0112	Carpenter 2nd class	day	0.14	448.00	62.72
0114	Beldar	day	0.14	368.00	51.52
	TOTAL				2041.76
	Add 1 % Water charges				20.42
	TOTAL				2062.18
	Add 15 % Contractor's profit and overheads				309.33
	Cost for 10 nos				2371.51
	Cost for each				237.15
	Say				237.15

21.11.4 510 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost sor 10 nos.				
	MATERIAL				
8652	Stainless steel (SS 304 grade) adjustable friction window stay 510 x 19 mm	each	10.00	515.00	5150.00
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.40	32.00	12.80
9977	CARRIAGE	L.S.	2.73	1.73	4.72
	LABOUR				
0112	Carpenter 2nd class	day	0.14	448.00	62.72
0114	Beldar	day	0.14	368.00	51.52
	TOTAL				5281.76
	Add 1 % Water charges				52.82
	TOTAL				5334.58
	Add 15 % Contractor's profit and overheads				800.19
	Cost for 10 nos				6134.77
	Cost for each				613.47
	Say				613.45

21.11.5 710 X 19 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos.				
	MATERIAL				
8653	Stainless steel (SS 304 grade) adjustable friction window stay 710 x 19 mm	each	10.00	889.00	8890.00
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.40	32.00	12.80
9977	CARRIAGE	L.S.	2.73	1.73	4.72
	LABOUR				
0112	Carpenter 2nd class	day	0.14	448.00	62.72
0114	Beldar	day	0.14	368.00	51.52
	TOTAL				9021.76
	Add 1 % Water charges				90.22
	TOTAL				9111.98
	Add 15 % Contractor's profit and overheads				1366.80
	Cost for 10 nos				10478.78
	Cost for each				1047.87
	Say				1047.85

21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.

21.12.1 Anodized (AC 15) aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos handle bar.				
	MATERIAL				
	10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum				
	0.0057 cum @ 2710 kg/ cum = 15.56kg				
	Add 5% wastage 0.78 kg				
	Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	200.00	3268.00
7389	Anodising 15 microns on aluminium sections	kilogram	16.34	40.00	653.60
9977	Carriage of material	L.S.	4.42	1.73	7.65
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.08	32.00	2.56
	LABOUR				
0111	Carpenter 1st class	day	0.125	487.00	60.88
	Total				3992.69
	Add 1 % Water charges				39.93
	Total				4032.62
	Add 15 % Contractor's profit and overheads				604.89
	Cost of 10 nos				4637.51
	Cost of 1 no				463.75
	Say				463.75

21.12.2 Powder coated minimum thickness 50 micron aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos handle bar. MATERIAL 10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum 0.0057 cum @ 2710 kg/ cum = 15.56kg Add 5% wastage 0.78 kg Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	200.00	3268.00
7392	Epoxy Powder coating 50 microns on aluminium sections	kilogram	16.34	64.00	1045.76
9977	Carriage of material	L.S.	4.42	1.73	7.65
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.08	32.00	2.56
	LABOUR				
0111	Carpenter 1st class	day	0.125	487.00	60.88
	Total				4384.85
	Add 1 % Water charges				43.85
	Total				4428.70
	Add 15 % Contractor's profit and overheads				664.31
	Cost of 10 nos				5093.01
	Cost of 1 no				509.30
	Say				509.30

21.12.3 Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 nos handle bar. MATERIAL 10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum 0.0057 cum @ 2710 kg/ cum = 15.56kg Add 5% wastage 0.78 kg Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	200.00	3268.00
7393	Polyester powder coating 50 microns on aluminium sections	kilogram	16.34	70.00	1143.80
9977	Carriage of material	L.S.	4.42	1.73	7.65
8647	Stainless steel screws 30 mm x4 mm	100 nos	0.08	32.00	2.56
	LABOUR				
0111	Carpenter 1st class	day	0.125	487.00	60.88
	Total				4482.89
	Add 1 % Water charges				44.83
	Total				4527.72
	Add 15 % Contractor's profit and overheads				679.16
	Cost of 10 nos				5206.88
	Cost of 1 no				520.68
	Say				520.70

21.13 Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7001	Detail of cost for 1 nos. MATERIAL Brass 100mm mortice latch and lock with 6 levers without pair of handles	each	1.00	220.00	220.00
0111	LABOUR Carpenter 1st class	day	0.17	487.00	82.79
9999	Sundry and screws	L.S.	3.64	1.73	6.30
	Total				309.09
	Add 1 % Water charges				3.09
	Total				312.18
	Add 15 % Contractor's profit and overheads				46.83
	Cost of 1 no				359.01
	Say				359.00

21.14 Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS: 1285, fixed with dash fastener of required dia and size (Dash fastener to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 4.082kg MATERIAL Aluminium Section (i) External member of the frame (Jindal section no TU/ 3644) V = 2x2.00 = 4.00 m H = 2x1.20 = 2.40 m Total= 6.40 m @ 0.607 kg/m = 3.885kg Angle cleat 38x38x4.8 mm 50 mm long 4x0.05 = 0.200 m @ 0.985 kg/m = 0.197 kg sub total = 4.082kg. Add 5% wastage = 0.204kg Total = 4.286kg				
7306	Aluminium T or L sections	kilogram	4.286	200.00	857.20
0589	Chromium plated Brass screws 20 mm	100 Nos	0.08	170.00	13.60
7389	Anodising 15 microns on aluminium sections	kilogram	4.286	40.00	171.44
9977	Carriage of material	L.S.	5.20	1.73	9.00
	LABOUR For fabrication of frame				
0116	Fitter (grade 1)	day	0.04	487.00	19.48
0139	Skilled Beldar (for floor rubbing etc.)	day	0.04	407.00	16.28
0114	Beldar	day	0.02	368.00	7.36
0100	Bandhani	day	0.01	407.00	4.07
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners & sundries	L.S.	5.20	1.73	9.00
	TOTAL				1107.43
	Add 1 % Water charges				11.07
	TOTAL				1118.50
	Add 15 % Contractor's profit and overheads				167.78
	Cost for 4.082 kg				1286.28
	Cost for 1 kg				315.11
	Say				315.10

21.15 Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.

21.15.1 Anodized (AC 15) aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos.				
	MATERIAL				
8660	Aluminium casement window fastener (Anodised AC 15)	each	10.00	40.00	400.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	0.40	35.00	14.00
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	Total				447.94
	Add 1 % Water charges				4.48
	Total				452.42
	Add 15 % Contractor's profit and overheads				67.86
	Cost of 10 nos				520.28
	Cost of 1 nos				52.02
	Say				52.00

21.15.2 Powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos.				
	MATERIAL				
8661	Aluminium casement window fastener (powder coated)	each	10.00	43.00	430.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	0.40	35.00	14.00
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	Total				477.94
	Add 1 % Water charges				4.78
	Total				482.72
	Add 15 % Contractor's profit and overheads				72.41
	Cost of 10 nos				555.13
	Cost of 1 nos				55.51
	Say				55.50

21.15.3 Polyester powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos.				
	MATERIAL				
8662	Aluminium casement window fastener (polyester powder coated)	each	10.00	42.00	420.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	0.40	35.00	14.00
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	Total				467.94
	Add 1 % Water charges				4.68
	Total				472.62
	Add 15 % Contractor's profit and overheads				70.89
	Cost of 10 nos				543.51
	Cost of 1 nos				54.35
	Say				54.35

21.16 Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in-charge

21.16.1 Anodized (AC 15) aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos.				
	MATERIAL				
8663	Aluminium round shape handle (anodised AC 15) outer dia 100mm	each	10.00	49.00	490.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	0.40	35.00	14.00
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	Total				537.94
	Add 1 % Water charges				5.38
	Total				543.32
	Add 15 % Contractor's profit and overheads				81.50
	Cost of 10 nos				624.82
	Cost of 1 nos				62.48
	Say				62.50

21.16.2 Powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos.				
	MATERIAL				
8664	Aluminium round shape handle (powder coated) outer dia 100 mm	each	10.00	54.00	540.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	0.40	35.00	14.00
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	Total				587.94
	Add 1 % Water charges				5.88
	Total				593.82
	Add 15 % Contractor's profit and overheads				89.07
	Cost of 10 nos				682.89
	Cost of 1 nos				68.28
	Say				68.30

21.16.3 Polyester powder coated minimum thickness 50 micron aluminium

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 nos.				
	MATERIAL				
8665	Aluminium round shape handle (polyester powder coated) outer dia 100 mm	each	10.00	59.00	590.00
8666	Stainless steel screws 25 mm x4 mm	100 Nos	0.40	35.00	14.00
	LABOUR				
0111	Carpenter 1st class	day	0.06	487.00	29.22

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9977	Carriage of materials	L.S.	2.73	1.73	4.72
	Total				637.94
	Add 1 % Water charges				6.38
	Total				644.32
	Add 15 % Contractor's profit and overheads				96.65
	Cost of 10 nos				740.97
	Cost of 1 nos				74.09
	Say				74.10

21.17 Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 kg				
	MATERIAL				
	Anodised aluminium grill = 10.00 kg				
	Add 20% wastage = 2 kg = 12 kg				
8774	Aluminium Grill	kg	12.00	250.00	3000.00
9977	Carriage of materials	L.S.	11.00	1.73	19.03
	LABOUR				
	for fixing				
0116	Fitter (grade 1)	day	0.50	487.00	243.50
0139	Skilled Beldar (for floor rubbing etc.)	day	0.25	407.00	101.75
0114	Beldar	day	0.25	368.00	92.00
0100	Bandhani	day	0.05	407.00	20.35
9999	Sundries	L.S.	25.00	1.73	43.25
	TOTAL				3519.88
	Add 1 % Water charges				35.20
	TOTAL				3555.08
	Add 15 % Contractor's profit and overheads				533.26
	Cost for 10.00 kg				4088.34
	Cost for 1 kg				408.83
	Say				408.85

21.18 Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 2.10 sqm				
	MATERIAL				
	Glass= 2.10 Sqm.				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add Wastage @ 10% = 0.21 sqm. Total= 2.31 sqm.				
8778	Toughened glass 12 mm thickness	sqm	2.31	1747.00	4035.57
9977	Carriage of glass panes and other materials	L.S.	8.19	1.73	14.17
9999	Methylated spirit	L.S.	5.33	1.73	9.22
21.4.1	Stainless steel pivot and spring type fixing Rate as per Item No.21.4.1 of SH:Aluminium Work	each	2.00	2054.40	4108.80(A)
	LABOUR				
0119	Glazier	day	0.90	448.00	403.20
0114	Beldar	day	0.90	368.00	331.20
9999	Sundries,sush rog cotton etc.	L.S.	1.13	1.73	1.95
	TOTAL				8904.11
	Add 1 % Water charges on all except (A) i.e. on (8904.11 - 4108.80) = 4795.31				47.95
	TOTAL				8952.06
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (8952.06 - 4108.80) = 4843.26				726.49
	Cost for 2.10 sqm				9678.55
	Cost for 1 sqm				4608.83
	Say				4608.85

21.19 Filling the gap in between aluminium/ stone/ wood frame and adjacent RCC/ Brick/ Stone/ wood/ Ceramic/ Gypsum work by providing weather/structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete, complying to ASTM C920, DIN 18540-F & ISO 11600

21.19.1 Upto 5 mm depth and 5 mm width

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m length width 5mm & depth 5mm				
	MATERIAL				
2604	Weather/structural non sag elastomeric PU sealant (600ml Sausage) for joints in RCC/ Brick/ Stone/ wood/ Ceramic/ Gypsum/ Alluminium work complying to ASTM C920, DIN 18540-F & ISO 11600 incl all taxes	each	1.00	532.00	532.00
8654	Masking tape	metre	20.00	2.30	46.00
9999	Sundries, including charges of Sealant gun machine, dhoti etc	L.S.	26.00	1.73	44.98
9977	Carriage of material	L.S.	8.40	1.73	14.53
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.40	487.00	194.80
	TOTAL				832.31
	Add 1 % Water charges				8.32
	TOTAL				840.63
	Add 15 % Contractor's profit and overheads				126.09
	Cost of 10 metre				966.72
	Cost per metre				96.67
	Say				96.65

21.19.2 Upto 10 mm depth and 10 mm width

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m length width 10mm & depth 10mm MATERIAL				
2604	Weather/structural non sag elastomeric PU sealant (600ml Sausage) for joints in RCC/ Brick/ Stone/ wood/ Ceramic/ Gypsum/ Alluminium work complying to ASTM C920, DIN 18540-F & ISO 11600 incl all taxes	each	1.50	532.00	798.00
8654	Masking tape	metre	20.00	2.30	46.00
9999	Sundries, including charges of Sealant gun machine, dhota etc	L.S.	26.00	1.73	44.98
9977	Carriage of material	L.S.	8.40	1.73	14.53
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.50	487.00	243.50
	TOTAL				1147.01
	Add 1 % Water charges				11.47
	TOTAL				1158.48
	Add 15 % Contractor's profit and overheads				173.77
	Cost of 10 metre				1332.25
	Cost per metre				133.22
	Say				133.20

21.19.3 Upto 20 mm depth and 20 mm width

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m length width 20mm & depth 20mm MATERIAL				
2604	Weather/structural non sag elastomeric PU sealant (600ml Sausage) for joints in RCC/ Brick/ Stone/ wood/ Ceramic/ Gypsum/ Alluminium work complying to ASTM C920, DIN 18540-F & ISO 11600 incl all taxes	each	3.00	532.00	1596.00
8654	Masking tape	metre	20.00	2.30	46.00
2630	Baker rod	metre	10.00	5.00	50.00
9999	Sundries, including charges of Sealant gun machine, dhota etc	L.S.	26.00	1.73	44.98
9977	Carriage of material	L.S.	8.40	1.73	14.53
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.75	487.00	365.25
	TOTAL				2116.76
	Add 1 % Water charges				21.17
	TOTAL				2137.93
	Add 15 % Contractor's profit and overheads				320.69
	Cost of 10 metre				2458.62
	Cost per metre				245.86
	Say				245.85

SUB HEAD : 22.0
WATER PROOFING

22.1 Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of :

(i) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound.

(ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions.

(iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.

22.1.1 Using rough kota stone.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.8	Details of cost for 10.00 sqm MATERIAL 1st layer Cement mortar 1:3 for fixing of stone 10x0.025 = 0.25 cum Rate as per Item Number 3.8 of SH: Mortars Kota stone slab = 10 sqm Wastage @ 10% = 1 sqm Total = 11 sqm	cum	0.25	4723.50	1180.88
1169	Kotastone slab 25mm thick (rough cheseled)	sqm	11.00	280.00	3080.00
2216	Cartage 11x0.025 @ 2330 kg/m ³ = 0.64 t Carriage of Stone blocks white & red sand stone & kota stone slab Cement mortar 1:3 10x0.025 = 0.25 cum Wastage @ 12% = 0.03 cum Total = 0.28 cum	tonne	0.64	92.24	59.03
3.8	Rate as per Item No.3.8 of SH: MORTARS for slurry Bed 2x10.00 @ 2kg/m ³ = 40.00 kg Joints 4x3.7x0.02x0.037 = 0.011 cum 25x0.6x0.02x0.037 = 0.011 cum = 0.022 cum @ 1440 kg/cum =31.68 kg Total = 71.88 kg or 0. 72 t	cum	0.28	4723.50	1322.58
0367	Portland Cement (OPC-43 grade)	tonne	0.072	5700.00	410.40
2209	Carriage of Cement Mortar = 0.25 + 0.28 = 0.53 cum Cement in 0.53 cum @ 5.1 q/cum = 2.7 quintal Cement in slurry = 0.73 quintal Total = 3.43 quintal @ 1 kg for 50 kg of cement i.e. 6.86 kg	tonne	0.072	92.24	6.64
1213	Water proofing materials	kilogram	6.86	35.00	240.10
0296	Stone Aggregate (Single size) : 12.5 mm nominal size @ 8 cudm/sqm 1x10.3x8x1/1000 = 0.08 cum	cum	0.08	1300.00	104.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.08	103.77	8.30
	Labour for base mortar & kota stone laying i.e. slurry job				
	Labour for base mortar & kota stone laying i/c slurry job				
0125	Mason (for plain stone work) 2nd class	day	1.20	448.00	537.60
0114	Beldar	day	1.00	368.00	368.00
0115	Coolie	day	1.00	368.00	368.00
	LABOUR				
	Labour for top layer & spreading stone grit				
0125	Mason (for plain stone work) 2nd class	day	1.08	448.00	483.84
0114	Beldar	day	1.08	368.00	397.44
0101	Bhisti	day	0.45	407.00	183.15
9999	Sundries	L.S.	6.24	1.73	10.80
	TOTAL				8760.76
	Add 1 % Water charges				87.61
	TOTAL				8848.37
	Add 15 % Contractor's profit and overheads				1327.26
	Cost for 10.00 sqm				10175.63
	Cost for 1 sqm				1017.56
	Say				1017.55

22.2 Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :

22.2.1 Using rough Kota stone

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 sqm				
	MATERIAL				
	1st layer				
	Kota stone slab = 10 sqm				
	Wastage @ 10% = 1 sqm				
	Total = 11 sqm				
1169	Kotastone slab 25mm thick (rough cheseled)	sqm	11.00	280.00	3080.00
	Cartage 11x0.025 @ 2330 kg/m ³ = 0.64t				
2216	Carriage of Stone blocks white & red sand stone & kota stone slab	tonne	0.64	92.24	59.03
	Cement slurry for jointing				
	6x3.70 = 22.20 m				
	7x2.78 = 19.46 m				
	=41.66x0.025x0.012 = 0.013 cum				
	Cement slurry for filling 20 mm gap				
	10x0.02 = 0.200 cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	= 0.213 cum @ 1440 kg/cum = 306.70 kg or 0.307 t				
0367	Portland Cement (OPC-43 grade)	tonne	0.31	5700.00	1767.00
2209	Carriage of Cement	tonne	0.31	92.24	28.59
13.9.2	Cement plaster 1:3 with neat cement punning Rate as per item no 13.9.2 of SH : Finishing Water proofing material	sqm	10.00	313.25	3132.50(A)
	Cement slurry = 0.31 t = 310 kg Cement plaster 1:3 @ 13.62 q/100sqm = 136.20 kg Total = 446.20 kg @ 1 kg for 50 kg of cement i.e. 8.90 kg				
1213	Water proofing materials LABOUR Fixing of Kota stone and applying cement slurry.	kilogram	8.90	35.00	311.50
0125	Mason (for plain stone work) 2nd class	day	3.00	448.00	1344.00
0114	Beldar	day	3.00	368.00	1104.00
0115	Coolie	day	1.00	368.00	368.00
9999	Sundries and scaffolding	L.S.	18.20	1.73	31.49
	TOTAL				11226.11
	Add 1 % Water charges on all except (A) i.e. on (11226.11 - 3132.50) = 8093.61				80.94
	TOTAL				11307.05
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11307.05 - 3132.50) = 8174.55				1226.18
	Cost for 10.00sqm				12533.23
	Cost for 1 sqm				1253.32
	Say				1253.30

22.3 Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of:

(i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.

(ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.

(iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area.

(iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm MATERIAL				
	Cement slurry @ 4.4 kg/sqm = 44.00 kg or 0.044 t				
0367	Portland Cement (OPC-43 grade)	tonne	0.044	5700.00	250.80
2209	Carriage of Cement	tonne	0.044	92.24	4.06

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.8	MATERIAL Cement plaster 1:3 (20 mm thick) Rate as per Item No.3.8 of SH: MORTARS	cum	0.224	4723.50	1058.06
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.10	407.00	447.70
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality = 10x1.70= 17 kg = 0.017 t	tonne	0.017	34561.00	587.54
2211	Carriage of Tar bitumen	tonne	0.017	103.77	1.76
3002	Polyvinyle chloride sheet 400 micron thick	sqm	10.00	40.00	400.00
9977	CARRIAGE	L.S.	13.00	1.73	22.49
1213	Water proofing materials @ 1 kg per 50 kg of cement used Cement slurry = 44 kg Cement plaster 1:3 10x(13.62x100)/100= 136.2 kg Total = 180.2 kg/50 = 3.60 kg	kilogram	3.60	35.00	126.00
	LABOUR				
0131	Painter	day	0.20	448.00	89.60
0114	Beldar	day	1.33	368.00	489.44
0130	Mistry	day	0.06	487.00	29.22
9999	Sundries	L.S.	7.28	1.73	12.59
	TOTAL				4355.42
	Add 1 % Water charges				43.55
	TOTAL				4398.97
	Add 15 % Contractor's profit and overheads				659.85
	Cost for 10 sqm				5058.82
	Cost for 1 sqm				505.88
	Say				505.90

22.4 Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :

22.4.1 Serrated with central bulb (225 mm wide, 8-11 mm thick)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7427	Details of cost for 100 metres MATERIAL Water stops Serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	100.00	211.00	21100.00
	LABOUR				
0114	Beldar	day	2.00	368.00	736.00
9999	Sundries & wire etc.	L.S.	26.00	1.73	44.98
	TOTAL				21880.98
	Add 1 % Water charges				218.81
	TOTAL				22099.79
	Add 15 % Contractor's profit and overheads				3314.97
	Cost for 100 metres				25414.76
	Cost for 1 metre				254.14
	Say				254.15

22.4.2 Dumb bell with central bulb (180 mm wide, 8 mm thick)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
7428	Water stops Dumb bell with central bulb	metre	100.00	165.00	16500.00
	LABOUR				
0114	Beldar	day	2.00	368.00	736.00
9999	Sundries & wire etc.	L.S.	26.00	1.73	44.98
	TOTAL				17280.98
	Add 1 % Water charges				172.81
	TOTAL				17453.79
	Add 15 % Contractor's profit and overheads				2618.07
	Cost for 100 metres				20071.86
	Cost for 1 metre				200.71
	Say				200.70

22.4.3 Kickers (320 mm wide, 5 mm thick)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 metres				
	MATERIAL				
7429	Kickers	metre	100.00	195.00	19500.00
	LABOUR				
0114	Beldar	day	2.00	368.00	736.00
9999	Sundries & wire etc.	L.S.	26.00	1.73	44.98
	TOTAL				20280.98
	Add 1 % Water charges				202.81
	TOTAL				20483.79
	Add 15 % Contractor's profit and overheads				3072.57
	Cost for 100 metres				23556.36
	Cost for 1 metre				235.56
	Say				235.55

22.5 Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :

(a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.

(b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.

The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	Cement $10 \times (0.488 + 0.242) = 7.30$ kg				
	Sealing fillets 10×0.5 kg / sqm = 5.00 kg				
	Total = 12.30 kg = 0.012 tonne				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0367	Portland Cement (OPC-43 grade)	tonne	0.012	5700.00	68.40
2209	Carriage of Cement	tonne	0.012	92.24	1.11
	Bonding material 1.6 kgx30x2 = 96 kg				
	Bitumen (blown/residual type) 10x(0.25+0.126) = 3.79 kg				
	Sealing fillets 10x0.10 kg / sqm = 1.00 kg				
	Wastage @ 5% on 4.79 kg = 0.24 kg				
	Total = 5.03 kg Say 5.00 kg				
8501	Polymer modified cementation coating	kilogram	5.00	140.00	700.00
	LABOUR				
0155	Mason (average)	day	2.00	467.00	934.00
0114	Beldar	day	2.00	368.00	736.00
0101	Bhisti	day	0.25	407.00	101.75
9999	Sundries, brushes etc	L.S.	15.60	1.73	26.99
	TOTAL				2568.25
	Add 1 % Water charges				25.68
	TOTAL				2593.93
	Add 15 % Contractor's profit and overheads				389.09
	Cost for 10 sqm				2983.02
	Cost for 1 sqm				298.30
	Say				298.30

22.6 Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:

(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.

(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.

(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around.

(d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately.

For the purpose of measurement the entire treated surface will be measured."

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL				
	Cement 10x(1.289+0.488) = 17.77 kg				
	Sealing fillets @ 10% = 1.77 kg				
	Total = 19.54kg = 0.020 tonne				
0367	Portland Cement (OPC-43 grade)	tonne	0.02	5700.00	114.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2209	Carriage of Cement Bonding material 1.6 kgx30x2 = 96 kg Bitumen (blown/residual type) 10x(0.253+0.67) = 9.23 kg Wastage @ 5% = 0.46 kg Total = 9.69 kg	tonne	0.02	92.24	1.84
8501	Polymer modified cementation coating Fibre Glass cloth = 10.00 sqm Wastage @ 10 % - 1.00 sqm Total = 11.00 sqm	kilogram	9.69	140.00	1356.60
8502	Fibre glass cloth LABOUR	sqm	11.00	44.00	484.00
0155	Mason (average)	day	2.00	467.00	934.00
0114	Beldar	day	1.00	368.00	368.00
0101	Bhisti	day	0.25	407.00	101.75
9999	Sundries, brushes etc	L.S.	23.40	1.73	40.48
	TOTAL				3400.67
	Add 1 % Water charges				34.01
	TOTAL				3434.68
	Add 15 % Contractor's profit and overheads				515.20
	Cost for 10 sqm				3949.88
	Cost for 1 sqm				394.98
	Say				395.00

22.7 Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:

(a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.

(b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.

(c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.

(d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.

(e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. "All above operations to be done in order and as directed and specified by the Engineer-in-Charge :

22.7.1 With average thickness of 120 mm and minimum thickness at khurra as 65 mm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
0367	i) Cement slury Portland Cement (OPC-43 grade)	tonne	0.0275	5700.00	156.75
3.10	ii) Cement mortar 1:5 (1 cement: 5 coarsesand)	cum	0.224	3565.05	798.57
	Rate as per Item No.3.10 of SH:Mortars				
	iii) Roof treatment with brick bat and cement mortar				
	MATERIAL				
0285	Brick Aggregate (Single size) : 63 mm nominal size	cum	0.94	750.00	705.00
2260	Carriage of Brick aggregate	cum	0.94	112.79	106.02
	Cement mortar 1:5				
3.10	Rate as per Item No.3.10 of SH:Mortars	cum	0.50	3565.05	1782.53
	LABOUR				
0114	Beldar	day	1.75	368.00	644.00
0101	Bhisti	day	0.28	407.00	113.96
0123	Mason (brick layer) 1st class	day	0.05	487.00	24.35
0124	Mason (brick layer) 2nd class	day	0.05	448.00	22.40
0128	Mate	day	0.04	407.00	16.28
	Extra labour for ramming				
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	13.65	1.73	23.61
	iv) Cement slury				
0367	Portland Cement (OPC-43 grade)	tonne	0.0275	5700.00	156.75
0114	Beldar	day	0.20	368.00	73.60
	v) 20 mm cement plaster 1:4 (1 cement : 4 coarse sand)				
13.6.1	Rate as per item no 13.6.1 of SH : Finishing	sqm	10.00	252.40	2524.00(A)
	vi) Water proofing compound				
	vi) Water proofing compound 27.50+27.50+69.40+124.00 = 248.40 kg @ 1 kg per bag of cement				
1213	Water proofing materials	kilogram	5.00	35.00	175.00
	Extra for making chequers for 10 sqm				
7233	Fibre glass tissue reinforcement Type II Grade I	sqm	10.50	86.00	903.00
0124	Mason (brick layer) 2nd class	day	0.36	448.00	161.28
0114	Beldar	day	0.36	368.00	132.48
9999	Chequer plate	L.S.	13.65	1.73	23.61
	Add labour for laying 20 mm bed mortar				
0124	Mason (brick layer) 2nd class	day	0.54	448.00	241.92
0114	Beldar	day	0.54	368.00	198.72

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti TOTAL Add 1 % Water charges on all except (A) i.e. on (9258.98 - 2524.00) = 6734.98 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (9326.33 - 2524.00) = 6802.33 Cost for 10 sqm Cost for one sqm Say	day	0.45	407.00	183.15 9258.98 67.35 9326.33 1020.35 10346.68 1034.66 1034.65

22.8 Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (hessian based self finished bitumen felt) and fourth and final course of stone grit 6 mm and down size or peasized gravel spread at 6 cubic decimeter per square metre, including preparation of surface but excluding grading complete with :

22.8.1 Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0313	Detail of cost for 30 sqm Blown or / and residual bitumen applied hot = 2x1.45x30 = 87 kg Blown type petroleum bitumen of penetration 85/25 of approved quality Hession felt type 3 Grade I (hessian base self finished bitumen felt) = 30sqm Add for over lapping @ 10% = 3 sqm. Total = 33 Sqm	tonne	0.087	34561.00	3006.81
0322	Bitumen felt :Type 3 grade 1	sqm	33.00	70.00	2310.00
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180 cudm	cum	0.18	795.00	143.10
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.18	103.77	18.68
2211	Carriage of Tar bitumen 0.087tx2.7x.001x33=0.162t	tonne	0.162	103.77	16.81
0370	Coal (steam) = 2 quintals/t of bitumen i.e. 2x0.087 =0.174q	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	118.59	2.06
9999	Praparing roof surface, sutting groove and making good etc. LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	2.16	448.00	967.68
0114	Beldar	day	3.24	368.00	1192.32
0130	Mistry	day	0.18	487.00	87.66

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries, brushes etc.	L.S.	6.76	1.73	11.69
	TOTAL				8059.18
	Add 1 % Water charges				80.59
	TOTAL				8139.77
	Add 15 % Contractor's profit and overheads				1220.97
	Cost of 30.00 Sqm.				9360.74
	Cost of 1.00 Sqm.				312.02
	Say				312.00

22.9 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) ,sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface but excluding grading, complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0313	Detail of cost for 30 sqm Blown or / and residual bitumen applied hot (1.45+1.20+1.45)x30=123kg Blown type petroleum bitumen of penetration 85/25 of approved quality Bitumen felt Type 3 grade 1 (hessian base self finished bitumen felt) = 60 sqm.+ Add for over lapping @ 10% = 6 sqm. Total =66 Sqm	tonne	0.123	34561.00	4251.00
0322	Bitumen felt :Type 3 grade 1	sqm	66.00	70.00	4620.00
2211	Carriage of Tar bitumen 0.123t+2.7x.001x66=0.273t	tonne	0.273	103.77	28.33
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180cudm	cum	0.18	795.00	143.10
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.18	103.77	18.68
0370	Coal (steam) = 2 quintals/t of bitumen i.e. 2x0.123=0.246q	quintal	0.246	400.00	98.40
2200	Carriage of steam coal	tonne	0.0246	118.59	2.92
9999	Praparing roof surface, sutting groove and making good etc. LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	3.24	448.00	1451.52
0114	Beldar	day	4.86	368.00	1788.48
0130	Mistry	day	0.2	487.00	97.40
9999	Sundries, brushes etc.	L.S.	6.76	1.73	11.69
	TOTAL				12744.29
	Add 1 % Water charges				127.44
	TOTAL				12871.73
	Add 15 % Contractor's profit and overheads				1930.76
	Cost of 30.00 Sqm.				14802.49
	Cost of 1.00 Sqm.				493.41
	Say				493.40

22.10 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitumen felt) six and final courses of stone grit 6 mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading, compete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0313	Details of cost for 30 sqm Blown bitumen applied hot (1.45+1.20+1.70)x30 = 130.5 kg. Blown type petroleum bitumen of penetration 85/25 of approved quality Bitumen felt type B grade I (fibre base self finished bitumen felt) = 60 sqm. Add for over lapping @ 10% = 6 sqm. Total =66 Sqm	tonne	0.1305	34561.00	4510.21
0318	Bitumen felt fibre base (vegetable or animal):Type 2 grade 1	sqm	66.00	70.00	4620.00
2211	Carriage of Tar bitumen (0.131 t+2.22x.001x66 = 0.275t)	tonne	0.275	103.77	28.54
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180cudm CARRIAGE:	cum	0.18	795.00	143.10
2202	Carriage of Stone aggregate below 40 mm nominal size Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 0.1305=0.261q	cum	0.18	103.77	18.68
0370	Coal (steam)	quintal	0.261	400.00	104.40
2200	Carriage of steam coal	tonne	0.0261	118.59	3.10
9999	Praparing roof surface, sutting groove and making good etc. LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	4.32	448.00	1935.36
0114	Beldar	day	6.48	368.00	2384.64
0130	Mistry	day	0.36	487.00	175.32
9999	Sundries, brushes etc. TOTAL	L.S.	6.76	1.73	11.69
	Add 1 % Water charges				14167.81
	TOTAL				141.68
	Add 15 % Contractor's profit and overheads				14309.49
	Cost of 30.00 Sqm.				2146.42
	Cost of 1.00 Sqm.				16455.91
	Say				548.53
					548.55

22.11 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade II (glass fibre base self finished bitumen felt) and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface but excluding grading, complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0313	Detail of cost for 30 sqm Blown or / and residual bitumen applied hot (1.45+1.20+1.70)x30 =130.5 kg. Blown type petroleum bitumen of penetration 85/25 of approved quality Bitumen felt as per IS 7193 Grade II (fibre base self finished bitumen felt) = 60 sqm. + Add for over lapping @ 10% = 6 sqm. Total =66 Sqm	tonne	0.1305	34561.00	4510.21
0318	Bitumen felt fibre base (vegetable or animal):As per IS 7193 Grade I	sqm	66.00	70.00	4620.00
2211	Carriage of Tar bitumen (0.131t+3.08x.001x66=334t.)	tonne	0.334	103.77	34.66
1177	Stone grit 6 mm and down size or pea sized gravel 30x6=180cudm	cum	0.18	795.00	143.10
2202	Carriage of Stone aggregate below 40 mm nominal size Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.1305=0.261q	cum	0.18	103.77	18.68
0370	Coal (steam)	quintal	0.261	400.00	104.40
2200	Carriage of steam coal	tonne	0.0261	118.59	3.10
9999	Praparing roof surface, sutting groove and making good etc. LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	4.32	448.00	1935.36
0114	Beldar	day	6.48	368.00	2384.64
0130	Mistry	day	0.36	487.00	175.32
9999	Sundries, brushes etc.	L.S.	6.76	1.73	11.69
	TOTAL				14173.93
	Add 1 % Water charges				141.74
	TOTAL				14315.67
	Add 15 % Contractor's profit and overheads				2147.35
	Cost of 30.00 Sqm.				16463.02
	Cost of 1.00 Sqm.				548.76
	Say				548.75

22.12 Supplying and applying bituminous solution primer on roof and / or wall surface at 0.24 litre per sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sq. metres				
	MATERIAL				
0316	Bitumen solution primer of approved quality	litre	2.40	50.00	120.00
9977	CARRIAGE	L.S.	1.43	1.73	2.47
	LABOUR				
0131	Painter	day	0.17	448.00	76.16
0114	Beldar	day	0.17	368.00	62.56
9999	Sundries brushes etc.	L.S.	13.52	1.73	23.39
	TOTAL				284.58
	Add 1 % Water charges				2.85
	TOTAL				287.43
	Add 15 % Contractor's profit and overheads				43.11
	Cost of 10.00 Sqm.				330.54
	Cost of 1.00 Sqm.				33.05
	Say				33.05

22.13 Deduct for omitting in water proofing treatment final course of spreading stone grit 6 mm down size or pea sized gravel :

22.13.1 at 6 cum per sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
1177	Stone grit 6 mm and down size or pea sized gravel 6x10 = 60 cum	cum	0.06	795.00	47.70
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.06	103.77	6.23
9999	Labour for screening and spreading grit	L.S.	21.58	1.73	37.33
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				102.95
	Add 1 % Water charges				1.03
	TOTAL				103.98
	Add 15 % Contractor's profit and overheads				15.60
	Cost of 10.00 Sqm.				119.58
	Cost of 1.00 Sqm.				11.95
	Say				11.95

22.13.2 at 8 cum per sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm.				
	MATERIAL				
1177	Stone grit 6 mm and down size or pea sized gravel 6x10 = 60 cum	cum	0.08	795.00	63.60
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.08	103.77	8.30

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Labour for screening and spreading grit	L.S.	26.91	1.73	46.55
9999	Sundries	L.S.	6.76	1.73	11.69
	TOTAL				130.14
	Add 1 % Water charges				1.30
	TOTAL				131.44
	Add 15 % Contractor's profit and overheads				19.72
	Cost of 10.00 Sqm.				151.16
	Cost of 1.00 Sqm.				15.11
	Say				15.10

22.14 Grading roof for water proofing treatment with

22.14.1 Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0295	Details of cost for one cum. Stone Aggregate (Single size) : 20 mm nominal size	cum	0.67	1300.00	871.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	0.22	1300.00	286.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.89	103.77	92.35
0982	Coarse sand (zone III)	cum	0.45	1200.00	540.00
2203	Carriage of Coarse sand	cum	0.45	103.77	46.70
0367	Portland Cement (OPC-43 grade)	tonne	0.32	5700.00	1824.00
2209	Carriage of Cement	tonne	0.32	92.24	29.52
	LABOUR				
0114	Beldar	day	1.63	368.00	599.84
0101	Bhisti	day	0.70	407.00	284.90
0123	Mason (brick layer) 1st class	day	0.10	487.00	48.70
9999	Sundries, brushes etc.	L.S.	14.30	1.73	24.74
0002	Hire charges of Concrete Mixer 0.25 to 0.40 cum with hooper	day	0.07	800.00	56.00
0012	Vibrator (Needle type 40 mm)	day	0.07	350.00	24.50
9999	Sundries for laying in terrace	L.S.	45.76	1.73	79.16
	TOTAL				4807.41
	Add 1 % Water charges				48.07
	TOTAL				4855.48
	Add 15 % Contractor's profit and overheads				728.32
	Cost of one cum				5583.80
	Say				5583.80

22.14.2 Cement mortar 1:3 (1 cement : 3 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cum. MATERIAL				
3.8	Cement mortar 1:3 Rate as per Item No.3.8 of SH:Mortars	cum	1.00	4723.50	4723.50
	LABOUR				
0155	Mason (average)	day	1.00	467.00	467.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	2.00	368.00	736.00
0101	Bhisti	day	0.50	407.00	203.50
0115	Coolie	day	5.00	368.00	1840.00
9999	Sundries	L.S.	11.70	1.73	20.24
	TOTAL				7990.24
	Add 1 % Water charges				79.90
	TOTAL				8070.14
	Add 15 % Contractor's profit and overheads				1210.52
	Cost of one cum				9280.66
	Say				9280.65

22.14.3 Cement mortar 1:4 (1cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for one cum.				
	MATERIAL				
	Cement mortar 1:4				
3.9	Rate as per Item Number 3.9 of SH: Mortars	cum	1.00	3970.50	3970.50
	LABOUR				
0155	Mason (average)	day	1.00	467.00	467.00
0114	Beldar	day	2.00	368.00	736.00
0101	Bhisti	day	0.50	407.00	203.50
0115	Coolie	day	5.00	368.00	1840.00
9999	Sundries	L.S.	10.79	1.73	18.67
	TOTAL				7235.67
	Add 1 % Water charges				72.36
	TOTAL				7308.03
	Add 15 % Contractor's profit and overheads				1096.20
	Cost of one cum				8404.23
	Say				8404.25

22.15 Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 1.5 mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm				
	MATERIAL				
	APP modified polymeric felt (two layers)				
	1.5 mm thick = 2x30 = 60 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 10% wastage = 6 sqm Total = 66 sqm				
8200	A.P.P. modified polymeric felt (two layers) 1.5 mm thick	sqm	66.00	75.00	4950.00
0316	Bitumen solution primer of approved quality 0.4x30 = 12	litre	12.00	50.00	600.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality 3x36 = 108 kg = 0.108 tonne	tonne	0.108	34561.00	3732.59
2211	Carriage of Tar bitumen	tonne	0.12	103.77	12.45
9977	Carriage of polymeric felt	L.S.	7.80	1.73	13.49
0370	Coal (steam)	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	118.59	2.06
9999	Preparing roof surface, cutting grooves and making good the same LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	2.16	448.00	967.68
0114	Beldar	day	3.24	368.00	1192.32
0130	Mistry	day	0.18	487.00	87.66
9999	Sundries, brushes etc	L.S.	6.76	1.73	11.69
	TOTAL				11872.31
	Add 1 % Water charges				118.72
	TOTAL				11991.03
	Add 15 % Contractor's profit and overheads				1798.65
	Cost for 30 sqm				13789.68
	Cost for 1 sqm				459.65
	Say				459.65

22.16 Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL				
	APP modified polymeric felt (two layers) 2.0 mm thick = 30 sqm				
	Add 10% wastage = 3 sqm Total = 33 sqm				
8201	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	33.00	98.00	3234.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0316	Bitumen solution primer of approved quality 0.4x30 = 12	litre	12.00	50.00	600.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality 1.20x30x2 =72 kg = 0.072 tonne	tonne	0.072	34561.00	2488.39
2211	Carriage of Tar bitumen	tonne	0.084	103.77	8.72
9977	Carriage of polymeric felt	L.S.	7.80	1.73	13.49
0370	Coal (steam)	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	118.59	2.06
9999	Preparing roof surface, cutting grooves and making good the same LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	1.58	448.00	707.84
0114	Beldar	day	2.37	368.00	872.16
0130	Mistry	day	0.13	487.00	63.31
9999	Sundries, brushes etc	L.S.	6.76	1.73	11.69
	TOTAL				8304.03
	Add 1 % Water charges				83.04
	TOTAL				8387.07
	Add 15 % Contractor's profit and overheads				1258.06
	Cost for 30 sqm				9645.13
	Cost for 1 sqm				321.50
	Say				321.50

22.17

Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 sqm MATERIAL APP modified polymeric felt (two layers) 2.0 mm thick = 2x30 = 60 sqm Add 10% wastage = 6 sqm Total = 66 sqm				
8201	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	66.00	98.00	6468.00
0316	Bitumen solution primer of approved quality 0.4x30 = 12	litre	12.00	50.00	600.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality 3course x 36 = 108 kg = 0.108 tonne	tonne	0.108	34561.00	3732.59
2211	Carriage of Tar bitumen	tonne	0.12	103.77	12.45
9977	Carriage of polymeric felt	L.S.	7.80	1.73	13.49
0370	Coal (steam)	quintal	0.174	400.00	69.60
2200	Carriage of steam coal	tonne	0.0174	118.59	2.06
9999	Preparing roof surface, cutting grooves and making good the same LABOUR	L.S.	134.55	1.73	232.77
0131	Painter	day	2.16	448.00	967.68
0114	Beldar	day	3.24	368.00	1192.32
0130	Mistry	day	0.18	487.00	87.66
9999	Sundries, brushes etc	L.S.	6.76	1.73	11.69
	TOTAL				13390.31
	Add 1 % Water charges				133.90
	TOTAL				13524.21
	Add 15 % Contractor's profit and overheads				2028.63
	Cost for 30 sqm				15552.84
	Cost for 1 sqm				518.42
	Say				518.40

22.18 Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25°C, 0.87 - 0.89 kg/ litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacture of membrane.

22.18.1 2mm (for corrugated roof sheets)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 sqm MATERIAL				
	A.P.P. modified 2 mm thick - 30 sqm				
	Add 10% for wastage - 3 sqm				
	Total = 33 sqm				
8203	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt	sqm	33.00	100.00	3300.00
8206	Bitumen primer for bitumen membrane	litre	12.00	90.00	1080.00
2211	Carriage of Tar bitumen	tonne	0.012	103.77	1.25
9977	Carriage of bitumen membrane	L.S.	7.80	1.73	13.49
1241	Commercial LPG in cylinder	kg	7.00	65.00	455.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.73	85.69

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0159	Skilled torch operator for laying tack	day	2.16	487.00	1051.92
0130	Mistry	day	0.18	487.00	87.66
0114	Beldar	day	3.24	368.00	1192.32
9999	Sundries, brushes, bitumen torch etc	L.S.	23.40	1.73	40.48
	TOTAL				7307.81
	Add 1 % Water charges				73.08
	TOTAL				7380.89
	Add 15 % Contractor's profit and overheads				1107.13
	Cost for 30 sqm				8488.02
	Cost for 1 sqm				282.93
	Say				282.95

22.19 Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :

22.19.1 3 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 sqm				
	MATERIAL				
	A.P.P. modified 2 mm thick - 30 sqm				
	Add 10% for wastage - 3 sqm				
	Total = 33 sqm				
8204	A.P.P. modified 3 mm thick membrane reinforced with glass fibre matt	sqm	33.00	200.00	6600.00
8206	Bitumen primer for bitumen membrane	litre	12.00	90.00	1080.00
2211	Carriage of Tar bitumen	tonne	0.012	103.77	1.25
9977	Carriage of bitumen membrane	L.S.	7.80	1.73	13.49
1241	Commercial LPG in cylinder	kg	7.00	65.00	455.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.73	85.69
	LABOUR				
0159	Skilled torch operator for laying tack	day	2.16	487.00	1051.92
0130	Mistry	day	0.18	487.00	87.66
0114	Beldar	day	3.24	368.00	1192.32
9999	Sundries, brushes, bitumen torch etc	L.S.	23.40	1.73	40.48
	TOTAL				10607.81
	Add 1 % Water charges				106.08
	TOTAL				10713.89
	Add 15 % Contractor's profit and overheads				1607.08
	Cost for 30 sqm				12320.97
	Cost for 1 sqm				410.69
	Say				410.70

22.20 Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25° C, 0.87-0.89 kg/ litre and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc, and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23° C as 650/ 450N/ 5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150° C. Cold flexibility shall be upto -2° C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :

22.20.1 3 mm thick

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 sqm MATERIAL				
	A.P.P. modified 2 mm thick - 30 sqm				
	Add 10% for wastage - 3 sqm				
	Total = 33 sqm				
8205	A.P.P. modified 3 mm thick membrane reinforced with polyster matt	sqm	33.00	205.00	6765.00
8206	Bitumen primer for bitumen membrane	litre	12.00	90.00	1080.00
2211	Carriage of Tar bitumen	tonne	0.012	103.77	1.25
9977	Carriage of bitumen membrane	L.S.	7.80	1.73	13.49
	Fuel				
1241	Commercial LPG in cylinder	kg	7.00	65.00	455.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.73	85.69
	LABOUR				
0159	Skilled torch operator for laying tack	day	2.16	487.00	1051.92
0130	Mistry	day	0.18	487.00	87.66
0114	Beldar	day	3.24	368.00	1192.32
9999	Sundries, brushes, bitumen torch etc	L.S.	23.4	1.73	40.48
	TOTAL				10772.81
	Add 1 % Water charges				107.73
	TOTAL				10880.54
	Add 15 % Contractor's profit and overheads				1632.08
	Cost for 30 sqm				12512.62
	Cost for 1 sqm				417.08
	Say				417.10

22.21 Extra for covering top of membrane with Geotextile, 120 gsm non woven, 100% polyester of thickness 1 to 1.25 mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 30 sqm MATERIAL				
	Geotextile 120 gsm membrane - 30 sqm				
	Add 5% for wastage - 1.50 sqm				
	Total = 31.50 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8207	Geotextile 120 gsm membrane	sqm	31.50	45.00	1417.50
9977	Carriage of Geotextile	L.S.	7.80	1.73	13.49
	LABOUR				
0159	Skilled torch operator for laying tack or fitter 2.16 / 5 = 0.43	day	0.43	487.00	209.41
0130	Mistry 0.18 / 5 = 0.04	day	0.04	487.00	19.48
0114	Beldar 3.24-5 / 0.65	day	0.65	368.00	239.20
9999	Sundries, torch, LPG etc	L.S.	46.80	1.73	80.96
	TOTAL				1980.04
	Add 1 % Water charges				19.80
	TOTAL				1999.84
	Add 15 % Contractor's profit and overheads				299.98
	Cost for 30 sqm				2299.82
	Cost for 1 sqm				76.66
	Say				76.65

22.22 Providing and mixing integral crystalline admixture for waterproofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc.. at the time of transporting of concrete into the drum of the ready-mix truck , using integral crystalline admixture @0.80% (minimum) to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 Kg				
	MATERIAL :				
0352	Integral crystalline admixture	kg	1.00	309.00	309.00
	LABOUR :				
9999	For measuring, making and mixing etc..	L.S.	5.80	1.73	10.03
9999	Sundries	L.S.	1.15	1.73	1.99
9999	Carriage of material and tools cost etc..	L.S.	1.75	1.73	3.03
	TOTAL				324.05
	Add 1 % Water charges				3.24
	TOTAL				327.29
	Add 15 % Contractor's profit and overheads				49.09
	Cost for 1.00 Kg				376.39
	Say				376.40

22.22A Providing and applying fibre reinforced elastomeric liquid water proofing membrane with resilient acrylic polymers having Sun Reflectivity Index (SRI) of 105 on top of concrete roof in three coats @10.76 litre/ 10 sqm. One coat of self-priming of elastomeric waterproofing liquid (dilution with water in the ratio of 3:1) and two coats of undiluted elastomeric waterproofing liquid (dry film thickness of complete application/system not less than 500 microns). The operation shall be carried out after scrapping and properly cleaning the surface to remove loose particles with wire brushes, complete in all respect as per the direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8511	Details of cost for 10 Sqm MATERIAL Fibre reinforced elastomeric liquid water proofing membrane 10.76 litre + 0.538 (Add wastage 5%) = 11.30 litre	litre	11.30	198.69	2245.20
9977	Carriage of materials	L.S.	1.43	1.73	2.47
0115	LABOUR Coolie	day	0.67	368.00	246.56
0131	Painter	day	0.67	448.00	300.16
9999	Wire brush brushes, rollers etc.	L.S.	6.76	1.73	11.69
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				2820.02
	Add 1 % Water charges				28.20
	TOTAL				2848.22
	Add 15 % Contractor's profit and overheads				427.23
	Cost of 10 sqm				3275.45
	Cost of 1 sqm				327.54
	Say				327.55

22.23 Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.

22.23.1 For vertical surface two coats @0.70 kg per sqm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0351	Details of cost for 1 .00 sqm MATERIAL : Integral crystalline slurry (2 x .70kg / sq.mtr. = 1.40kg)	kg	1.40	270.00	378.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	LABOUR For application of waterproofing material	L.S.	11.55	1.73	19.98
9999	Sundries	L.S.	1.15	1.73	1.99
9999	Carriage of material and tools cost etc..	L.S.	1.75	1.73	3.03
	TOTAL				403.00
	Add 1% Water Charges				4.03
	TOTAL				407.03
	Add 15 % Contractor's profit and overheads				61.05
	Cost for 1.00 sqm				468.08
	Say				468.10

22.23.2 For horizontal surface one coat @1.10 kg per sqm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0351	Details of cost for 1 .00 sqm MATERIAL : Integral crystalline slurry (1 x 1.10kg / sq.mtr. = 1.10kg)	kilogram	1.10	270.00	297.00
	LABOUR :				
9999	For application of waterproofing material	L.S.	5.75	1.73	9.95
9999	Sundries	L.S.	1.15	1.73	1.99
9999	Carriage of material and tools cost etc..	L.S.	1.75	1.73	3.03
	TOTAL				311.96
	Add 1% Water Charges				3.12
	TOTAL				315.08
	Add 15 % Contractor's profit and overheads				47.26
	Cost for 1.00 sqm				362.35
	Say				362.35

22.23A Providing & Applying polymer modified, flexible cementitious negative side waterproofing coating with elastic waterproofing polymers on interior wall plaster surface in three coats @14.35 kg /10 sqm. one coat of self priming of cementitious waterproofing polymer(dilution with water in the ratio of 1:1) and two coats of cementitious waterproofing polymer (dilution with water in the ratio of 3:1) after scrapping and properly cleaning the surface to remove pre-existing paint film & loose particles till plaster is visible, complete in all respect as per the direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8512	Details of cost for 10 Sqm MATERIAL Cementitious water proofing coating with elastic polymers 14.35 kg + 0.72 (Add wastage 5%) = 15.07 litre	kg	15.07	189.13	2850.19
9977	Carriage of materials	L.S.	1.56	1.73	2.70
	LABOUR				
0115	Coolie	day	0.23	368.00	84.64
0131	Painter	day	0.46	448.00	206.08
9999	Wire brush brushes, rollers etc.	L.S.	7.15	1.73	12.37

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	8.06	1.73	13.94
	TOTAL				3169.92
	Add 1 % Water charges				31.70
	TOTAL				3201.62
	Add 15 % Contractor's profit and overheads				480.24
	Cost of 10 sqm				3681.86
	Cost of 1 sqm				368.18
	Say				368.20

22.24 Providing and applying integral crystalline (dry shake) of hydrophilic in nature for waterproofing treatment to the RCC structures like basement raft, foundation slab, sewage & water treatment plant slab, warehouses floor, parking structures and water tank base slab etc. sprinkled @0.60kg per sqm or higher as recommended by the manufacturer's specification over the lean concrete of above cited structures. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 85%, compared control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline dry-shake shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0354	Details of cost for 1.00 sqm MATERIAL :				
	Integral crystalline dry shake	kilogram	0.60	412.00	247.20
	LABOUR				
9999	For measuring and sprinkling of waterproofing material	L.S.	11.55	1.73	19.98
9999	Sundries	L.S.	1.15	1.73	1.99
9999	Carriage of material and tools cost etc..	L.S.	1.75	1.73	3.03
	TOTAL				272.20
	Add 1 % Water charges				2.72
	TOTAL				274.92
	Add 15 % Contractor's profit and overheads				41.24
	Cost for 1.00 sqm				316.16
	Say				316.15

22.24A Providing & Applying high quality acrylic modified resin based texture of Dholpur/ Red sand stone Pattern with anti algae and UV resistance properties to be applied as intermediate finish in desired pattern @ 43.04 kgs/10 sqm to form film of 1- 1.5 mm thickness after scrapping and properly cleaning the surface to remove loose particles from the plaster surface, followed by top coating with Premium Acrylic Smooth exterior paint with Silicone additives of required shade by two or more coats @ 1.43 litres/10 sqm, complete as the direction of Engineer -in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8513	Details of cost for 10 Sqm MATERIAL Acrylic modified resin based texture 43.04 kg + 2.15 (Add wastage 5%) = 45.19 kg	kg	45.19	48.89	2209.34

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
14.67.1	Quantity taken for cost using once = 10 sqm Top coat with premium acrylic exterior paint (two or more coats) Rate as per Item No.14.67.1 of SH:REPAIRS TO BUILDINGS	sqm	10.00	70.75	707.50(A)
9977	Carriage of materials LABOUR	L.S.	3.90	1.73	6.75
0115	Coolie	day	0.56	368.00	206.08
0123	Mason (brick layer) 1st class	day	0.56	487.00	272.72
9999	Sundries and scaffolding	L.S.	40.00	1.73	69.20
	TOTAL				3471.59
	Add 1 % Water charges on all except (A) i.e. on (3471.59 - 707.50) = 2764.09				27.64
	TOTAL				3499.23
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (3499.23 - 707.50) = 2791.73				418.76
	Cost of 10 sqm				3917.99
	Cost of 1 sqm				391.79
	Say				391.80

22.25 Providing and applying crystalline mortar by mixing in the ratio of 4.5 : 1 (4.5 parts crystalline mortar : 1 part water) for the treatment of faulty construction joints, cracks, tie rod holes and spalled & honeycombed surface of RCC underground structures like basement, water tanks, bridge deck etc. to ensure water tightness. The crystalline mortar shall conform to the EN 1504-3 having compressive strength Class R4 (?45 MPa) and adhesive bond strength Class R3 (?1.5 MPa). The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.

22.25.1 For sealing cracks and faulty construction joints, routed out/making U-shape groove size 25x25mm and then primed the area with integral crystalline slurry @0.05kg/running meter and while the surface is tacky filled the groove upto surface with crystalline mortar @1.50kg/running meter. Once crystalline mortar is touch dry then finally applied two coats of integral crystalline slurry @0.05kg/running meter per coat.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0353	Details of cost for 1.00 meter MATERIAL :				
	Crystalline Mortar @1.50 kg per meter	kilogram	1.50	248.00	372.00
0351	Integral crystalline slurry for priming and finishing (3 x 0.05kg / meter) = 0.15kg	kilogram	0.150	270.00	40.50
9999	LABOUR For making crystalline mortar and repair work etc..	L.S.	14.450	1.73	25.00
9999	Sundries	L.S.	1.150	1.73	1.99
9999	Carriage of material and tools cost etc..	L.S.	1.750	1.73	3.03
	TOTAL				442.52
	Add 1 % Water charges				4.43
	TOTAL				446.94
	Add 15 % Contractor's profit and overheads				67.04
	Cost for 1.00 meter				513.98
	Say				514.00

22.25.2 For patching of tie rod holes, prepared tie rod hole surface and then primed the area with integral crystalline slurry @0.070kg/sqm and while the surface is tacky repair and then filled the tie rod holes with crystalline mortar@0.040kg per hole. The crystalline mortar should be tightly rodded into tie rod holes or packed tightly (For 25x25x25 mm tie rod hole, use 0.040kg to fill the hole)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 no. hole				
0353	MATERIAL : Crystalline mortar@0.040 kg per hole	kilogram	0.04	248.00	9.92
9999	LABOUR For making crystalline mortar and repair work etc..	L.S.	2.90	1.73	5.02
9999	Sundries	L.S.	0.30	1.73	0.52
9999	Carriage of material and tools cost etc..	L.S.	0.25	1.73	0.43
	TOTAL				15.89
	Add 1 % Water charges				0.16
	TOTAL				16.05
	Add 15 % Contractor's profit and overheads				2.41
	Cost for each hole				18.45
	Say				18.45

22.26 Providing and applying of swellable type water stop tape, 19mm x 25mm thick in linear meter (expansive nature) for construction joints treatment of RCC structure such as raft slab, retaining walls, water storage tank and at the junctions of raft slab with the retaining walls etc.. After cleaning the surface, one coat of required primer for swellable water stop tape shall be applied throughout the length of the joint @3.78 litre per 240 running meter. Over the primed surface swellable type water stop tape shall be placed. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.00 meter				
0355	MATERIAL : Swellable type water stop tape (Crystalline sealing compound)	metre	1.00	416.00	416.00
0356	Swellable type water stop primer (@3.78 litre per 240 running meter)	Litre	0.016	1750.00	28.00
9999	LABOUR For application of primer and swellable water stop	L.S.	8.65	1.73	14.96
9999	Sundries	L.S.	1.15	1.73	1.99
9999	Carriage of material and tools cost etc..	L.S.	1.75	1.73	3.03
	TOTAL				463.98
	Add 1 % Water charges				4.64
	TOTAL				468.62
	Add 15 % Contractor's profit and overheads				70.29
	Cost for 1.00 metre				538.91
	Say				538.90

SUB HEAD : 23.0

**RAIN WATER HARVESTING &
TUBEWELLS**

23.1 Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.

23.1.1 All types of soil

23.1.1.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 35 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	1.00	6500.00	6500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading & Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	368.00	736.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11170.20
	Add 1 % Water charges				111.70
	TOTAL				11281.90
	Add 15 % Contractor's profit and overheads				1692.29
	Cost for 35 metre				12974.19
	Cost of 1 metre				370.69
	Say				370.70

23.1.1.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 32 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	1.00	6500.00	6500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading & Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	368.00	736.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11170.20
	Add 1 % Water charges				111.70
	TOTAL				11281.90
	Add 15 % Contractor's profit and overheads				1692.29
	Cost for 32 metre				12974.19
	Cost of 1 metre				405.44
	Say				405.45

23.1.1.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 25 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	1.00	6500.00	6500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading & Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	368.00	736.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11170.20
	Add 1 % Water charges				111.70
	TOTAL				11281.90
	Add 15 % Contractor's profit and overheads				1692.29
	Cost for 25 metre				12974.19
	Cost of 1 metre				518.96
	Say				518.95

23.1.2 Rocky strata including Boulders

23.1.2.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	0.90	6500.00	5850.00
1235	Diesel oil	litre	6.00	46.55	279.30
	Extra diesel required for boring in rocky strata				
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140				
	Loading, unloading & Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator & security				
0134	Rock Hole Driller	day	0.75	368.00	276.00
0114	Beldar	day	3.00	368.00	1104.00
0103	Blacksmith 2nd class	day	0.75	448.00	336.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11779.50
	Add 1 % Water charges				117.80
	TOTAL				11897.30
	Add 15 % Contractor's profit and overheads				1784.60
	Cost for 16 metre				13681.90
	Cost of 1 metre				855.11
	Say				855.10

23.1.2.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	0.90	6500.00	5850.00
1235	Diesel oil	litre	8.00	46.55	372.40
	Extra diesel required for boring in rockstrata				
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading &Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity Extra labour to assist M/C operator &security	each	1.00	750.00	750.00
0134	Rock Hole Driller	day	1.00	368.00	368.00
0114	Beldar	day	4.00	368.00	1472.00
0103	Blacksmith 2nd class	day	0.75	448.00	336.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				12332.60
	Add 1 % Water charges				123.33
	TOTAL				12455.93
	Add 15 % Contractor's profit and overheads				1868.39
	Cost for 16 metre				14324.32
	Cost of 1 metre				895.27
	Say				895.25

23.1.2.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	0.90	6500.00	5850.00
1235	Diesel oil	litre	16.00	46.55	744.80
	Extra diesel required for boring in rockstrata				
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading &Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity Extra labour to assist M/C operator &security	each	1.00	750.00	750.00
0134	Rock Hole Driller	day	1.20	368.00	441.60
0114	Beldar	day	8.00	368.00	2944.00
0103	Blacksmith 2nd class	day	0.75	448.00	336.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				14250.60
	Add 1 % Water charges				142.51
	TOTAL				14393.11
	Add 15 % Contractor's profit and overheads				2158.97
	Cost for 16 metre				16552.08
	Cost of 1 metre				1034.50
	Say				1034.50

23.2 Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.

23.2.1 All types of soil

23.2.1.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre				
	MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	1.00	6500.00	6500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading &Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator &security				
0114	Beldar	day	2.00	368.00	736.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11170.20
	Add 1 % Water charges				111.70
	TOTAL				11281.90
	Add 15 % Contractor's profit and overheads				1692.29
	Cost for 30 metre				12974.19
	Cost of 1 metre				432.47
	Say				432.45

23.2.1.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 27 metre				
	MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	1.00	6500.00	6500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading &Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator &security				
0114	Beldar	day	2.00	368.00	736.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11170.20
	Add 1 % Water charges				111.70
	TOTAL				11281.90
	Add 15 % Contractor's profit and overheads				1692.29
	Cost for 27 metre				12974.19
	Cost of 1 metre				480.52
	Say				480.50

23.2.1.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 20 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	1.00	6500.00	6500.00
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading & Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator & security				
0114	Beldar	day	2.00	368.00	736.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				11170.20
	Add 1 % Water charges				111.70
	TOTAL				11281.90
	Add 15 % Contractor's profit and overheads				1692.29
	Cost for 20 metre				12974.19
	Cost of 1 metre				648.70
	Say				648.70

23.2.2 Rocky strata including Boulders

23.2.2.1 300 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	0.90	6500.00	5850.00
1235	Diesel oil	litre	10.00	46.55	465.50
	Extra diesel required for boring in rockystrata				
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading & Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator & security				
0134	Rock Hole Driller	day	1.00	368.00	368.00
0114	Beldar	day	5.00	368.00	1840.00
0103	Blacksmith 2nd class	day	0.70	448.00	313.60
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				12771.30
	Add 1 % Water charges				127.71
	TOTAL				12899.01
	Add 15 % Contractor's profit and overheads				1934.85
	Cost for 16 metre				14833.86
	Cost of 1 metre				927.11
	Say				927.10

23.2.2.2 350 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 16 metre				
	MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	0.90	6500.00	5850.00
1235	Diesel oil	litre	12.00	46.55	558.60
	Extra diesel required for boring in rockstrata				
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading &Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator &security				
0134	Rock Hole Driller	day	1.00	368.00	368.00
0114	Beldar	day	6.00	368.00	2208.00
0103	Blacksmith 2nd class	day	0.75	448.00	336.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				13254.80
	Add 1 % Water charges				132.55
	TOTAL				13387.35
	Add 15 % Contractor's profit and overheads				2008.10
	Cost for 16 metre				15395.45
	Cost of 1 metre				962.21
	Say				962.20

23.2.2.3 400 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 14 metre				
	MACHINERY :				
0020	Hydraulic Excavator (3D) with driver and fuel.	day	0.95	6500.00	6175.00
1235	Diesel oil	litre	16.00	46.55	744.80
	Extra diesel required for boring in rockstrata				
0005	Hire charges of Diesel Truck - 9 tonne	day	0.4286	2000.00	857.20
	Transportation charges for to and fro to site (assume 140m of bore for one shifting) (2 x30)/140Loading, unloading &Errection charges of drilling Rig Machine				
	LABOUR				
0114	Beldar	day	4.00	368.00	1472.00
0130	Mistry	day	1.00	487.00	487.00
7763	Water supply tanker of 5000 litre capacity	each	1.00	750.00	750.00
	Extra labour to assist M/C operator &security				
0134	Rock Hole Driller	day	1.20	368.00	441.60
0114	Beldar	day	8.00	368.00	2944.00
0103	Blacksmith 2nd class	day	1.00	448.00	448.00
0113	Chowkidar	day	1.00	368.00	368.00
	TOTAL				14687.60
	Add 1 % Water charges				146.88
	TOTAL				14834.48
	Add 15 % Contractor's profit and overheads				2225.17
	Cost for 14 metre				17059.65
	Cost of 1 metre				1218.54
	Say				1218.55

23.3 Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.

23.3.1 100 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7758	Details of cost for 100 metres				
2321	MATERIAL uPVC blind pipe 100 mm dia as per IS: 12818	metre	100.00	244.00	24400.00
	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.50	378.03	189.01
	Qty = 50 to consider 50% of carriage as per 2321				
0114	LABOUR for lowering				
	Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.50	368.00	184.00
	TOTAL				24957.01
	Add 1 % Water charges				249.57
	TOTAL				25206.58
	Add 15 % Contractor's profit and overheads				3780.99
	Cost of 100 metres				28987.57
	Cost of 1 metre				289.87
	Say				289.85

23.3.2 150 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7745	Details of cost for 100 metres				
2321	MATERIAL uPVC blind pipe 150 mm dia as per IS: 12818	metre	100.00	487.00	48700.00
	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.50	378.03	189.01
	Qty = 50 to consider 50% of carriage as per 2321				
0114	LABOUR for lowering				
	Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries (Adhesive etc.)	L.S.	10.07	1.73	17.42
	TOTAL				49274.43
	Add 1 % Water charges				492.74
	TOTAL				49767.17
	Add 15 % Contractor's profit and overheads				7465.08
	Cost of 100 metres				57232.25
	Cost of 1 metre				572.32
	Say				572.30

23.3.3 200 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7746	Details of cost for 100 metres				
2322	MATERIAL uPVC blind pipe 200 mm dia as per IS: 12818	metre	100.00	519.00	51900.00
	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	0.50	614.93	307.46

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Qty = 50 to consider 50% of carriage as per 2321				
0115	LABOUR for lowering				
	Beldar	day	0.50	368.00	184.00
	Coolie	day	0.50	368.00	184.00
	TOTAL				52575.46
	Add 1 % Water charges				525.75
	TOTAL				53101.21
	Add 15 % Contractor's profit and overheads				7965.18
	Cost of 100 metres				61066.39
	Cost of 1 metre				610.66
	Say				610.65

23.4 Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.

23.4.1 100 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7759	Details of cost for 100 metres				
	MATERIAL				
	uPVC slotted pipe 100 mm dia as per IS: 12818	metre	100.00	380.00	38000.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.50	378.03	189.01
	Qty = 50 to consider 50% of carriage as per 2321				
	LABOUR for lowering				
0114	Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries (Adhesive etc.)	L.S.	10.07	1.73	17.42
	TOTAL				38574.43
	Add 1 % Water charges				385.74
	TOTAL				38960.17
	Add 15 % Contractor's profit and overheads				5844.03
	Cost of 100 metres				44804.20
	Cost of 1 metre				448.04
	Say				448.05

23.4.2 150 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7751	Details of cost for 100 metres				
	MATERIAL				
	uPVC slotted pipe 150 mm dia as per IS: 12818	metre	100.00	450.00	45000.00
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	0.50	378.03	189.01
	Qty = 50 to consider 50% of carriage as per 2321				
	LABOUR for lowering				
0114	Beldar	day	0.50	368.00	184.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries (Adhesive etc.)	L.S.	10.07	1.73	17.42
	TOTAL				45574.43
	Add 1 % Water charges				455.74
	TOTAL				46030.17
	Add 15 % Contractor's profit and overheads				6904.53
	Cost of 100 metres				52934.70
	Cost of 1 metre				529.34
	Say				529.35

23.4.3 200 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7752	Details of cost for 100 metres MATERIAL uPVC slotted pipe 200 mm dia as per IS: 12818	metre	100.00	700.00	70000.00
2322	Carriage of Spun iron S & S pipes 200 mm dia Qty = 50 to consider 50% of carriage as per 2321	100 metre	0.50	614.93	307.46
	LABOUR for lowering				
0114	Beldar	day	0.50	368.00	184.00
0115	Coolie	day	0.50	368.00	184.00
9999	Sundries (Adhesive etc.)	L.S.	13.42	1.73	23.22
	TOTAL				70698.68
	Add 1 % Water charges				706.99
	TOTAL				71405.67
	Add 15 % Contractor's profit and overheads				10710.85
	Cost of 100 metres				82116.52
	Cost of 1 metre				821.16
	Say				821.15

23.5 Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7753	Details of cost for 1 cum. MATERIAL Boulder 50 mm to 200 mm including carriage	cum	1.00	700.00	700.00
	LABOUR				
0114	Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	1.00	1.73	1.73
	TOTAL				793.73
	Add 1 % Water charges				7.94
	TOTAL				801.67
	Add 15 % Contractor's profit and overheads				120.25
	Total				921.92
	Cost of 1 Cum.				921.92
	Say				921.90

23.6 Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7754	Details of cost for 1 cum. MATERIAL Gravel 5 mm to 10 mm including carriage	cum	1.00	800.00	800.00
0114	LABOUR Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	1.00	1.73	1.73
	TOTAL				893.73
	Add 1 % Water charges				8.94
	TOTAL				902.67
	Add 15 % Contractor's profit and overheads				135.40
	Total				1038.07
	Cost of 1 Cum.				1038.07
	Say				1038.05

23.7 Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7755	Details of cost for 1 cum. MATERIAL Gravel 1.5 mm to 2 mm including carriage	cum	1.00	800.00	800.00
0114	LABOUR Beldar	day	0.25	368.00	92.00
9999	Sundries	L.S.	1.00	1.73	1.73
	TOTAL				893.73
	Add 1 % Water charges				8.94
	TOTAL				902.67
	Add 15 % Contractor's profit and overheads				135.40
	Total				1038.07
	Cost of 1 Cum.				1038.07
	Say				1038.05

23.8 Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7772	Details of cost for 1 cum. MATERIAL Pea Gravel including carriage	cum	1.00	900.00	900.00
0114	LABOUR Beldar	day	0.30	368.00	110.40

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	1.00	1.73	1.73
	TOTAL				1012.13
	Add 1 % Water charges				10.12
	TOTAL				1022.25
	Add 15 % Contractor's profit and overheads				153.34
	Total				1175.59
	Cost of 1 Cum.				1175.59
	Say				1175.60

23.9 Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7762	Details of cost for 1 No. RCC drain cover MATERIAL Precast R.C.C. perforated slab	each	1.00	800.00	800.00
9988	LABOUR Carriage and fixing charges	L.S.	15.00	1.73	25.95
	TOTAL				825.95
	Add 1 % Water charges				8.26
	TOTAL				834.21
	Add 15 % Contractor's profit and overheads				125.13
	Total				959.34
	Cost of 1 No.				959.34
	Say				959.35

23.10 Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.

23.10.1 100 mm nominal size dia having minimum wall thickness 5.00 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre MATERIAL				
7757	M.S. pipe 100 mm dia casing pipe	metre	30.00	700.00	21000.00
7764	M.S. socket 100 mm dia	each	5.00	120.00	600.00
2343	Carriage of ductile iron pipes (k7) 100 mm dia including loading and unloading Painting with anticorrosive Paint 3.14 x.0110 x30.00=10.36 sqm.	100 metre	0.30	226.82	68.05
13.65.1	Rate as per Item No.13.65.1 of SH:Finishing LABOUR	sqm	10.36	65.20	675.47(A)
0114	Beldar	day	1.35	368.00	496.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry TOTAL Add 1 % Water charges on all except (A) i.e. on (23083.82 - 675.47) = 22408.35 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (23307.90 - 675.47) = 22632.43 Cost for 30 metre Cost of 1 metre Say	day	0.50	487.00	243.50 23083.82 224.08 23307.90 3394.86 26702.76 890.09 890.10

23.10.2 150 mm nominal size dia having minimum wall thickness 5.00 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre MATERIAL				
7743	M.S. pipe 150 mm dia casing pipe	metre	30.00	950.00	28500.00
7765	M.S. socket 150 mm dia	each	5.00	210.00	1050.00
2344	Carriage of cast iron pipes 150 mm dia including loading and unloading Painting with Anticorrosive Paint 3.14 x0.160 x30.00=15.07 sqm.	100 metre	0.30	378.03	113.41
13.65.1	Rate as per Item No.13.65.1 of SH:Finishing LABOUR	sqm	15.07	65.20	982.56(A)
0114	Beldar	day	1.40	368.00	515.20
0130	Mistry TOTAL Add 1 % Water charges on all except (A) i.e. on (31404.67 - 982.56) = 30422.11 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (31708.89 - 982.56) = 30726.33 Cost for 30 metre Cost of 1 metre Say	day	0.50	487.00	243.50 31404.67 304.22 31708.89 4608.95 36317.84 1210.59 1210.60

23.10.3 200 mm nominal size dia having minimum wall thickness 5.40 mm

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre MATERIAL				
7744	M.S. pipe 200 mm dia casing pipe	metre	30.00	1200.00	36000.00
7766	M.S. socket 200 mm dia	each	5.00	270.00	1350.00
2345	Carriage of cast iron pipes 200 mm dia including loading and unloading Painting with anticorrosive Paint 3.14 x0.210 x30.00=20.25 sqm.	100 metre	0.30	614.93	184.48
13.65.1	Rate as per Item No.13.65.1 of SH:Finishing LABOUR	sqm	20.25	65.20	1320.30(A)
0114	Beldar	day	1.35	368.00	496.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0130	Mistry TOTAL Add 1 % Water charges on all except (A) i.e. on (39595.08 - 1320.30) = 38274.78 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (39977.83 - 1320.30) = 38657.53 Cost for 30 metre Cost of 1 metre Say	day	0.50	487.00	243.50 39595.08 382.75 39977.83 5798.63 45776.46 1525.88 1525.90

23.11 Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge.

23.11.1 100 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre MATERIAL				
7757	M.S. pipe 100 mm dia casing pipe	metre	30.00	700.00	21000.00
7764	M.S. socket 100 mm dia	each	5.00	120.00	600.00
9999	Sundries	L.S.	906.04	1.73	1567.45
2343	Carriage of ductile iron pipes (k7) 100 mm dia including loading and unloading Painting with anticorrosive Paint 3.14 x.11 x30.00=10.36 sqm	100 metre	0.30	226.82	68.05
13.65.1	Rate as per Item No.13.65.1 of SH:Finishing LABOUR	sqm	10.36	65.20	675.47(A)
0114	Beldar	day	1.35	368.00	496.80
0130	Mistry TOTAL Add 1 % Water charges on all except (A) i.e. on (24651.27 - 675.47) = 23975.80 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (24891.03 - 675.47) = 24215.56 Cost for 30 metre Cost of 1 metre Say	day	0.50	487.00	243.50 24651.27 239.76 24891.03 3632.33 28523.36 950.77 950.75

23.11.2 150 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre MATERIAL				
7743	M.S. pipe 150 mm dia casing pipe	metre	30.00	950.00	28500.00
7765	M.S. socket 150 mm dia	each	5.00	210.00	1050.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Extra for making slots	L.S.	1208.05	1.73	2089.93
2344	Carriage of cast iron pipes 150 mm dia including loading and unloading Painting with anticorrosive Paint 3.14 x.160 x30.00=15.07 sqm.	100 metre	0.30	378.03	113.41
13.65.1	Rate as per Item No.13.65.1 of SH:Finishing LABOUR	sqm	15.07	65.20	982.56(A)
0114	Beldar	day	1.40	368.00	515.20
0130	Mistry	day	0.50	487.00	243.50
	TOTAL				33494.60
	Add 1 % Water charges on all except (A) i.e. on (33494.60 - 982.56) = 32512.04				325.12
	TOTAL				33819.72
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (33819.72 - 982.56) = 32837.16				4925.57
	Cost for 30 metre				38745.29
	Cost of 1 metre				1291.51
	Say				1291.50

23.11.3 200 mm nominal size dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 30 metre MATERIAL				
7744	M.S. pipe 200 mm dia casing pipe	metre	30.00	1200.00	36000.00
7766	M.S. socket 200 mm dia	each	5.00	270.00	1350.00
9999	Extra for making slots	L.S.	1208.05	1.73	2089.93
2345	Carriage of cast iron pipes 200 mm dia including loading and unloading Painting with anticorrosive Paint 3.14 x 0.210 x30.00=20.25 sqm.	100 metre	0.30	614.93	184.48
13.65.1	Rate as per Item No.13.65.1 of SH:Finishing LABOUR	sqm	20.25	65.20	1320.30(A)
0114	Beldar	day	1.40	368.00	515.20
0130	Mistry	day	0.50	487.00	243.50
	TOTAL				41703.41
	Add 1 % Water charges on all except (A) i.e. on (41703.41 - 1320.30) = 40383.11				403.83
	TOTAL				42107.24
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (42107.24 - 1320.30) = 40786.94				6118.04
	Cost for 30 metre				48225.28
	Cost of 1 metre				1607.50
	Say				1607.50

23.12 Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all

complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0040	Details of cost for 8 Hours MACHINERY : Air compressor 250 cfm with two leads for pneumatic cutters/ hammers.	day	1.00	1500.00	1500.00
1235	MATERIAL Diesel oil	litre	48.00	46.55	2234.40
	TOTAL				3734.40
	Add 1 % Water charges				37.34
	TOTAL				3771.74
	Add 15 % Contractor's profit and overheads				565.76
	Cost of 8 Hours				4337.50
	Cost of 1 Hour				542.18
	Say				542.20

23.13 Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:

23.13.1 100 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7760	Details of cost for 1 No MATERIAL 100mm dia MS screwed cap with locking arrangement M.S. cap 100 mm dia	each	1.00	120.00	120.00
	Add 5% labour facor on X				6.00
	TOTAL				126.00
	Add 1 % Water charges				1.26
	TOTAL				127.26
	Add 15 % Contractor's profit and overheads				19.09
	Total				146.35
	Cost of 1 No				146.35
	Say				146.35

23.13.2 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7747	Details of cost for 1 No MATERIAL 100mm dia MS screwed cap with locking arrangement M.S. cap 150 mm dia	each	1.00	150.00	150.00
	Add 5% labour facor on X				7.50
	TOTAL				157.50
	Add 1 % Water charges				1.58
	TOTAL				159.08
	Add 15 % Contractor's profit and overheads				23.86
	Total				182.94
	Cost of 1 No				182.94
	Say				182.95

23.13.3 200 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7748	Details of cost for 1 No MATERIAL 100mm dia MS screwed cap with locking arrangement M.S. cap 200 mm dia Add 5% labour facor on X TOTAL Add 1 % Water charges TOTAL Add 15 % Contractor's profit and overheads Total Cost of 1 No Say	each	1.00	190.00	190.00 9.50 199.50 2.00 201.50 30.23 231.73 231.73 231.75

23.14 Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.

23.14.1 100 mm clamp

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
10.1 9999	Details of cost for 1 No MATERIAL Clamps made of MS flat of size 100x10mm thick1x2mt.x7.80 kg per mt.=15.60 kg. Rate as per Item No.10.1 of SH:Steel Work Sundries, nuts and bolts etc. TOTAL Add 1 % Water charges on all except (A) i.e. on (955.07 - 911.82) = 43.25 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (955.50 - 911.82) = 43.68 Total Cost of 1 No Say	kg L.S.	15.60 25.00	58.45 1.73	911.82(A) 43.25 955.07 0.43 955.50 6.55 962.05 962.05 962.05

23.14.2 150 mm clamp

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
10.1 9999	Details of cost for 1 No MATERIAL Clamps made of MS flat of size 100x10mm thick1x2.10 mt.x7.80 kg per mt.=16.38 kg. Rate as per Item No.10.1 of SH:Steel Work Sundries, nuts and bolts etc. TOTAL Add 1 % Water charges on all except (A) i.e. on (1009.31 - 957.41) = 51.90 TOTAL Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1009.83 - 957.41) = 52.42 Total Cost of 1 No Say	kg L.S.	16.38 30.00	58.45 1.73	957.41(A) 51.90 1009.31 0.52 1009.83 7.86 1017.69 1017.69 1017.70

23.14.3 200 mm clamp

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
10.1	Details of cost for 1 No				
9999	MATERIAL Clamps made of MS flat of size 100x10mm thick1x2.40 mt.x7.80 kg per mt.=18.72 kg. Rate as per Item No.10.1 of SH:Steel Work Sundries, nuts and bolts etc.	kg	18.72	58.45	1094.18(A)
	TOTAL	L.S.	30.00	1.73	51.90
	Add 1 % Water charges on all except (A) i.e. on (1146.08 - 1094.18) = 51.90				0.52
	TOTAL				1146.60
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (1146.60 - 1094.18) = 52.42				7.86
	Total				1154.46
	Cost of 1 No				1154.46
	Say				1154.45

23.15 Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).**23.15.1 100 mm dia**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7761	Details of cost for 1 No				
9999	MATERIAL M.S. bail plug 100 mm dia Sundries	each	1.00	150.00	150.00
	TOTAL	L.S.	5.00	1.73	8.65
	Add 1 % Water charges				1.59
	TOTAL				160.24
	Add 15 % Contractor's profit and overheads				24.04
	Total				184.28
	Cost of 1 No				184.28
	Say				184.30

23.15.2 150 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7749	Details of cost for 1 No				
9999	MATERIAL M.S bail plug 150 mm dia Sundries	each	1.00	190.00	190.00
	TOTAL	L.S.	5.00	1.73	8.65
	Add 1 % Water charges				1.99
	TOTAL				200.64
	Add 15 % Contractor's profit and overheads				30.10
	Total				230.74
	Cost of 1 No				230.74
	Say				230.75

23.15.3 200 mm dia

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 No				
	MATERIAL				
7750	M.S bail plug 200 mm dia	each	1.00	210.00	210.00
9999	Sundries	L.S.	5.00	1.73	8.65
	TOTAL				218.65
	Add 1 % Water charges				2.19
	TOTAL				220.84
	Add 15 % Contractor's profit and overheads				33.13
	Total				253.97
	Cost of 1 No				253.97
	Say				253.95

SUB HEAD : 24.0
CONSERVATION
OF
HERITAGE BUILDINGS

24.1 Raking out joints of stone masonry surface to the required width and depth, with due care and precaution, by mechanical / manual means, including preparing and cleaning the surface for re-pointing/ refilling of joints, including disposal of rubbish to the dumping ground within 50 metre lead.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	day	0.53	368.00	195.04
0115	Coolie	day	0.08	368.00	29.44
0101	Bhisti	day	0.07	407.00	28.49
9999	Sundries	L.S.	1.43	1.73	2.47
	TOTAL				255.44
	Add 1 % Water charges				2.55
	TOTAL				257.99
	Add 15 % Contractor's profit and overheads				38.70
	Cost of 10.00 sqm				296.69
	Cost of 1.00 sqm				29.66
	Say				29.65

24.2 Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube chalis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-charge.

Note:- (1) The elevational area of the scaffolding shall be measured for payment purpose.

(2) The payment will be made once only for execution of all items for such works.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for area $2.5 \times 9.0 = 202.50$ sqm				
	MATERIAL				
	Assuming shuttering material will become unserviceable after use of 40 times Adding for maintenance @ 10% of cost				
	Taking slvage value after full use of material @ 25% of cost				
7397	Base jack	each	0.30	150.00	45.00
	Qty taken for cost of using once $= 14 \times 0.85 / 40 = 0.2975$				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
4009	Mild steel tubes hot finished welded type Vertical standard 2.5m length=7x2x9x2.5= 315.00 mSide support 6.00m length=3x2x6.00=36.00mHorizonatal support 3.00mlength=18x3x3.00=162.00mTotal=1026.00m @ 3.67 kg/m =3765.42 kgQty taken for cost of using once= 3765.42x0.85/ 40=80.02kg	kilogram	80.02	42.00	3360.84
7387	Spigot for standard jointing 7x2x9=126 nos x 0.40m length = 50.40m @2.46kg /m=123.98kgQty taken for cost of using once= 123.98x0.85/40=2.63kg	kg	2.63	45.00	118.35
1034	Bolts and nuts upto 300 mm in length 2x7x2x9=252 nos @ 0.15 kg each=37.80 kg =0.378qQty taken for cost of using once= 0.378x0.85/40=0.008q	quintal	0.008	5100.00	40.80
7346	Double coupler Clamp coupler for fixing MS tube with scaffolding 2x3x2+2x18x3=120 nosQty taken for cost of using once= 120x0.85/ 40=2.55 nos	each	2.555	48.00	122.64
7398	Challies 3 nos x 18 lines=54 nosTwo level plate challies=2x18 lines=36nosTotal=90 nosQty taken for cost of using once=90x0.85/ 40=1.9125 nos	each	1.91	800.00	1528.00
7399	Cup lock For Vertical standards=(5x7x2x9=630 nos) +(2x18x19=694 nos)Total=1314 nosQty taken for cost of using once= 1314x0.85/ 40=27.92	each	27.92	50.00	1396.00
2205	Carriage of Steel 40mm dia MS pipe=3765.42kg25mm spigot=123.98kgNuts & bolts=37.80kgclamp=120 nos@1.00kg each=120.00kgChallies=90 nos @ 15.00kg each=1350.00kgCup locks=1314 nos @ 0.50kg each= 657.00kgTotal=6054.20kg=6.054 tonne	tonne	6.054	92.24	558.41
0116	Fitter (grade 1)	day	15.50	487.00	7548.50
0114	Beldar	day	31.00	368.00	11408.00
9999	Sundries	L.S.	1035.00	1.73	1790.55
	TOTAL				27917.09
	Add 1 % Water charges				279.17
	TOTAL				28196.26
	Add 15 % Contractor's profit and overheads				4229.44
	Cost of 202.50 sqm				32425.70
	Cost of 1.00 sqm				160.12
	Say				160.10

- 24.3** **Cleaning the sand stone surface and removing dirt, dust, bird dropping, grease, oil, algae, fungus, monkey beats, vegetable growth etc., including providing, applying and washing the surface with liquid Ammonia Chemical of 5% solution and other chemical cleaning agent as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with the help of required scrubbers and also cleaning with machine operated water jet mixed with desired quantity of fine silica where ever required, without causing any scratching/ damage to the stone surface and finally washing the surface with clean water with the help of pressure jet machine, complete in all respect, including taking all precautions to safeguard ventilators, windows, doors etc. by suitable covering so as to avoid any damage to the building/ structure, all as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
7767	Stone cleaning chemical approved by ASI 1 kg teepal of 3% solution for 10 sqm area for 10sqm = 0.10 liter	litre	0.10	165.00	16.50
7771	Liquid Amonia 5%	litre	0.17	161.00	27.37
	LABOUR (for applying the camical Salution)				
0103	Blacksmith 2nd class	day	0.20	448.00	89.60
0114	Beldar	day	0.20	368.00	73.60
0128	Mate	day	0.10	407.00	40.70
9999	Cleaning T & P & its manitinance cost (Jet Pump, electric cable, horse pipe, waler pipe, Nozel safety belt Rope & mantance cost and safety machine for window etc.)	L.S.	1.00	1.73	1.73
6501	Sand zone V (Jamuna)	cum	0.0283	600.00	16.98
	LABOUR (for pressure cleaning)				
0103	Blacksmith 2nd class	day	0.40	448.00	179.20
0114	Beldar	day	0.80	368.00	294.40
0128	Mate	day	0.10	407.00	40.70
	TOTAL				780.78
	Add 1 % Water charges				7.81
	TOTAL				788.59
	Add 15 % Contractor's profit and overheads				118.29
	Cost of 10.00 sqm				906.88
	Cost of 1.00 sqm				90.68
	Say				90.70

- 24.4** **Providing and applying antifungal wash treatment using 3% solution of sodium pentachlorophenate, of reputed brand and manufacturer, on cleaned sand stone surface at desired locations as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
7775	Sodium pentachlorophenate	Kg	0.10	630.00	63.00
	LABOUR				
0103	Blacksmith 2nd class	day	0.25	448.00	112.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.25	368.00	92.00
0128	Mate	day	0.125	407.00	50.88
	TOTAL				317.88
	Add 1 % Water charges				3.18
	TOTAL				321.06
	Add 15 % Contractor's profit and overheads				48.16
	Cost of 10.00 sqm				369.22
	Cost of 1.00 sqm				36.92
	Say				36.90

24.5 Ruled / Flush pointing on Red sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime: 1.5 surkhi (50% red and 50% light yellow surkhi) : 1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.19	Rate as per Item No.3.19 of SH:Mortars	cum	0.023	2429.95	55.89
	LABOUR				
0155	Mason (average)	day	0.92	467.00	429.64
0115	Coolie	day	1.37	368.00	504.16
0101	Bhisti	day	0.93	407.00	378.51
9999	Sundries	L.S.	4.03	1.73	6.97
	TOTAL				1375.17
	Add 1 % Water charges				13.75
	TOTAL				1388.92
	Add 15 % Contractor's profit and overheads				208.34
	Cost of 10.00 sqm				1597.26
	Cost of 1.00 sqm				159.72
	Say				159.70

24.6 Ruled/ Flush pointing on White sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime : 1.5 surkhi (15% dark red and 85% light yellow surkhi) : 1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm				
	MATERIAL				
3.19	Rate as per Item No.3.19 of SH:Mortars	cum	0.023	2429.95	55.89
	LABOUR				
0155	Mason (average)	day	0.92	467.00	429.64
0115	Coolie	day	1.37	368.00	504.16
0101	Bhisti	day	0.93	407.00	378.51

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	4.03	1.73	6.97
	TOTAL				1375.17
	Add 1 % Water charges				13.75
	TOTAL				1388.92
	Add 15 % Contractor's profit and overheads				208.34
	Cost of 10.00 sqm				1597.26
	Cost of 1.00 sqm				159.72
	Say				159.70

24.7 Applying two or more coat of Ethyl Silicate chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with brush or spray on the existing stone masonry surface till there is no further absorption of chemical by stone surface, including protecting the applied surface from direct sunlight by suitable means during application, all complete as per direction of the Engineer-in-Charge (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7769	Detail of cost for 5 sqm MATERIAL Stone surface strengthening chemical approved by ASI	litre	1.00	1020.00	1020.00
0131	LABOUR Painter	day	0.15	448.00	67.20
0114	Beldar	day	0.15	368.00	55.20
9999	Sundries	L.S.	6.00	1.73	10.38
	TOTAL				1152.78
	Add 1 % Water charges				11.53
	TOTAL				1164.31
	Add 15 % Contractor's profit and overheads				174.65
	Cost of 5.00 sqm				1338.96
	Cost of 1.00 sqm				267.79
	Say				267.80

24.8 Applying breathable, non-reactive, antifungal, and water repellent Silane/ Siloxane chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacture, diluted with solvent mineral Turpentine oil in the ratio of 1:12 (One part of approved chemical :12 Part of Turpentine oil), on the existing sand stone masonry surface with two or more coats to give uniform application of chemical on the surface, all complete as per direction of Engineer-In-charge (The rate is inclusive of all materials & labours involved except scaffolding).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7768	Detail of cost for 45 sqm MATERIAL Water repellent chemical approved by ASI	litre	1.00	650.00	650.00
7770	Turpentine oil	litre	12.00	55.00	660.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0131	Painter	day	1.00	448.00	448.00
0114	Beldar	day	1.00	368.00	368.00
9999	Handling / Transportation charges	L.S.	6.00	1.73	10.38
	TOTAL				2136.38
	Add 1 % Water charges				21.36
	TOTAL				2157.74
	Add 15 % Contractor's profit and overheads				323.66
	Cost of 45.00 sqm				2481.40
	Cost of 1.00 sqm				55.14
	Say				55.15

SUB HEAD : 25.0

STRUCTURAL GLAZING
ALUMINIUM COMPOSITE PANEL

- 25.1 Providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings , the aluminium quality as per grade 6063 T5 or T6 as per BS 1474,including super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account).**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.50 kg Width of the unit 1.6 m Height of the unit 4.2 m Area of Single Unit 6.72 sqm Total Area 6.72 sqm, No of Panels 1 no Aluminium Weight per sqm = 6.50 Kg/m ² Vision Height 2.2 m Add for cleats, sleeves, screws etc. @5% = 0.33 kg Add wastage @ 5% = 0.34 kg Total = 7.17 kg Details of cost for 6.50 kg MATERIALS				
7306	Aluminium T or L sections	kilogram	7.17	200.00	1434.00
7392	Powder coating 50 microns on aluminium sections	kilogram	7.17	64.00	458.88
	TOTAL				1892.88
	Add 1 % Water charges				18.93
	TOTAL				1911.81
	Add 15 % Contractor's profit and overheads				286.77
	Cost for 6.5 kg				2198.58
	Cost for 1 kg				338.24
	Say				338.25

- 25.2 Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:**

(a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:

(b) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimentional movement for achieving perfect verticality and

fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.

(c) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment, including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.

(d) Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.

(e) Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, duly approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer- in-Charge.

Note:- 1. The cost of providing extruded aluminium frames, shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this sub- head. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be measured in sqm. up to two decimal places.

Note:-2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately.

The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NBL Certified laboratories

1. Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr

2. Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range up to 2000 ml.

3. Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml

4. Structural Performance Deflection and deformation by static air pressure test (1.5 times desing wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm

5. Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test Tests to be conducted on site.

6. Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000 ml

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.72 sqm Width of the unit 1.6 m Height of the unit 4.2 m Area of Single Unit 6.72 sqm Total Area 6.72 sqm, No of Panels 1 no Aluminium Weight per sqm = 6.50 Kg/sqm Vision Height 2.2 m Sparndrel Height 2.0 m Details of cost for 6.72 sqm MATERIALS				
2605	Structural sealant - 6 mm x 12 mm	metre	17.02	30.00	510.60
2606	Spacer tape 6.4 mm thick x 6 mm wide	metre	20.11	20.00	402.20
2607	Weather Sealant - Non Staining (600 ml)	each	1.96	420.00	823.20
2608	Weather Sealant - Normal (300 ml)	each	2.55	125.00	318.75
2609	MS Brackets/Aluminium Alloy Brackets	kg	9.78	100.00	978.00
2610	Silicon Gasket in Kg (Above 50 g / m)	kg	0.78	570.00	444.60
2611	EPDM Gasket in Kg (Above 60 g / m)	kg	0.70	150.00	105.00
2612	Anchor Fastner - M10	each	2.00	10.00	20.00
2613	SS Bolt with washer of sizes for structural glazing / ACP Cladding	each	2.00	35.00	70.00
2630	Baker rod	metre	5.04	5.00	25.20
2614	SS Screws of sizes for structural glazing / ACP Cladding	each	52.00	4.00	208.00
2632	Fire Stop	metre	1.60	550.00	880.00
2615	Protective Tape	metre	6.72	20.00	134.40
2616	GI flashing - 1.2 mm Thick	kg	3.96	58.00	229.68
8654	Masking tape	metre	6.72	2.30	15.46
9999	Sundries	L.S.	225.50	1.73	390.12
9999	Sundries (For Fabrication)	L.S.	1804.03	1.73	3120.97
9999	Sundries (For Installation)	L.S.	1804.03	1.73	3120.97
9999	Sundries (Transporation)	L.S.	451.00	1.73	780.23
9999	Sundries (Scaffolding / Loading / Unloading)	L.S.	573.00	1.73	991.29
9999	Sundries (Designing charges etc.)	L.S.	216.18	1.73	373.99

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	TOTAL				13942.66
	Add 1 % Water charges				139.43
	TOTAL				14082.09
	Add 15 % Contractor's profit and overheads				2112.31
	Cost for 6.72 sqm				16194.40
	Cost for 1 sqm				2409.88
	Say				2409.90

25.3 Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor.

(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.26.2)

For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm.

(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.72 sqm Width of the unit 1.6 m Height of the unit 4.2 m Area of Single Unit 6.72 sqm Total Area 6.72 sqm, No of Panels 1 no Area of Glass deducting area of gap/grove 5% = 6.38 sqm Vision Height 2.2 m Wastage 10% = 0.638 sqm say 0.7 sqm Net = 7.02 sqm Details of cost for 6.72 sqm MATERIALS				
2617	6 mm thick High performance glass	sqm	7.02	1850.00	12987.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
2618	6 mm thick clear heat strengthened glass	sqm	7.02	640.00	4492.80
9999	Sundries (for insurance Charges)	L.S.	126.27	1.73	218.45
9999	Sundries (Fabrication charges including silicon sealant, baker rod, desecant etc.	L.S.	2120.13	1.73	3667.82
9999	Transporation including loading and unloading	L.S.	126.27	1.73	218.45
	TOTAL				21584.52
	Add 1 % Water charges				215.85
	TOTAL				21800.37
	Add 15 % Contractor's profit and overheads				3270.06
	Cost for 6.72 sqm				25070.43
	Cost for 1 sqm				3730.71
	Say				3730.70

25.4 Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer- in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1.76 sqm Width of the unit 1.6 m Shuttter Weight Height of the unit 1.1 m Outer glass 6 mm Area 1.76 sqm Inner glass 6 mm Aluminium Weight per sqm 7.78 Kg Al weight = 1.76x7.78 = 13.7 Kg No of Locking Point 4 no Total 67 Kg Wedge Block 1 no Details of cost for 1.76 sqm				
	MATERIALS				
2619	6 mm thick clear heat strengthened glass	each	3.00	128.00	384.00
2611	EPDM Gasket in Kg (Above 60 g / m)	kg	0.80	150.00	120.00
2614	SS Screws of sizes for structural glazing / ACP Cladding	each	49.00	4.00	196.00
2615	Protective Tape	metre	1.76	20.00	35.20
2620	ARMS GS HD -TOP HUNG -20"-TYPE P-COUPLE	pair	1.00	1550.00	1550.00
2621	Connection Block	each	2.00	39.00	78.00
2622	Curtain wall striker	each	4.00	100.00	400.00
2623	Adjustable Fastening Pawl	each	4.00	38.00	152.00
2624	Corner drive	each	2.00	295.00	590.00
2625	Top wedge Block	each	1.00	135.00	135.00
9999	Sundries	L.S.	118.00	1.73	204.14

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries (For Fabrication)	L.S.	354.36	1.73	613.04
	TOTAL				4457.38
	Add 1 % Water charges				44.57
	TOTAL				4501.95
	Add 15 % Contractor's profit and overheads				675.29
	Cost for 1.76 sqm				5177.24
	Cost for 1 sqm				2941.61
	Say				2941.60

25.5 Providing, fabricating and supplying shadow box of required size and shape, for fixing in the spandrel portion of the structural glazing, in linear as well as curvilinear portions of the building by providing semi-rigid, inorganic, non-combustible fibre glass wool insulation 50 mm thick, conforming to IS: 8183 and BS: 3958 Part 5. The insulation layer shall have facing (factory bonded on surface # 10f the fibre glass insulation layer), of black non-woven fibre glass tissue of nominal thickness 0.5 mm and nominal mass not less than 60 gm / sqm, made of randomly oriented glass fibres distributed in a binder by a wet-lay process including fixing 1.5 mm thick solid aluminum sheet backing using, 6 mm thick cement board including SS rivets, nuts, bolts, washers etc complete.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3.23 sqm Width of the unit = 0.86 m Height of the unit = 3.75 m Area = 3.23 sqm Area including wastage @5 % = 3.39 Details of cost for 3.23 sqm				
	MATERIALS				
2626	Glass wool Density 48 Kg / m3 with Black Glass Tissue (BGT)	sqm	3.39	230.00	779.70
2634	GI/Aluminium Sheet (0.8 mm thick)	kg	21.30	45.00	958.50
2627	SS Screws - # 8 x 19	each	32.00	10.00	320.00
2628	Weather Sealant - DC 789	cartridge	2.00	130.00	260.00
2629	Cement Board	sqm	3.39	250.00	847.50
9999	Sundries with clips & adhesives	L.S.	308.50	1.73	533.71
9999	Sundries (For Fabrication)	L.S.	170.64	1.73	295.21
9999	Sundries (For Installation)	L.S.	170.64	1.73	295.21
	TOTAL				4289.83
	Add 1 % Water charges				42.90
	TOTAL				4332.73
	Add 15 % Contractor's profit and overheads				649.91
	Cost for 3.23 sqm				4982.64
	Cost for 1 sqm				1542.61
	Say				1542.60

25.6 Providing and supplying Spandrel Glass Panels comprising of 6 mm thick heat strengthened monolithic float glass of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade so as to match the colour and shade of the IGUs in the vision panels etc. ,all complete for the required performances as specified, as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in- Charge.

For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (Payment for fixing of Spandrel Glass Panels in the curtain glazing is included in cost of relevant Item*).“(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 K etc. . The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 3.23 sqm Width of the unit = 0.86 m Height of the unit = 3.75 m Area = 3.23 sqm Area i/c wastage @ 5 % = 3.39 sqm Details of cost for 3.23 sqm				
2617	MATERIALS 6 mm thick High performance glass	sqm	3.39	1850.00	6271.50
9999	Sundries (Insurance charges)	L.S.	43.46	1.73	75.19
9999	Sundries (Fabrication charges including silicon sealant, baker rod, desecant etc.)	L.S.	682.55	1.73	1180.81
9999	Sundries (transportation including loading & unloading)	L.S.	147.59	1.73	255.33
	TOTAL				7782.83
	Add 1 % Water charges				77.83
	TOTAL				7860.66
	Add 15 % Contractor's profit and overheads				1179.10
	Cost for 3.23 sqm				9039.76
	Cost for 1 sqm				2798.68
	Say				2798.70

25.7

Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. including:

(a) Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design.

(b) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.

(c) The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material & labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium item.s The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 6.72 sqm Width of the unit 1.6 m Height of the unit 4.2 m Area of Single Unit 6.72 sqm Total Area 6.72 sqm No of Panels 1 no Area i/c wastage @ 5% = 7.06 sqm Details of cost for 6.72 sqm MATERIALS				
2607	Weather Sealant - Non Staining (600 ml)	each	2.00	420.00	840.00
2608	Weather Sealant - Normal (300 ml)	each	2.00	125.00	250.00
2609	MS Brackets/Aluminium Alloy Brackets	kg	10.00	100.00	1000.00
2611	EPDM Gasket in Kg (Above 60 g / m)	kg	0.70	150.00	105.00
2612	Anchor Fastner - M10	each	2.00	10.00	20.00
2613	SS Bolt with washer of sizes for structural glazing / ACP Cladding	each	2.00	35.00	70.00
2614	SS Screws of sizes for structural glazing / ACP Cladding	each	49.00	4.00	196.00
2615	Protective Tape	metre	7.00	20.00	140.00
2630	Baker rod	metre	5.00	5.00	25.00
2616	Gl flashing - 1.2 mm Thick	kg	4.00	58.00	232.00
2631	4 mm thick ACP	sqm	7.06	1000.00	7060.00
9999	Sundries	L.S.	451.00	1.73	780.23
9999	Sundries (For Fabrication)	L.S.	1895.30	1.73	3278.87
9999	Sundries (For Installation)	L.S.	1895.30	1.73	3278.87
9999	Sundries (Scaffolding / Loading / Unloading)	L.S.	602.25	1.73	1041.89
9999	Sundries (Transporation)	L.S.	473.83	1.73	819.73
9999	Sundries (Designing charges etc.)	L.S.	328.15	1.73	567.70
	TOTAL				19705.29
	Add 1 % Water charges				197.05
	TOTAL				19902.34
	Add 15 % Contractor's profit and overheads				2985.35
	Cost for 6.72 sqm				22887.69
	Cost for 1 sqm				3405.90
	Say				3405.90

25.8

Design supply & installation of suspended Spider Glazing system designed to withstand the wind pressure as per IS 875 (Part-III). The Suspended System held with Spider Fittings of SS-316 Grade Steel of approved manufacturer with glass panel having 12 mm thick clear toughened glass held together with SS- 316 Grade Stainless steel Spider & bolt assembly with laminated glass fins 21 mm thick. The Glass fins and glass panel assembly shall be connected to Slab/beams by means of SS- 316 Grade stainless steel brackets & Anchor bolts and at the bottom using SS channel of 50x25x2mm using fastener & anchor bolts, non staining weather sealants of approved make, Teflon/ nylon bushes and separators to prevent bi-metallic contacts, all complete to perform as per specification and approved drawings. The complete system to be designed to accommodate thermal expansion & seismic movements etc. The joints between glass panels (6 to 8 mm) and gaps at the perimeter & in U channel of the assembly to be filled with non staining weather sealant, so as to make the entire system fully water proof & dust proof.

The rate shall include all design, Engineering and shop drawing including approval from structural designer, labour, T&P, scaffolding, other incidental charges including wastage, enabling temporary services all fitting fixers nut bolts, washer, Buffer plates, fastener, anchors, SS channel laminated glass etc. all complete. For the purpose of payment, actual elevation area of Glazing including thickness of joints and the portion of Glass panel inside the SS channel shall be measured.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 35.28 Sqm Description WD HT Nos Area (Sqm) Facade Area 7.00 5.04 1.00 35.28 Fin Area 0.40 2.30 5.00 4.60				
8945	(A) Spider Fitting 4 Point spider fittings of SS-316 grade with fin but without flat head bolt(c/c routel distance 200mm)	each	5.00	3318.00	16590.00
8946	2 Point wall mounted spider fitting of SS-316 grade without flat head bolt and anchor fastener (c/c routel distance 200mm)	each	2.00	1659.00	3318.00
8947	1 Point wall mounted spider fitting of SS-316 grade without flat head bolt and anchor fastener (c/c routel distance 200mm)	each	12.00	1300.00	15600.00
8948	Flate head bolt	Nos	36.00	651.00	23436.00
8949	400 mm long fin plate without fastners	pair	5.00	5931.00	29655.00
2612	(B) Local Hardware Anchor Fastner - M10 For one point spider fitting =12x2=24 nos For two point spider fitting =2x2=4 nos For 400mm fin plates =5x6=30 nosTotal=58 nos	each	58.00	10.00	580.00
8560	Non staining water resistant Clear silicon filling in gap Vr. joints between glasses = 7x5.04=35.28 mHr.joints between glass & wall = 2x7.00=14.00 mTotal=49.28 m	metre	49.28	61.00	3006.08

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8559	Stainless steel U Channel of size (50x25x2mm)	metre	7.00	150.00	1050.00
9999	Sundries(Baker Road, Screw &Accessories)	L.S.	1000.00	1.73	1730.00
9999	Labour	L.S.	10000.00	1.73	17300.00
9999	Scaffolding	L.S.	2600.00	1.73	4498.00
8778	(C) Glass Area Toughened glass 12 mm thickness with hole =7.00x5.04=35.28 sqm + 1.76 sqm (Add 5% Wastage)Total = 37.04 sqm	sqm	37.04	1747.00	64708.88
2415	21mm thick clear toughened Laminated glass for fins with holes = 5x2.30x.40=4.60sqm + 0.23sqm (Add 5% Wastage)Total = 4.83 sqm	sqm	4.83	6000.00	28980.00
	TOTAL				210451.96
	Add 1 % Water charges				2104.52
	TOTAL				212556.48
	Add 15 % Contractor's profit and overheads				31883.47
	Cost of 35.28 sqm				244439.95
	Cost of 1 sqm				6928.57
	Say				6928.55

SUB HEAD : 26.0

**NEW TECHNOLOGIES AND
MATERIALS**

- 26.1 Providing & fixing in position Phenol bonded Bamboowood flooring with planks of sizes 14mm thick, 1800mm length (minimum) and 130 mm wide(minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The flooring shall be fixed with tongue and groove interlocking system, with underlayment of 4mm thick expanded poly ethylene foam sheets having density 40kg/cum, over prepared surface with necessary quarter round planks of size 1900mm x 18mm and door reducer of size 1900mm x 44mm, wherever required. The bamboo wood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer in-charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10m x 10m = 100 sqm MATERIAL				
8021	Bamboo wood Tile Flooring 14mm thick of minimum size 1800mm x 130mm 100 + 10 (Add for wastage @10%) = 110 sqm	sqm	110.00	3775.00	415250.00
8022	Bamboo wood Quarter Round 18mm thick of size 1900mm x 18mm	metre	39.90	125.00	4987.50
8023	Bamboo wood door reducer 14mm thick of size 1900mm x 44mm	metre	2.00	275.00	550.00
8015	Expanded poly ethylene Foam sheet 4mm thick of Density 40kg/m ³ 100 + 5 (Add for wastage @5%) = 105 sqm	sqm	105.00	18.00	1890.00
1246	Silicon based Joint Sealant for Tiles	kg	5.00	150.00	750.00
1247	Rubber base Adhesive	kg	5.00	160.00	800.00
	LABOUR				
0111	Carpenter 1st class	day	3.00	487.00	1461.00
0114	Beldar	day	3.00	368.00	1104.00
9999	Sundries	L.S.	100.00	1.73	173.00
	TOTAL				426965.50
	Add 1 % Water charges				4269.66
	TOTAL				431235.16
	Add 15 % Contractor's profit and overheads				64685.27
	Cost of 100 sqm				495920.43
	Cost of 1 sqm				4959.20
	Say				4959.20

- 26.2 Providing & fixing in position Phenol bonded Bamboo wood in wall skirting with planks of sizes 14mm thick, 1900mm length (minimum) and 85mm wide(minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The skirting shall be fixed with SS screws & rawl plugs, over underlayment of 4mm thick, expanded poly ethylene foam sheets having 40kg/cum density over prepared surface. The bamboo wood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer in-charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm skirting MATERIAL				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8024	Bamboo wood Skirting 14mm thick of Size 1900mm x 85mm Area of 1 length skirting is 1.9 m x 0.085 m = 0.162 sqm Quantity required for 10 sqm = 10 / 0.1615 = 61.92 pieces Add 2.5% wastage= 1.548 Total = 61.92 + 1.548 = 63.468 Qty in running mtr = 63.468 x1.9m = 120.59 running meter	sqm	120.59	325.00	39191.75
8015	High Density Expanded poly ethylene Foam sheet 4mm thick of Density 40kg/m ³ 10 + 0.5 (Add for wastage @5%) = 10.5 sqm	sqm	10.50	18.00	189.00
8210	Stainless steel screws 50 mm (62x3=186 nos)	100 Nos	1.86	260.00	483.60
1246	Silicon based Joint Sealant for Tiles	kg	1.00	150.00	150.00
1247	Rubber base Adhesive	kg	1.00	160.00	160.00
	LABOUR				
0111	Carpenter 1st class	day	1.00	487.00	487.00
0114	Beldar	day	1.00	368.00	368.00
9999	Sundries	L.S.	20.00	1.73	34.60
	TOTAL				41063.95
	Add 1 % Water charges				410.64
	TOTAL				41474.59
	Add 15 % Contractor's profit and overheads				6221.19
	Cost of 10 sqm				47695.78
	Cost of 1 sqm				4769.57
	Say				4769.55

26.3

Providing & fixing in position Phenol bonded Bamboowood wall cladding at all height with planks of sizes 10mm thick, 1800mm length (minimum) and 130 mm wide (minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC), with necesary profiled edges fixed with 40mm SS screws 5 nos in each tile to frame work made of second class teak wood of size 20x15 mm in centre of each tile and bottom and top of work height, 40x15mm placed at ends of each tile. The cladding shall be laid over backlayment of 1.00 mm thick expanded poly ethylene foam of density 40kg/cum in two layers, first layer on wall surface before fixing wooden frame and second layer on frame under cladding. The bomboo wood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of the Engineer in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8025	Details of cost for 10m x 9.5m = 95 sqm MATERIAL Bamboo wood Tile Wall Cladding 10mm thick of size 1900mm x 135mm 10 x 9.5 = 95 + 9.5 (Add for wastage @10%) = 104.5 sqm	sqm	104.50	3375.00	352687.50

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8026	Bamboo wood T-mold 14mm thick of size 1900mm x 44mm At end joints of planks = 4x9.91 = 39.64 mtr + 1.98 (Add for wastage 5%) = 41.62 mtr	metre	41.62	275.00	11445.50
8027	Bamboo wood Threshold 14mm thick of size 1900mm x 44mm At periferi of cladding = 2x(10+9.5)+1.95 (Add for wastage @5%) =40.95 metre	metre	40.95	275.00	11261.25
8016	High Density expanded poly ethylene (EPE) Foam 1mm thick (2x10x9.5) = 190 + 9.5 (Add for wastage @5%)=199.5 sqm	sqm	199.50	850.00	169575.00
8210	Stainless steel screws 50 mm @500mm c/c at teak wood frame	100 Nos	2.58	260.00	670.80
8212	Stainless steel screws 30 mm (5nos in each panels) No of panels=95/(1.9 x 0.135)=370 nos No. of screws= 370 x 5=1850 nos	100 Nos	1.85	180.00	3330.00
1190	Second class teak wood in planks 10 metre height, at every 1.9 meter height one length of 10 metre i.e (5x9.91x0.02x0.015+2x10x0.02x.015+2x9.50x.02x.015+4x9.91x0.04x0.015)+wastage @5% =0.052866 cum cudm	10 cudm	5.29	675.00	3568.73
0111	LABOUR Carpenter 1st class	day	5.00	487.00	2435.00
0112	Carpenter 2nd class	day	5.00	448.00	2240.00
0114	Beldar	day	5.00	368.00	1840.00
9999	Sundries	L.S.	100.00	1.73	173.00
	TOTAL				559226.78
	Add 1 % Water charges				5592.27
	TOTAL				564819.05
	Add 15 % Contractor's profit and overheads				84722.86
	Cost of 95 sqm				649541.91
	Cost of 1 sqm				6837.28
	Say				6837.30

26.4 Providing & fixing in position Phenol bonded Bamboo wood panelled or panelled and glazed shutters for doors windows, clerestorey windows with pre-molded 30mm thick planks, in approved colours, texture & finishe. It shall have 10mm wide, 25mm deep grove to fit in panels.The bamboo wood shall have minimum density of 1000 Kg/cum, minimum Hardness 1000 Kgf. All styles and rails shall have profiled interlocking system locked in place by bamboo pins, all complete as per direction of Engineer in charge. (The panelling will be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8028	Details of cost for shutters of Bamboowood 200 x 108cm = 2.16 sqm MATERIAL Bamboo wood shutter of doors Styles 4x2.00x0.115x0.03 =0.0276 cum +	10 cudm	4.83	1800.00	8694.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Top rails 1x1.08x0.11x0.03m = 0.0036 cum + Bottom rails 1x1.08x0.212x0.03 = 0.0069 cum + Lock rails 1x1.08x0.18x0.03 = 0.0058 cum Total =0.0439 cum + 0.004 cum (Wastage @5%) Grand Total =0.0483 cum OR 4.830 cudm				
8215	Stainless steel butt hinges 125x64x1.9 mm IS : 12817 marked	10 Nos	0.40	250.00	100.00
8211	Stainless steel screws 40 mm	100 Nos	0.32	208.00	66.56
	LABOUR				
0156	Carpenter (average)	day	0.33	467.00	154.11
0114	Beldar	day	0.33	368.00	121.44
9999	Sundries T&P etc.	L.S.	5.62	1.73	9.72
	TOTAL				9145.83
	Add 1 % Water charges				91.46
	TOTAL				9237.29
	Add 15 % Contractor's profit and overheads				1385.59
	Cost of 2.16 sqm				10622.88
	Cost of 1 sqm				4918.00
	Say				4918.00

26.5 Providing & fixing in position Phenol bonded Bamboo wood panelling of 10mm thick, in 25 to 40 mm thick panelled or panelled & glazed shutters for doors, windows, clerestorey windows, in approved colour, texture & finish. The bamboo wood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. The panels shall have profiled interlocking system locked in place with bamboo pins all complete as per direction of the Engineer in-charge. (area of opening for panel inserts excluding portion inside grooves or rebates to be measured)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for shutters of a door with 2/3rd panelling... 200 x 108 cm = 2.16 sqm Panel area = 4x45.1x36.55cm = 0.66 sqm				
8029	MATERIAL Bamboo wood panelling (10mm thick) 4x47.2x38.65x1.0cm = 0.0073cum + 0.0007 sqm (Add Wastage @10%) Total = 0.008 cum OR 8 cudm	10 cudm	0.80	1800.00	1440.00
	LABOUR				
0156	Carpenter (average)	day	0.57	467.00	266.19
9999	Sundries	L.S.	4.42	1.73	7.65
	TOTAL				1713.84
	Add 1 % Water charges				17.14
	TOTAL				1730.98
	Add 15 % Contractor's profit and overheads				259.65
	Cost of 0.66 sqm				1990.63
	Cost of 1 sqm				3016.10
	Say				3016.10

- 26.6 Providing & fixing in position 65 mm thick factory made door frame of Phenol bonded Bamboo wood (superior class, interior use), in approved colour, texture and finish. The bamboo wood shall have minimum density of 1000 Kg/cum, minimum Hardness 1000 Kgf. The door frame shall have tenon & mortise interlocking system, to be fixed to the wall with 100 mm size G.I screws all a complete as per direction of Engineer-in charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8030	Detail of cost for 33 cumd MATERIAL Superior class Bamboo wood door frame 65 mm thick 2x206.75x9.5x6.5 cm = 0.0255 cum + 1x117.50x9.5x6.5 cm = 0.0072 cum Total = 0.033 cum = 33 cumd + 0.001 cum (Add for wastage @ 5%) Grand total = 0.034 cum = 34 Cudm	10 cumd	3.40	1800.00	6120.00
0111	LABOUR Carpenter 1st class	day	0.72	487.00	350.64
0114	Beldar	day	0.07	368.00	25.76
	TOTAL				6496.40
	Add 1 % Water charges				64.96
	TOTAL				6561.36
	Add 15 % Contractor's profit and overheads				984.20
	Cost of 33 cumd				7545.56
	Cost of 1 cumd				228.65
	Say				228.65

- 26.7 Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size between cavity wall, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/m³ as per ASTM D 1622, water absorptions 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardent property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the direction of Engineer-in-Charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8561	Details of cost for 10 Sqm MATERIAL Extruded polystyrene rigid insulation board 50 mm thick including 2% wastage	sqm	10.20	500.00	5100.00
	LABOUR				
0111	Carpenter 1st class	day	0.25	487.00	121.75
0128	Mate	day	0.25	407.00	101.75
0114	Beldar	day	0.25	368.00	92.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries (Water based adhesive, fasteners, scaffolding etc.)	L.S.	100.00	1.73	173.00
	TOTAL				5588.50
	Add 1 % Water charges				55.89
	TOTAL				5644.39
	Add 15 % Contractor's profit and overheads				846.66
	Cost of 10 sqm				6491.05
	Cost of 1 sqm				649.10
	Say				649.10

26.8 Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size under deck on ceiling surface, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/cum as per ASTM D 1622, water absorptions 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardent property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the direction of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8561	Details of cost for 10 Sqm MATERIAL Extruded polystyrene rigid insulation board 50 mm thick including 2% wastage	sqm	10.20	500.00	5100.00
	LABOUR				
0111	Carpenter 1st class	day	0.50	487.00	243.50
0128	Mate	day	0.50	407.00	203.50
0114	Beldar	day	0.50	368.00	184.00
9999	Sundries (Water based adhesive, fasteners, scaffolding etc.)	L.S.	100.00	1.73	173.00
	TOTAL				5904.00
	Add 1 % Water charges				59.04
	TOTAL				5963.04
	Add 15 % Contractor's profit and overheads				894.46
	Cost of 10 sqm				6857.50
	Cost of 1 sqm				685.75
	Say				685.75

26.9 Providing and fixing factory made solid Foam uPVC profile for kitchen cabinet frame (45 x 20 mm) of approved shade, quality and make. The profile shall be laminated on both sides, made from rigid foam sheets (Single extruded) having density 600 Kg/cum and the exposed edges sealed with PVC edge beading of same shade and colour. The frame shall be fire retardent with necessary screw

holding capacity. Frame shall be fixed to wall using Expendable Fastner with necessary stainless steel screws, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for kitchen cabinate (2.00 x 0.45)+(2.00+0.61)= 2.13 mtr MATERIAL				
2491	Pre laminated both side solid foam uPVC profile (45x20mm)(Accuplist/Accucel/ Sintex or equivalent)	metre	2.13	125.00	266.25
2493	PVC edge beading	metre	4.26	30.00	127.80
2494	Expandable fastner with plastic sleeve	each	8.00	5.00	40.00
8210	Stainless steel screws 50 mm	100 Nos	0.08	260.00	20.80
	LABOUR				
0111	Carpenter 1st class	day	0.10	487.00	48.70
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				540.35
	Add 1 % Water charges				5.40
	TOTAL				545.75
	Add 15 % Contractor's profit and overheads				81.86
	Cost for 2.13 metre				627.61
	Cost for 1 metre				294.65
	Say				294.65

26.10 Providing and fixing factory made Kitchen Cabinet Shutter/Partition 20 mm nominal thickness of approved shade, quality and make, made from rigid foam sheets (Single extruded) having density 600 Kg/cum and laminated on both side by laminate Sheet/PVC foil lamination. The exposed edges shall be sealed with PVC edge beading of same shade and colour. The shutter shall be fire retardent having necessary screw holding capacity. Shutter shall be fixed to frame using approved hinges with necessary stainless steel screws, all complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for of one shutter 0.46 x 0.61m =0.278 sqm MATERIAL				
2492	Solid foam uPVC sheet 20mm thick pre laminated on both side(Accuplist/Accucel/ Sintex)	sqm	0.278	2075.00	576.85
2493	PVC edge beading	metre	2.13	30.00	63.90
9999	Sundries	L.S.	20.00	1.73	34.60
	LABOUR				
0111	Carpenter 1st class	day	0.20	487.00	97.40
0114	Beldar	day	0.20	368.00	73.60
	TOTAL				846.35
	Add 1 % Water charges				8.46
	TOTAL				854.81
	Add 15 % Contractor's profit and overheads				128.22
	Cost for 0.278 sqm				983.03
	Cost for 1 sqm				3536.07
	Say				3536.05

26.11 Providing and fixing concealed hinge of approved quality for 19-20mm thick door with stainless steel screws complete :

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8226	Details of cost for 10 nos MATERIAL Concealed zinc coated hinges 19-20 mm thick with mounting plate hettich make(code 1078660)	10 Nos	0.10	400.00	400.00
8210	Stainless steel screws 50 mm	100 Nos	0.80	260.00	208.00
9977	Carriage of material	L.S.	2.73	1.73	4.72
	LABOUR				
0112	Carpenter 2nd class	day	0.14	448.00	62.72
0114	Beldar	day	0.09	368.00	33.12
	TOTAL				708.56
	Add 1 % Water charges				7.09
	TOTAL				715.65
	Add 15 % Contractor's profit and overheads				107.35
	Cost of 10 nos				823.00
	Cost of 1 no				82.30
	Say				82.30

26.12 Supplying & laying of bi-axial extruded high modulus polypropylene geogrid coforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 15kN/m in the longitudinal and transverse direction, with 5kN/m and 7kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8956	Details of Cost for 300 Sqm MATERIAL Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 15 kN/m in the longitudinal and transverse direction Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 28500=2850	Sqm	300.00	95.00	28500.00
	LABOUR				2850.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOTAL				34925.52
	Add Water charges @ 1%				349.26
	TOTAL				35274.78
	Add Contractor's profit and overheads @ 15%				5291.12
	Cost for 300 Sqm				40565.99
	Cost per Sqm				135.22
	Say				135.20

26.13 Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 20kN/m in the longitudinal and transverse direction, with 7kN/m and 14kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8957	Details of Cost for 300 Sqm MATERIAL Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 20kN/m in the longitudinal and transverse direction Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 327000=3270	Sqm	300.00	109.00	32700.00
	LABOUR				3270.00
128	Mate	day	0.36	407.00	146.52
0114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOTAL				39545.52
	Add Water charges @ 1%				395.46
	TOTAL				39940.98
	Add Contractor's profit and overheads @ 15%				5991.15
	Cost for 300 Sqm				45932.12
	Cost per Sqm				153.11
	Say				153.10

26.14 Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 30kN/m in the longitudinal and transverse direction, with 10.5kN/m and 21kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8958	Details of Cost for 300 Sqm MATERIAL Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 30kN/m in the longitudinal and transverse direction Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps	Sqm	300.00	178.00	53400.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 53400=5340				5340.00
	LABOUR				
128	Mate	day	0.36	407.00	146.52
0114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOTAL				62315.52
	Add Water charges @ 1%				623.16
	TOTAL				62938.68
	Add Contractor's profit and overheads @ 15%				9440.80
	Cost for 300 Sqm				72379.48
	Cost per Sqm				241.26
	Say				241.25

26.15 Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 40kN/m in the longitudinal and transverse direction, with 14kN/m and 28kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8959	Details of Cost for 300 Sqm MATERIAL Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 40kN/m in the longitudinal and transverse direction	Sqm	300.00	260.00	78000.00
	Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 78000=7800				7800.00
	LABOUR				
128	Mate	day	0.36	407.00	146.52
0114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOTAL				89375.52
	Add Water charges @ 1%				893.76
	TOTAL				90269.28
	Add Contractor's profit and overheads @ 15%				13540.39
	Cost for 300 Sqm				103809.67
	Cost per Sqm				346.03
	Say				346.00

26.16 **Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. Geocomposite for planar drainage, realized by thermobonding a draining core in extruded monofilaments with two filtering nonwoven geotextiles that may also be working as separation or protecting layers. The draining three dimensional core will have a “W” configuration as longitudinal parallel channels. Minimum thickness to be 7.2mm, with two filtering UV stabilized polypropylene nonwoven geotextile of minimum thickness of 0.75mm having pores of 150 micron and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 2.1 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 18 kN/m , with mass per unit area of 740 gsm, supplied in the form of roll for easy transportation to site of work as per detailed specification all complete as per directions of Engineer in charge.**

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8960	Material Details of Cost for 300 Sqm Geosynthetic Drainage Composite Add 10 per cent of the cost of synthetic Composites for wastage and accessories for joining sheets with the facia pannels, overlaps and other protective elements for synthetic Composites and other miscelleneus activities required to complete the item in all respect including transpotarion & takes. 10% of 151200=15120	Sqm	300.00	504.00	151200.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOTAL				169895.52
	Add Water charges @ 1%				1698.96
	TOTAL				171594.48
	Add Contractor's profit and overheads @ 15%				25739.17
	Cost for 300 Sqm				197333.65
	Cost per Sqm				657.78
	Say				657.80

26.17 **Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. having thermobonding a draining core - HDPE geonet comprises of two sets of parallel overlaid ribs integrally connected to have a rhomboidal shape with a polyethylene film and a nonwoven geotextile having mass per unit area 130 g/m2 and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 0.7 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 13.5 kN/ m , with mass per unit area of 830 gsm, at easily accessible location including**

top and bottom, with all leads and lifts, manpower and machinery, materials, labour etc. complete and as directed by Engineer - In - Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8961	Material Details of Cost for 300 Sqm Geosynthetic Drainage Composite Add 10 per cent of the cost of synthetic Composites for wastage and accessories for joining sheets with the facia pannels, overlaps and other protective elements for synthetic Composites and other miscelleneus activities required to complete the item in all respect including transpotarion & takes. 10% of 180000=18000	Sqm	300.00	600.00	180000.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOTAL				201575.52
	Add Water charges @ 1%				2015.76
	TOTAL				203591.20
	Add Contractor's profit and overheads @ 15%				30538.69
	Cost for 300 Sqm				234129.97
	Cost per Sqm				780.43
	Say				780.45

26.18 Supplying and laying high strength flexible geogrids (HSFG) as soil reinforcement / basal reinforcement as per MORTH 3100 and IRC 113, made of high tenacity polyester core with polyethylene coating with Minimum Long Term Design Strength (LTDS) of more than 50% of ultimate tensile strength at 30 degree Celcius corresponding to 12 % strain .

26.18.1 Ultimate tensile strength- 100 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8962	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 60000=6000	Sqm	300.00	200.00	60000.00
	LABOUR				6000.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
139	Skilled Beldar TOATL Add Water charges @ 1% TOTAL Add Contractor's profit and overheads @ 15% Cost for 300 Sqm Cost per Sqm Say	day	3.00	407.00	1221.00 69575.52 695.76 70271.28 10540.69 80811.97 269.37 269.35

26.18.2 Ultimate tensile strength- 150 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8963	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 66000=6600	Sqm	300.00	220.00	66000.00 6600.00
128	LABOUR Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar TOATL Add Water charges @ 1% TOTAL Add Contractor's profit and overheads @ 15% Cost for 300 Sqm Cost per Sqm say	day	3.00	407.00	1221.00 76175.52 761.76 76937.28 11540.59 88477.87 294.93 294.95

26.18.3 Ultimate tensile strength- 200 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8964	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 90000=9000	Sqm	300.00	300.00	90000.00 9000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
128	LABOUR Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				102575.52
	Add Water charges @ 1%				1025.76
	TOTAL				103601.28
	Add Contractor's profit and overheads @ 15%				15540.19
	Cost for 300 Sqm				119141.47
	Cost per Sqm				397.14
	say				397.15

26.18.4 Ultimate tensile strength- 250 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8965	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 99000=9900	Sqm	300.00	330.00	99000.00
	LABOUR				9900.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				112475.52
	Add Water charges @ 1%				1124.76
	TOTAL				113600.28
	Add Contractor's profit and overheads @ 15%				17040.04
	Cost for 300 Sqm				130640.32
	Cost per Sqm				435.47
	say				435.45

26.18.5 Ultimate tensile strength- 300 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8966	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps	Sqm	300.00	350.00	105000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 105000 =10500				10500.00
	LABOUR				
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				119075.52
	Add Water charges @ 1%				1190.76
	TOTAL				120266.28
	Add Contractor's profit and overheads @ 15%				18039.34
	Cost for 300 Sqm				138306.22
	Cost per Sqm				461.02
	say				461.00

26.18.6 Ultimate tensile strength- 350 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8967	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 117000 =11700	Sqm	300.00	390.00	117000.00
	LABOUR				
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				132275.52
	Add Water charges @ 1%				1322.76
	TOTAL				133598.28
	Add Contractor's profit and overheads @ 15%				20039.74
	Cost for 300 Sqm				153638.02
	Cost per Sqm				512.13
	say				512.15

26.18.7 Ultimate tensile strength- 400 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8968	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid	Sqm	300.00	420.00	126000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 126000 =12600				12600.00
	LABOUR				
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				142175.52
	Add Water charges @ 1%				1421.76
	TOTAL				143597.28
	Add Contractor's profit and overheads @ 15%				21539.59
	Cost for 300 Sqm				165136.87
	Cost per Sqm				550.46
	say				550.45

26.18.8 Ultimate tensile strength- 500 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8969	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 150000 =15000	Sqm	300.00	500.00	150000.00
	LABOUR				
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				168575.52
	Add Water charges @ 1%				1685.76
	TOTAL				170261.28
	Add Contractor's profit and overheads @ 15%				25539.19
	Cost for 300 Sqm				195800.47
	Cost per Sqm				652.67
	say				652.65

26.18.9 Ultimate tensile strength- 600 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8970	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 165000 =16500	Sqm	300.00	550.00	165000.00
	LABOUR				16500.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				185075.52
	Add Water charges @ 1%				1850.76
	TOTAL				186926.28
	Add Contractor's profit and overheads @ 15%				28038.94
	Cost for 300 Sqm				214965.22
	Cost per Sqm				716.55
	say				716.55

26.18.10 Ultimate tensile strength- 700 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8971	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 195000 =19500	Sqm	300.00	650.00	195000.00
	LABOUR				19500.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				218075.52
	Add Water charges @ 1%				2180.76
	TOTAL				220256.28
	Add Contractor's profit and overheads @ 15%				33038.44
	Cost for 300 Sqm				253294.72
	Cost per Sqm				844.32
	say				844.30

26.18.11 Ultimate tensile strength- 800 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8972	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 212400 =21240	Sqm	300.00	708.00	212400.00
	LABOUR				21240.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				237215.52
	Add Water charges @ 1%				2372.16
	TOTAL				239587.68
	Add Contractor's profit and overheads @ 15%				35938.15
	Cost for 300 Sqm				275525.83
	Cost per Sqm				918.42
	say				918.40

26.18.12 Ultimate tensile strength- 900 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8973	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 252300 =25230	Sqm	300.00	841.00	252300.00
	LABOUR				25230.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				281105.52
	Add Water charges @ 1%				2811.06
	TOTAL				283916.58
	Add Contractor's profit and overheads @ 15%				42587.49
	Cost for 300 Sqm				326504.06
	Cost per Sqm				1088.35
	say				1088.35

26.18.13 Ultimate tensile strength- 1000 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8974	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 285000 =28500	Sqm	300.00	950.00	285000.00
	LABOUR				28500.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				317075.52
	Add Water charges @ 1%				3170.76
	TOTAL				320246.28
	Add Contractor's profit and overheads @ 15%				48036.94
	Cost for 300 Sqm				368283.22
	Cost per Sqm				1227.61
	say				1227.60

26.18.14 Ultimate tensile strength- 1100 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8975	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wstage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the facia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 300000 =30000	Sqm	300.00	1000.00	300000.00
	LABOUR				30000.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				333575.52
	Add Water charges @ 1%				3335.76
	TOTAL				336911.28
	Add Contractor's profit and overheads @ 15%				50536.69
	Cost for 300 Sqm				387447.97
	Cost per Sqm				1291.49
	say				1291.50

26.18.15 Ultimate tensile strength- 1200 kN/m

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8976	MATERIAL Details of Cost for 300 Sqm Synthetic Geogrid Add 10 per cent of the cost of reinforcing elements (synthetic geogrids) for wastage and accessories like tie-strips, nuts and bolts and loops/lugs for joining reinforcing elements with the fascia pannels, overlaps and other protective elements for synthetic geogrids and all other activities required to complete the item in all respect including taxes and transportation. 10% of 326400 =32640	Sqm	300.00	1088.00	326400.00
	LABOUR				32640.00
128	Mate	day	0.36	407.00	146.52
114	Beldar	day	6.00	368.00	2208.00
139	Skilled Beldar	day	3.00	407.00	1221.00
	TOATL				362615.52
	Add Water charges @ 1%				3626.16
	TOTAL				366241.68
	Add Contractor's profit and overheads @ 15%				54936.25
	Cost for 300 Sqm				421177.93
	Cost per Sqm				1403.93
	say				1403.95

26.19 Providing at all heights, levels and locations Aluminium profile industrial troughed sheet of Alloy 31500/31000/40800, conforming to IS 1254, IS 737, IS 2676. The sheet shall be fixed using self drilling/self tapping SS screws of size 5.5x65 mm with EPDM seal complete upto required pitch in horizontal, vertical or curved surfaces i/c cutting to size and shape where required as per specifications, detail drawings and direction of Engineer-in-Charge. The rate shall be inclusive of all screws, seal, ridge, labour, scaffolding, machinery for fixing and approved sealent where required etc. but excluding the cost of purlins, rafters and trusses.

26.19.1 0.71 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 216.14 sqm Consider a shed of 20x10 metres. (External dimensions of plinth). Area of roof- 20.20x10.70m = 216.14 sqm. MATERIAL: Sheets used = 20 Nosx10.70mx1.044m = 223.42 sqm, Add 3% wastage = 6.70 sqm, Total = 230.12sqm				
8977	Aluminium profile sheet 0.71 mm	sqm	230.12	570.00	131168.40
9999	Carriage of sheets	L.S.	104.00	1.73	179.92
1023	Galvanised steel J or L hooks 8 mm dia	10 Nos	47.60	115.00	5474.00
1208	Bitumen washer	100 Nos	4.76	30.00	142.80
1209	G.I. plain washer thick	100 Nos	4.76	35.00	166.60

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Carriage of bolts and nuts, washers etc.	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	39.52	1.73	68.37
	LABOUR:				
0130	Mistry	day	2.34	487.00	1139.58
0112	Carpenter 2nd class	day	9.34	448.00	4184.32
0114	Beldar	day	9.34	368.00	3437.12
	Total				145975.05
	Add water charges @ 1%				1459.75
	Total				147434.80
	Add Contractor's profit and overheads @ 15%				22115.22
	Cost of 216.14 sqm				169550.02
	Cost of 1 sqm				784.44
	Say				784.45

26.19.2 0.91 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 216.14 sqm Consider a shed of 20x10 metres. (External dimensions of plinth). Area of roof- 20.05x10.70m = 216.14 sqm. MATERIAL:				
	Sheets used = 20 Nosx10.70mx1.044m = 223.42 sqm, Add 3% wastage = 6.70 sqm, Total = 230.12sqm				
8978	Aluminium profile sheet 0.91 mm	sqm	230.12	736.00	169368.32
9999	Carriage of sheets	L.S.	104.00	1.73	179.92
1023	Galvanised steel J or L hooks 8 mm dia	10 Nos	47.60	115.00	5474.00
1208	Bitumen washer	100 Nos	4.76	30.00	142.80
1209	G.I. plain washer thick	100 Nos	4.76	35.00	166.60
9999	Carriage of bolts and nuts, washers etc.	L.S.	8.06	1.73	13.94
9999	Sundries	L.S.	39.52	1.73	68.37
	LABOUR:				
0130	Mistry	day	2.34	487.00	1139.58
0112	Carpenter 2nd class	day	9.34	448.00	4184.32
0114	Beldar	day	9.34	368.00	3437.12
	Total				184174.97
	Add water charges @ 1%				1841.75
	Total				186016.72
	Add Contractor's profit and overheads @ 15%				27920.51
	Cost of 216.14 sqm				213919.23
	Cost of 1 sqm				989.73
	Say				989.75

26.20 Providing round the clock security guard without gun for watch & ward of Government premises and its all belongings by deploying neatly dressed security guards in 8 hour's shift including necessary T&P like torch, lathi and uniform etc.complete,as per the direction of Engineer-in-charge.(One job means 8 hour's duty).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0164	Details of cost for 1 job (8hour's duty)				
9999	Security guard (without gun)	day	1.00	407.00	407.00
	Lathi,torch,dress & other sundries	L.S.	10.00	1.73	17.30
	TOTAL				424.30
	Add Contractor's profit and overheads @ 15%				63.65
	Cost of 1 job				487.95
	Say				487.95

26.21 Providing round the clock security guard with gun for watch & ward of Government premises and its all belongings by deploying neatly dressed security guards in 8 hour's shift including necessary T&P like torch, lathi and uniform etc.complete, as per the direction of Engineer-in-charge.(One job means 8 hour's duty).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0165	Details of cost for 1 job (8hour's duty)				
9999	Security guard (with gun)	day	1.00	448.00	448.00
	Lathi,torch,uniform,wooden stick & other miscellaneous items	L.S.	10.00	1.73	17.30
	TOTAL				465.30
	Add Contractor's profit and overheads @ 15%				69.80
	Cost of 1 job				535.10
	Say				535.00

26.22 Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991,in true horizontal level suspended on interlocking metal T-Grid of hot dipped galvanised iron section of 0.33mm thick (galvanized @ 120 grams per sqm including both sides) comprising of main-T runners of size 24x38 mm of length 3000 mm, cross - T of size 24x32 mm of length 1200 mm and secondary intermediate cross-T of size 24x32 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x25x2 mm. Galvanised iron perimeter wall angle of size 24x24x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40 mm long dry wall S.S screws. The work shall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.

26.22.1 With 15 mm thick tegular edged light weight calcium silicate false ceiling tiles.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm MATERIAL				
8589	Calcium Silicate tegular edged ceiling tiles 595x595 mm and 15 mm thick Ceiling Area = 100 sqm + Add 5% wastage = 5 sqm Total = 105 sqm	sqm	105.00	860.00	90300.00
8590	Galvanised iron main Tee ceiling section Size 24x38x0.33 mm (3 metre long) including wastage @10%	each	29.50	113.00	3333.50
8591	Galvanised iron perimeter wall Angle Size 24 x 24 x 0.40 mm (3.00 metre long) including wastage @10%	each	13.50	63.00	850.50
8592	Galvanised iron intermediate cross T section Size 24 x 32 x 0.33 mm (1.2 metre long) including wastage @10%	each	147.00	38.00	5586.00
8593	Galvanised iron intermediate cross T section Size 24 x 32 x 0.33 mm (0.6 metre long) including wastage @10%	each	147.00	19.00	2793.00
8588	Galavanised MS hanger rod 6 mm dia MS fully threaded up to 1000 mm length	each	72.00	25.00	1800.00
8619	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00
8596	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	72.00	31.00	2232.00
8211	40 mm long S.S screws with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Scaffolding etc.	L.S.	498.65	1.73	862.66
9977	Carriage of materials etc.	L.S.	237.48	1.73	410.84
9999	Sundries	L.S.	310.70	1.73	537.51
	LABOUR				
0111	Carpenter 1st class	day	28.00	487.00	13636.00
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				132022.02
	Add 1 % Water charges				1320.22
	TOTAL				133342.24
	Add 15 % Contractor's profit and overheads				20001.34
	Cost of 100 sqm.				153343.58
	Cost of 1 sqm.				1533.44
	Say				1533.45

26.23 Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, in true horizontal level suspended on interlocking metal powder coated T-Grid of hot dipped galvanised iron section of 0.40 mm thick on Silhouette profile, rotary stiched double webbed white with 6

mm reveal profile (white/black),comprising of main-T runners of size 15x42 mm of length 3000 mm, cross - T of size 15x42 mm of length 1200 mm and secondary intermediate cross-T of size 15x42 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm. Galvanised iron perimeter wall angle of size 22x19x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40mm long dry wall S.S screws. The work shall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.

26.23.1 With 15 mm thick integral densified micro edge light weight calcium silicate false ceiling tiles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8563	Details of cost for 100 sqm MATERIAL 15 mm thick, light weight, integral densified micro look edged,false ceiling tiles of size 595x595 mm. Celling Area = 100 sqm + Add 5% wastage = 5 sqm Total = 105 sqm	sqm	105.00	900.00	94500.00
8567	SILHOUETTE Profile grid frame : Galvanized mild steel perimeter wall angle 22x19x0.40 mm (3000 mm long) including wastage @10%	each	13.50	110.00	1485.00
8566	Powder coated steel section main-T ceiling sections 15x42x0.40 mm (3000 mm long) including wastage @10%	each	29.50	225.00	6637.50
8568	Powder coated Galvanised Iron intermediate cross-T section 15x42x0.40 mm (1200 mm long) including wastage @10%	each	147.00	90.00	13230.00
8569	Powder coated Galvanized Iron intermediate cross-T section 15x42x0.40mm (600 mm long) including wastage @10%	each	147.00	45.00	6615.00
8588	Galavanised MS hanger rod 6 mm dia MS fully threaded up to 1000 mm length	each	72.00	25.00	1800.00
8619	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00
8515	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	72.00	31.00	2232.00
8211	40 mm long S.S screws with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Scaffolding etc.	L.S.	498.65	1.73	862.66
9977	Carriage of materials etc.	L.S.	237.48	1.73	410.84
9999	Sundries	L.S.	310.70	1.73	537.51
0111	LABOUR Carpenter 1st class	day	28.00	487.00	13636.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				151626.52
	Add 1 % Water charges				1516.27
	TOTAL				153142.78
	Add 15 % Contractor's profit and overheads				22971.42
	Cost of 100 sqm.				176114.20
	Cost of 1 sqm.				1761.14
	Say				1761.15

26.24 Providing and fixing in position wall panelling at all heights with integral densified calcium silicate panels/tiles of size 595 x 595mm, having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, comprising of a frame made from especially fabricated galvanised mild steel sheet 0.50 mm thick pressed section (galvanizing @120 grams per sqm including both sides) i.e.vertical studs of size 48 x 34 x 36 mm are placed at 600mm center to center in a floor and ceiling channel section of size 50 x 32mm fixed to the floor and soffit at 600mm centers using 12mm dia,50mm long wedge type expanded zinc alloy dash fastner with 10mm bolt. This same channel is then to be fixed in horizontal direction at 600mm center to center so as to form a grid of 600mm x 600mm. Glasswool of 50mm thickness is then to be inserted in the slots and finally calcium silicate non combustible panels/tiles are to be screw fixed with self tapping pan head nickel coated mild steel screws of size 13 x 3.2mm on to this grid leaving an even groove of 1 mm between the panels. The joints between the panels are to be duly jointed and finished using recommended jointing calcium silicate based compound and fiber joint tape roll 50mm wide (90 metre)roll and two coats of primer suitable for panelling as per manufacturer's specification as per direction of Engineer-in-Charge all complete.

26.24.1 With 15 mm thick fully perforated square/butt edge light weight calcium silicate panels/ tiles

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8564	Details of cost for 6.00 x 3.65=21.90 sqm MATERIAL 15 mm thick, light weight,fully perforated square/butt edge integral densified,false ceiling tiles of size 595x595 mm. 21.90 sqm + 1.10 sqm (Add 5% wastage) Total = 23.00 sqm	sqm	23.00	865.00	19895.00
7367	Galvanised M.S. sheet 0.5 mm thick pressed channel section of size 50x32 mm 2 x 6.00 m=12m +0.60 (Add 5% wastage) = 12.60 m	metre	12.60	60.00	756.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7369	Galvanised M.S. sheet 0.50 mm thick pressed stud : 48x34x36 mm 11 x 3.65 m = 40.15 m + 5 x 6.00 = 30.00 m Total= 70.15 m +3.51 (Add 5% wastage) Total = 73.66m	metre	73.66	75.00	5524.50
7025	Self tapping pan head nickle coated mild steel screws of size 13 x 3.2 mm	1000 Nos	0.392	550.00	215.60
7383	12 mm dia 50 mm long wedge type expanded zinc alloy dash fastner	each	19.00	7.00	133.00
7274	Glass wool 50 mm thick 21.90 +1.10 (Add 5% wastage) = 23.00 sqm	sqm	23.00	250.00	5750.00
0764	Calcium silicate base compound for jointing calcium silicate tiles 22.81/103.68 x 21.9 = 4.82 kgs	kg	4.82	25.00	120.50
7026	Fibre joint tape 50 mm wide (90 metre) roll 1.27/103.68 x 21.90 = 0.27 roll	each roll	0.27	170.00	45.90
9999	Sundries such as scaffolding, tools, bits, etc.	L.S.	130.00	1.73	224.90
9977	Carriage of materials etc. LABOUR	L.S.	52.00	1.73	89.96
0111	Carpenter 1st class 0.30x21.90=6.57 days	day	6.57	487.00	3199.59
0112	Carpenter 2nd class 0.13x21.90=2.847 days	day	2.847	448.00	1275.46
0114	Beldar 0.35x21.90=7.665 days	day	7.665	368.00	2820.72
0131	Painter	day	1.095	448.00	490.56
	TOTAL				40541.69
	Add 1 % Water charges				405.42
	TOTAL				40947.11
	Add 15 % Contractor's profit and overheads				6142.07
	Cost of 21.90 sqm.				47089.18
	Cost of 1 sqm.				2150.19
	Say				2150.20

26.25 Providing and fixing 15 mm thick false ceiling tiles at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991,in true horizontal level on the existing frame work consisting of T-sections and Lsections suitably fixed according to tile size as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8589	Details of cost for 10 Sqm MATERIAL Calcium Silicate tegular edged ceiling tiles 595x595 mm and 15 mm thick 10 + 0.5 (Add wastage @5%) = 10.5 sqm	sqm	10.50	860.00	9030.00
9977	Carriage	L.S.	14.95	1.73	25.86

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0111	Carpenter 1st class	day	2.50	487.00	1217.50
0114	Beldar	day	2.00	368.00	736.00
9999	Scaffolding	L.S.	31.07	1.73	53.75
9999	Sundries	L.S.	31.07	1.73	53.75
	TOTAL				11116.86
	Add 1 % Water charges				111.17
	TOTAL				11228.03
	Add 15 % Contractor's profit and overheads				1684.20
	Cost of 10 sqm				12912.23
	Cost of 1 sqm				1291.22
	Say				1291.20

26.26 Providing & fixing false ceiling at all heights with GRG (Glass Fibre Reinforced Gypsum) false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having moisture content less than 2%, humidity resistance of 99%, NRC0.50 to 0.75 as per IS 8225:1987, Non combustible as per BS 476 (part 4)-1970 and light reflectance of 85% (minimum) to be laid in true horizontal level suspended on inter-locking metal T-Grid of hot dipped galvanised iron section of 0.33mm thick (galvanized @ 120 grams per sqm including both sides) comprising of main-T runners of size 15x32 mm of length 3000 mm, cross - T of size 15x32 mm of length 1200 mm and secondary intermediate cross-T of size 15x32 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm. Galvanised iron perimeter wall angle of size 24x24x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40 mm long dry wall wood screws. The work shall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.

26.26.1 With semi perforated 12 mm thick micro tegular edged GRG false ceiling tiles.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm MATERIAL Celling area =100 sqm Add wastage @ 5% = 5 sqm Total=105.00 sqm				
8581	12 mm thick micro tegular edged semi perforated GFRG (Glass Fibre Reinforced Gypsum) false ceiling tiles of Size 595x 595 mm	sqm	105.00	624.00	65520.00
8555	Galvanized iron main-T ceiling sections 15x32x0.33 mm (3000 mm long) Including wastage @ 10%	each	29.50	177.00	5221.50
8591	Galvanized iron perimeter wall angle 24x24x0.40 mm (3000 mm long) Including wastage @ 10%	each	13.50	63.00	850.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8556	Galvanized iron intermediate cross-T section 15x32x0.33 mm (1200 mm long) Including wastage @ 10%	each	147.00	73.00	10731.00
8587	Galvanized iron intermediate cross-T section 15x32x0.33 mm (600 mm long) Including wastage @ 10%	each	147.00	34.00	4998.00
8588	Galvanised MS hanger rod 6mm dia MS fully threaded up to 1000 mm length	each	72.00	25.00	1800.00
8619	Galvanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00
8596	Galvanised MS 8mm outer diameter M-6 dash fastener 25mm long	each	72.00	31.00	2232.00
8211	40mm SS with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Scaffolding etc.	L.S.	498.65	1.73	862.66
9977	Carriage of materials etc.	L.S.	237.48	1.73	410.84
9999	Sundries	L.S.	310.70	1.73	537.51
	LABOUR				
0111	Carpenter 1st class	day	28.00	487.00	13636.00
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				116480.01
	Add 1 % Water charges				1164.80
	TOTAL				117644.81
	Add 15 % Contractor's profit and overheads				17646.72
	Cost of 100 sqm				135291.53
	Cost of 1 sqm				1352.92
	Say				1352.90

26.26.2 With fully perforated 12 mm thick micro tegular edged or 10 mm thick square edged GRG false ceiling tiles.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 sqm MATERIAL Celling area =100 sqm Add wastage @ 5% = 5 sqm Total=105.00 sqm				
8582	12 mm thick micro tegular edged fully perforated GFRG (Glass Fibre Reinforced Gypsum) false ceiling tiles of Size 595x 595 mm	sqm	105.00	706.00	74130.00
8555	Galvanized iron main-T ceiling sections 15x32x0.33 mm (3000 mm long) Including wastage @ 10%	each	29.50	177.00	5221.50
8591	Galvanized iron perimeter wall angle 24x24x0.40 mm (3000 mm long) Including wastage @ 10%	each	13.50	63.00	850.00
8556	Galvanized iron intermediate cross-T section 15x32x0.33 mm (1200 mm long) Including wastage @ 10%	each	147.00	73.00	10731.00
8587	Galvanized iron intermediate cross-T section 15x32x0.33 mm (600 mm long) Including wastage @ 10%	each	147.00	34.00	4998.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8588	Galavanised MS hanger rod 6mm dia	each	72.00	25.00	1800.00
8619	MS fully threaded up to 1000 mm length				
8596	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00
8211	Galvanised MS 8mm outer diameter M-6 dash fastener 25mm long	each	72.00	31.00	2232.00
	40mm long SS screws with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Scaffolding etc.	L.S.	498.65	1.73	862.66
9977	Carriage of materials etc.	L.S.	237.48	1.73	410.84
9999	Sundries	L.S.	310.70	1.73	537.51
	LABOUR				
0111	Carpenter 1st class	day	28.00	487.00	13636.00
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				125090.01
	Add 1 % Water charges				1250.90
	TOTAL				126340.91
	Add 15 % Contractor's profit and overheads				18951.14
	Cost of 100 sqm				145292.05
	Cost of 1 sqm				1452.92
	Say				1452.90

26.27 Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance ?85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 &7)in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanised@80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod up to 1000 mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be pre-painted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.

26.27.1 With 16 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.55 to 0.6)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8552	Details of cost for 100 Sqm MATERIAL Mineral fibre beveled tegular edged ceiling tiles 595x595 mm, 16 mm thick	sqm	105.00	786.00	82530.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8555	Area = 100 sqm + 5 sqm (Add for wastage @5%) Total = 105 sqm G.I. main runner 15X32mm of 3000 mm length, 0.33mm thick including 10 % wastage	each	29.50	177.00	5221.50
8556	G.I. cross Tee 15X32mm of 1200mm length 0.33mm thick including 10 % wastage	each	147.00	73.00	10731.00
8557	G.I. cross Tee 15X32mm of 600mm length, 0.33 mm thick including 10 % wastage	each	147.00	34.00	4998.00
8591	Galvanised Steel perimeter wall Angle Size 24 x 24 x 0.40 mm (3.00 metre long) including 10 % wastage	each	13.50	63.00	850.50
8558	Galvanised Iron hanger rod 6mm dia fully threaded upto 1000mm length	each	72.00	25.00	1800.00
8619	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00
8515	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	72.00	31.00	2232.00
8211	40 mm long S.S screws with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Sundries i.e. scaffolding etc	L.S.	187.95	1.73	325.15
9977	Carriage of material etc.	L.S.	89.35	1.73	154.58
	LABOUR				
0111	Carpenter 1st class	day	28.00	487.00	13636.00
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				132158.73
	Add 1 % Water charges				1321.59
	TOTAL				133480.32
	Add 15 % Contractor's profit and overheads				20022.05
	Cost of 100 sqm				153502.36
	Cost of 1 sqm				1535.02
	Say				1535.00

26.27.2 With 20 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.7)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8554	Details of cost for 100 Sqm MATERIAL Mineral fibre beveled tegular edged ceiling tiles 595x595mm, 20 mm thick Area = 100 sqm + 5 sqm (Add for wastage @5%) Total = 105 sqm	sqm	105.00	990.00	103950.00
8555	G.I. main runner 15X32mm of 3000 mm length, 0.33mm thick including 10 % wastage	each	29.50	177.00	5221.50
8556	G.I. cross Tee 15X32mm of 1200mm length 0.33mm thick including 10 % wastage	each	147.00	73.00	10731.00
8587	G.I. cross Tee 15X32mm of 600mm length, 0.33 mm thick including 10 % wastage	each	147.00	34.00	4998.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8591	Galvanised Steel perimeter wall Angle Size 24 x 24 x 0.40 mm (3.00 metre long) including 10 % wastage	each	13.50	63.00	850.50
8558	Galvanised Iron hanger rod 6mm dia fully threaded upto 1000mm length	each	72.00	25.00	1800.00
8619	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00
8596	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	72.00	31.00	2232.00
8211	40 mm long S.S screws with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Sundries i.e. scaffolding etc	L.S.	187.95	1.73	325.15
9977	Carriage of material etc.	L.S.	89.35	1.73	154.58
	LABOUR				
0111	Carpenter 1st class	day	28.00	487.00	13636.00
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				153578.73
	Add 1 % Water charges				1535.79
	TOTAL				155114.52
	Add 15 % Contractor's profit and overheads				23267.18
	Cost of 100 sqm				178381.69
	Cost of 1 sqm				1783.82
	Say				1783.80

26.27.3 With 16 mm thick beveled tegular mineral fibre Anti-microbial false ceiling tile confirming to ISO 5 (class 100) specifications

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 100 Sqm MATERIAL				
8553	Mineral fibre beveled tegular edged ceiling tiles 595x595 mm, 16 mm thick with bioblock, confirming to ISO 5 (class 100) specifications Area = 100 sqm + 5 sqm (Add for wastage @5%) Total = 105 sqm	sqm	105.00	857.00	89985.00
8555	G.I. main runner 15X32mm of 3000 mm length, 0.33mm thick including 10 % wastage	each	29.50	177.00	5221.50
8556	G.I. cross Tee 15X32mm of 1200mm length 0.33mm thick including 10 % wastage	each	147.00	73.00	10731.00
8557	G.I. cross Tee 15X32mm of 600mm length, 0.33 mm thick including 10 % wastage	each	147.00	34.00	4998.00
8591	Galvanised Steel perimeter wall Angle Size 24 x 24 x 0.40 mm (3.00 metre long) including 10 % wastage	each	13.50	63.00	850.50
8558	Galvanised Iron hanger rod 6mm dia fully threaded upto 1000mm length	each	72.00	25.00	1800.00
8619	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	72.00	14.00	1008.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8596	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	72.00	31.00	2232.00
8211	40 mm long S.S screws with plastic rawl plugs	100 nos	1.00	208.00	208.00
9999	Sundries i.e. scaffolding etc	L.S.	187.95	1.73	325.15
9977	Carriage of material etc. LABOUR	L.S.	89.35	1.73	154.58
0111	Carpenter 1st class	day	28.00	487.00	13636.00
0114	Beldar	day	23.00	368.00	8464.00
	TOTAL				139613.73
	Add 1 % Water charges				1396.14
	TOTAL				141009.87
	Add 15 % Contractor's profit and overheads				21151.48
	Cost of 100 sqm				162161.35
	Cost of 1 sqm				1621.61
	Say				1621.60

26.28 Chipping of unsound/weak concrete material from slabs, beams, columns etc. with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge

26.28.1 75mm average thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for One Sqm 75mm average thickness for beams MACHINERY				
9999	Hire charges for HILTY-TE 504 Pneumatic Chisel LABOUR	L.S.	5.60	1.73	9.69
0157	Machine Operator	day	0.20	487.00	97.40
0114	Beldar	day	0.10	368.00	36.80
	TOTAL				143.89
	Add 1 % Water charges				1.44
	TOTAL				145.33
	Add 15 % Contractor's profit and overheads				21.80
	Cost of 1.0 sqm				167.13
	Say				167.15

26.28.2 50mm average thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for One Sqm 50mm average thickness for beams MACHINERY				
9999	Hire charges for HILTY-TE 504 Pneumatic Chisel LABOUR	L.S.	3.74	1.73	6.47
0157	Machine Operator	day	0.13	487.00	65.26

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0114	Beldar	day	0.07	368.00	24.29
	TOTAL				96.02
	Add 1 % Water charges				0.96
	TOTAL				96.98
	Add 15 % Contractor's profit and overheads				14.55
	Cost of 1.0 sqm				111.53
	Say				111.55

26.28.3 25 mm average thickness

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Details of cost for One Sqm 25mm average thickness for beams MACHINERY Hire charges for HILTY-TE 504 Pneumatic Chisel	L.S.	1.87	1.73	3.24
	LABOUR				
0157	Machine Operator	day	0.07	487.00	32.63
0114	Beldar	day	0.03	368.00	12.51
	TOTAL				48.38
	Add 1 % Water charges				0.48
	TOTAL				48.86
	Add 15 % Contractor's profit and overheads				7.33
	Cost of 1.0 sqm				56.19
	Say				56.20

26.29 Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge.

26.29.1 Bars upto 12 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7911	Detail of cost for 3.00 sqm (95.54 meter length of 10 mm dia bar) Bars upto 12 mm diameter (1 litre chemical shall cover 3.00 sqm area of bars) MATERIALS Chemical Rust Remover	litre	1.00	200.00	200.00
	LABOUR (Application charges for 3.0 sqm)				
0131	Painter	day	0.162	448.00	72.58
0115	Coolie	day	0.162	368.00	59.62
9999	Putty, brush, sand paper	L.S.	3.162	1.73	5.47

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
9999	Sundries	L.S.	1.98	1.73	3.43
	TOTAL				341.10
	Add 1 % Water charges				3.41
	TOTAL				344.51
	Add 15 % Contractor's profit and overheads				51.68
	Cost of 3 sqm (95.54 m length of 10 mm dia bar)				396.19
	Rate per meter length of bar				4.14
	Say				4.15

26.29.2 Bars above 12 mm diameter

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 3.00 sqm (47.78 meter length of 20 mm dia bar) Bars above 12 mm diameter (1 litre chemical shall cover 3.00 sqm area of bars)				
	MATERIALS				
7911	Chemical Rust Remover	litre	1.00	200.00	200.00
	LABOUR (Application charges for 3.0 sqm)				
0131	Painter	day	0.162	448.00	72.58
0115	Coolie	day	0.162	368.00	59.62
9999	Putty, brush, sand paper	L.S.	3.162	1.73	5.47
9999	Sundries	L.S.	1.98	1.73	3.43
	TOTAL				341.10
	Add 1 % Water charges				3.41
	TOTAL				344.51
	Add 15 % Contractor's profit and overheads				51.68
	Cost of 3.00 sqm (47.78m length of 20 mm dia bar)				396.19
	Rate per meter length of bar				8.29
	Say				8.30

26.30 Drilling suitable holes in reinforced or plain cement concrete with power driven drill machine to a minimum depth of 100mm upto 200mm in RCC beams, lintels, columns and slabs to introduce steel bars for sunshades/balconies including fixing the steel bars in position using epoxy resin anchor grout of approved make but excluding the cost of reinforcement, all complete as per direction of Engineer-In-Charge.

26.30.1 Upto and including 12mm dia.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 holes				
	MATERIAL				
7913	Epoxy	kg	0.20	550.00	110.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Approx unit Weight of Epoxy= 2000kg/cum or 2gm/cucm Volume of Epoxy filled = $3.14/4[(1.5)^2-(1.2)^2] \times 15.5\text{cm} = 9.86\text{cucm}$ Weight of Epoxy for 10 holes= $10 \times 9.86 \times 2 = 197.20$ gms say 200gms = 0.2 kg				
0088	MACHINERY Hire charges of Drill machine upto 30 mm dia	day	0.50	150.00	75.00
0116	LABOUR Fitter (grade 1)	day	0.50	487.00	243.50
0114	Beldar	day	0.50	368.00	184.00
	TOTAL				612.50
	Add 1 % Water charges				6.13
	TOTAL				618.63
	Add 15 % Contractor's profit and overheads				92.79
	Rate for 10 holes				711.42
	Rate for one hole				71.14
	Say				71.15

26.31 Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect.

26.31.1 SBR Polymer (@10% of cement weight) modified cementitious bond coat @2.2 kg cement per sqm of surface area mixed with specified proportion of approved polymer

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of Cost for 10.00 Sqm bonding coat				
	MATERIAL				
0367	Portland Cement (OPC-43 grade)	tonne	0.022	5700.00	125.40
7914	SBR Polymer @ 10% of cement weight= 22.00kgx10% =2.2 kg	kg	2.20	180.00	396.00
	LABOUR				
0155	Mason (average)	day	0.27	467.00	126.09
0115	Coolie	day	0.27	368.00	99.36
9999	Scaffolding and sundries (8.06/2=4.03)	L.S.	4.03	1.73	6.97
	TOTAL				753.82
	Add 1 % Water charges				7.54
	TOTAL				761.36
	Add 15 % Contractor's profit and overheads				114.20
	Cost for 10.00 sqm				875.56
	Rate per sqm				87.55
	Say				87.55

26.31.2 Epoxy bonding adhesive having coverage 2.20 sqm/kg of approved make

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7913	Details of Cost for 2.20 Sqm Epoxy	kg	1.00	550.00	550.00
9999	Application charge for applying bonding coat of Epoxy	L.S.	18.50	1.73	32.01
9999	Cost of brushes etc.	L.S.	8.40	1.73	14.53
	TOTAL				596.54
	Add 1 % Water charges				5.97
	TOTAL				602.51
	Add 15 % Contractor's profit and overheads				90.38
	Cost for 2.20 sqm				692.89
	Rate per sqm				314.95
	Say				314.95

26.32 Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) as per specifications and directions of Engineer-in-charge.

Note: Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75mm size cube crushing strength at the end of 28 days to be not less than 30 N/Sqmm²).

26.32.1 12 mm average thickness.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of Cost for 10 Sqm MATERIAL				
	Cement mortar 1:4 (1 cement : 4 coarse sand) = 0.144 Cum				
3.9	Rate as per Item No.3.9 of SH:MORTARS	cum	0.144	3970.50	571.75
7914	SBR Polymer	kg	1.10	180.00	198.00
	Qty of cement in mortar= 0.144x0.38 = 0.055 MT or 55kg @ 2% of weight of cement 55kgx2%=1.10 kg				
	LABOUR				
0155	Mason (average)	day	0.67	467.00	312.89
0115	Coolie	day	0.75	368.00	276.00
0101	Bhisti	day	0.92	407.00	374.44
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				1754.90
	Add 1 % Water charges				17.55
	TOTAL				1772.45
	Add 15 % Contractor's profit and overheads				265.87
	Cost for 10 sqm				2038.32
	Rate per sqm				203.83
	Say				203.85

26.32.2 25 mm average thickness in 2 layers.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of Cost for 10 Sqm				
	MATERIAL				
	Cement mortar 1:4 (1 cement : 4 coarse sand) $= (0.144/12) \times 25 = 0.30$ Cum				
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.30	3970.50	1191.15
7914	SBR Polymer	kg	2.28	180.00	410.40
	Cement $0.30 \times 0.38 = 0.114$ MT OR 114 kg				
	@ 2% of weight of cement $114 \text{kg} \times 2\% = 2.28 \text{kg}$				
	LABOUR				
0155	Mason (average)	day	0.94	467.00	438.98
0115	Coolie	day	1.02	368.00	375.36
0101	Bhisti	day	1.01	407.00	411.07
9999	Scaffolding and sundries	L.S.	12.61	1.73	21.82
	TOTAL				2848.78
	Add 1 % Water charges				28.49
	TOTAL				2877.27
	Add 15 % Contractor's profit and overheads				431.59
	Cost for 10 sqm				3308.86
	Rate per sqm				330.88
	Say				330.90

26.32.3 50 mm average thickness in 3 layers.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of Cost for 10 Sqm				
	MATERIAL				
	Cement mortar 1:4 (1 cement : 4 coarse sand) $0.144/12 \times 50 = 0.60$ Cum				
3.9	Rate as per Item No.3.9 of SH: MORTARS	cum	0.60	3970.50	2382.30
7914	SBR Polymer	kg	4.56	180.00	820.80
	Cement $0.60 \times 0.38 = 0.228$ MT OR 228 kg				
	@ 2% of weight of cement $228 \text{kg} \times 2\% = 4.56 \text{kg}$				
	LABOUR				
0155	Mason (average)	day	1.88	467.00	877.96
0115	Coolie	day	2.04	368.00	750.72
0101	Bhisti	day	2.02	407.00	822.14
9999	Scaffolding and sundries	L.S.	25.22	1.73	43.63
	TOTAL				5697.55
	Add 1 % Water charges				56.98
	TOTAL				5754.53
	Add 15 % Contractor's profit and overheads				863.18
	Cost for 10 sqm				6617.71
	Rate per sqm				661.77
	Say				661.75

26.33 Providing, mixing and applying SBR polymer (of approved make @ minimum 2% by wt. of cement used) modified plain/reinforced cement concrete for structural members having minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness.

Note: Rates shall be for finished surface area of concrete and shall include the cost of labour, concrete and appropriate approved Super-Plasticiser for rendering concrete as flowable and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument)

26.33.1 50mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Detail of cost for 10 sqm area (0.5cum) M25 concrete 0.5 cum of concrete@ 330 kg/cum Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	0.50	7250.05	3625.03(A)
0009	Deduction of pumping charges Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	-0.50	200.00	-100.00
7914	SBR Polymer @2% of cement 165 kg = 165X2% = 3.3 kg	kg	3.30	180.00	594.00
	TOTAL				4119.03
	Add 1 % Water charges except(A) i.e. (4119.03 - 3625.03) = 494.00				4.94
	TOTAL				4123.97
	Add 15 % Contractor's profit and overheads except(A) i.e. (4123.97 - 3625.03) = 498.94				74.84
	Cost of 10 sqm				4198.81
	Cost of 1 sqm				419.88
	Say				419.90

26.33.2 75mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Detail of cost for 10 sqm area (0.75cum) M25 concrete 0.75 cum of concrete@ 330 kg/cum Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	0.75	7250.05	5437.54(A)
0009	Deduction of pumping charges Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	-0.75	200.00	-150.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7914	SBR Polymer @2% of cement 247.50 kg = 247.50X2% = 4.95 kg TOTAL	kg	4.95	180.00	891.00
	Add 1 % Water charges except(A) i.e. (6178.54 - 5437.54) = 741.00				7.41
	Total				6185.95
	Add 15 % Contractor's profit and overheads except(A) i.e. (6185.95 - 5437.54) = 748.41				112.26
	Cost of 10 sqm				6298.21
	Cost of 1 sqm				629.82
	Say				629.80

26.34 Providing and laying SBR Polymer modified (of approved make @ minimum 2% by wt. of cement used) plain/reinforced concrete jacket for the structural members e.g. columns, pillars, piers, beams etc with concrete having the specified minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness all-round existing core of RCC member.

Note: Rates shall be for finished surface area of concrete and shall include the cost of making holes in existing RCC slab, if required, for pouring concrete in shuttering mould of jacket and appropriate approved Super-Plasticiser for rendering concrete as flowable self compacting and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument)

26.34.1 50mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Detail of cost for 10 sqm area (0.5cum) M25 concrete 0.5 cum of concrete with cement content 330 kg/cum Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	0.50	7250.05	3625.03(A)
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	-0.50	200.00	-100.00
7914	SBR Polymer @2% of cement 165 kg = 165X2% = 3.3 kg TOTAL	kg	3.30	180.00	594.00
	Add 1 % Water charges except(A) i.e. (4119.03 - 3625.03) = 494.00				4.94
	TOTAL				4123.97
	Add 15 % Contractor's profit and overheads except(A) i.e. (4123.97 - 3625.03) = 498.94				74.84
	Cost of 10 sqm				4198.81
	Cost of 1 sqm				419.88
	Say				419.90

26.34.2 75mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Detail of cost for 10 sqm area (0.75cum) M25 concrete 0.75 cum of concrete with cement content 330 kg/cum Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	0.75	7250.05	5437.54(A)
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	-0.75	200.00	-150.00
7914	SBR Polymer @2% of cement 247.50 kg = 247.50X2% = 4.95 kg	kg	4.95	180.00	891.00
	TOTAL				6178.54
	Add 1 % Water charges except(A) i.e. (6178.54 - 5437.54) = 741.00				7.41
	TOTAL				6185.95
	Add 15 % Contractor's profit and overheads except(A) i.e. (6185.95 - 5437.54) = 748.41				112.26
	Cost of 10 sqm				6298.21
	Cost of 1 sqm				629.82
	Say				629.80

26.34.3 100mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Detail of cost for 10 sqm area (1.00 cum) M25 concrete 1.00 cum of concrete with cement content 330 kg/cum Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	1.00	7250.05	7250.05(A)
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	-1.00	200.00	-200.00
7914	SBR Polymer @2% of cement 330 kg = 330X2% = 6.6 kg	kg	6.60	180.00	1188.00
	TOTAL				8238.05
	Add 1 % Water charges except(A) i.e. (8238.05 - 7250.05) = 988.00				9.88
	TOTAL				8247.93
	Add 15 % Contractor's profit and overheads except(A) i.e. (8247.93 - 7250.05) = 997.88				149.68
	Cost of 10 sqm				8397.61
	Cost of 1 sqm				839.76
	Say				839.75

26.35 Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge.

(The payment shall be made on the basis of actual weight of approved grout injected.)

26.35.1 Stirrer mixed Acrylic Polymer of approved make @ 2% of weight of cement used) modified Cement slurry made with non shrink compound in concrete/ RCC work

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 100 kg Acrylic polymer mixed cement grout				
	MATERIAL				
7927	Acrylic Polymer chemical for cracks	kg	2.00	30.00	60.00
	Considering 1 kg of cement grout mixed with non shrink polymer compound with cement @ 2% of cement				
0367	Portland Cement (OPC-43 grade)	tonne	0.10	5700.00	570.00
9977	Carriage of materials	L.S.	1.00	1.73	1.73
9999	Injecting charges of Stirrer mixed polymer grout Gun, rubber, pipe and other accessories hire charges of plant, machinery including necessary fuel and transportation of site	L.S.	2250.00	1.73	3892.50
	LABOUR				
0122	Foreman	day	1.00	487.00	487.00
0157	Nozzleman	day	1.00	487.00	487.00
0157	Pump Operator	day	1.00	487.00	487.00
	TOTAL				5985.23
	Add 1 % Water charges				59.85
	TOTAL				6045.08
	Add 15 % Contractor's profit and overheads				906.76
	Cost of 100 kg				6951.84
	Cost of 1 kg				69.51
	Say				69.50

26.35.2 Stirrer mixed SBR Polymer (of approved make) modified Cement slurry made with Shrinkage Compensating Cement in concrete/RCC work.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 100 kg of SBR polymer mixed cement grout				
	MATERIAL				
7914	SBR Polymer for crack	kg	2.00	180.00	360.00
0367	Portland Cement (OPC-43 grade)	tonne	0.10	5700.00	570.00
9977	Carriage of materials	L.S.	1.00	1.73	1.73
9999	Injecting charges of Stirrer mixed polymer grout Gun, rubber, pipe and other accessories hire charges of plant, machinery including necessary fuel and transportation of site Rs 4000/- per day including plant shall be used of doing approximate 50 sqm Hence cost per sqm (4000/50 = 80)	L.S.	2250.00	1.73	3892.50
	LABOUR				
0122	Foreman	day	1.00	487.00	487.00
0157	Nozzle Operator	day	1.00	487.00	487.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0157	Pump Operator	day	1.00	487.00	487.00
	TOTAL				6285.23
	Add 1 % Water charges				62.85
	TOTAL				6348.08
	Add 15 % Contractor's profit and overheads				952.21
	Cost of 100 kg				7300.29
	Cost of 1 kg				73.00
	Say				73.00

26.35.3 Epoxy injection grout in concrete/RCC work of approved make

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7913	Details of cost for 10kg Epoxy grout				
	MATERIAL				
	Epoxy	kg	10.00	550.00	5500.00
0092	Hire charges of Plant and machinery, it can inject - 350kg/day	day	0.03	100.00	3.00
	LABOUR				
0114	Beldar	day	0.06	368.00	22.08
0157	Nozzle Operator	day	0.03	487.00	14.61
9999	Sundries (gloves goggles etc.)	L.S.	5.00	1.73	8.65
	TOTAL				5548.34
	Add 1 % Water charges				55.48
	TOTAL				5603.82
	Add 15 % Contractor's profit and overheads				840.57
	Cost of 10 kg				6444.39
	Cost of 1 kg				644.43
	Say				644.45

26.36 Providing, erecting, maintaining and removing temporary protective screens made out of specified fabric with all necessary fixing arrangement to ensure that it remains in position for the work duration as required by the Engineer-in-charge.

26.36.1 Wooven PVC cloth

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 sqm				
	MATERIAL				
7915	Wooven PVC cloth	sqm	10.00	25.00	250.00
9999	Fixing double scaffolding outside	L.S.	11.00	1.73	19.03
	Total Material				269.03
	LABOUR				
	For fixing and removal after complete of work @25%				67.26
	TOTAL				336.29
	Add 1 % Water charges				3.36
	TOTAL				339.65
	Add 15 % Contractor's profit and overheads				50.95
	Rate for 10 sqm				390.60
	Rate for 1 sqm				39.06
	Say				39.05

26.37 Cleaning of exposed concrete surface of sticking material including loose and foreign material by sand blasting with coarse sand followed by and including cleaning with oil free air blast as per direction of Engineer in charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10 Sqm Machinery				
0089	Hire charges of sand blasting equipment (14 sqm per day)	day	0.70	400.00	280.00
0090	Hire charges of compressor	day	0.70	600.00	420.00
0982	Material Coarse sand (zone III)	cum	1.00	1200.00	1200.00
	LABOUR				
0114	Beldar	day	0.70	368.00	257.60
9999	Sundries	L.S.	10.00	1.73	17.30
	TOTAL				2174.90
	Add 1 % Water charges				21.75
	TOTAL				2196.65
	Add 15 % Contractor's profit and overheads				329.50
	Cost of 10 sqm				2526.15
	Cost of 1 sqm				252.61
	Say				252.60

26.38 Shotcreting R.C.C. columns, beams and slabs etc. in layers with approved design mix concrete having the specified minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10 mm maximum size in proportion as per design criteria] including the cost of centering and shuttering at edges and corners etc. as directed by Engineer- in-Charge

Note: Rates shall include the providing necessary ground wires etc. The levelling gauges, if used, shall be paid for separately. Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument.

26.38.1 25mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm M25 concrete 0.5 cum of concrete@ 330 kg/cum Cubical qty of concrete for 10 sqm = 10x1.00x0.025 = 0.25 cum Wastage 25%, = 0.25x25/100=0.0625 cum Total=0.3125 cum				
5.33.2	Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	0.3125	7250.05	2265.64(A)
0086	Machinery Compressor, gun, rubber pipes & other accessories- hire charge of plant & machinery i/c necessary fuel (approx. 40 sqm area of shotcrete per day = 10/40 = 0.25 day)	day	0.25	4000.00	1000.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0157	Labour				
	Operator (Pile/ Special machine)	day	0.40	487.00	194.80
0154	Nozzel man/ gun man	day	0.40	487.00	194.80
0124	Mason (brick layer) 2nd class	day	0.40	448.00	179.20
0161	Helper (Technician)	day	0.80	368.00	294.40
0101	Bhisti	day	0.40	407.00	162.80
	TOTAL				4291.64
	Add 1 % Water charges except(A) i.e. (4291.64 - 2265.64) =2026.00				20.26
	TOTAL				4311.90
	Add 15 % Contractor's profit and overheads except(A) i.e. (4311.90 - 2265.64) = 2046.26				306.94
	Cost of 10 sqm				4618.84
	Cost of 1 sqm				461.88
	Say				461.90

26.38.2 50mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Detail of cost for 10 sqm M25 concrete 0.5 cum of concrete@ 330 kg/cum Cubical qty of concrete for 10 sqm = 10x1.00x0.050 = 0.50 cum Wastage 25%, = 0.50x25/100=0.125 cum Total=0.625 cum				
	Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete Machinery	cum	0.625	7250.05	4531.28(A)
0086	Compressor, gun, rubber pipes & other accessories- hire charge of plant & machinery i/c necessary fuel (approx. 25 sqm area of shotcrete per day = 10/25 = 0.4 day)	day	0.40	4000.00	1600.00
0157	Labour				
	Operator (Pile/ Special machine)	day	0.40	487.00	194.80
0154	Nozzel man/ gun man	day	0.40	487.00	194.80
0124	Mason (brick layer) 2nd class	day	0.40	448.00	179.20
0161	Helper (Technician)	day	0.80	368.00	294.40
0101	Bhisti	day	0.40	407.00	162.80
	TOTAL				7157.28
	Add 1 % Water charges except(A) i.e. (7157.28 - 4531.28) =2626.00				26.26
	TOTAL				7183.54
	Add 15 % Contractor's profit and overheads except(A) i.e. (7183.54 - 4531.28) = 2652.26				397.84
	Cost of 10 sqm				7581.38
	Cost of 1 sqm				758.14
	Say				758.15

26.38.3 75mm thick in Grade M 25 with cement content not less than 330 kg per cum

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Detail of cost for 10 sqm M25 concrete 0.5 cum of concrete@ 330 kg/cum				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
5.33.2	Cubical qty of concrete for 10 sqm = 10x1.00x0.025 = 0.25 cum Wastage 25%, = 0.25x25/100=0.0625 cum Total=0.3125 cum Rate as per Item No.5.33.2 of SH: Reinforced Cement Concrete	cum	0.9375	7250.05	6796.92(A)
0086	Machinery Compressor, gun, rubber pipes & other accessories- hire charge of plant & machinery i/c necessary fuel (approx. 15 sqm area of shotcrete per day = 10/15 = 0.665 day)	day	0.665	4000.00	2660.00
0157	Labour Operator (Pile/ Special machine)	day	0.40	487.00	194.80
0154	Nozzel man/ gun man	day	0.40	487.00	194.80
0124	Mason (brick layer) 2nd class	day	0.40	448.00	179.20
0161	Helper (Technician)	day	0.80	368.00	294.40
0101	Bhisti	day	0.40	407.00	162.80
	TOTAL				10482.92
	Add 1 % Water charges except(A) i.e. (10482.92 - 6796.92) = 3686.00				36.86
	TOTAL				10519.98
	Add 15 % Contractor's profit and overheads except(A) i.e. (10519.98 - 6796.92) = 3723.06				558.46
	Cost of 10 sqm				11078.44
	Cost of 1 sqm				1107.84
	Say				1107.85

26.39 Providing and inserting 12mm dia galvanised steel injection nipple in honey comb area and along crack line including drilling of holes of required diametre (20mm to 30mm) up to depth from 30mm to 80mm at required spacing and making the hole & crack dust free by blowing compressed air, sealing the distance between injection nipple with adhesive chemical of approved make and allow it to cure complete as per direction of Engineer-In-Charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7921	Details of cost for 20.00 Nos Hole MATERIAL Adhesive chemical (750 mm deep & 20 mm Dia Hole) Volume of hole =20x(3.14/4)x2.00x 2.00x7.5=471 cub cm. Adhesive @ 40% of 471 ml=188.40 ml, Say 188 ml	ml	188.00	2.36	443.68
7922	Bit of drilling machine for Hole upto 30mm dia (One Bit done 20 Holes only)	each	1.00	475.00	475.00
7923	GI injection nipple 12mm dia, 75mm long	each	20.00	40.00	800.00
7924	Blowing compressed air for cleaning holes upto 30mm dia	each	20.00	10.00	200.00
0155	LABOUR Mason (average)	day	0.50	467.00	233.50
0115	Coolie	day	0.50	368.00	184.00

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0101	Bhisti	day	0.50	407.00	203.50
	TOTAL				2539.68
	Add 1 % Water charges				25.40
	TOTAL				2565.08
	Add 15 % Contractor's profit and overheads				384.76
	Cost of 20 Nos hole				2949.84
	Cost of 1 hole				147.49
	Say				147.50

26.40 Providing and fixing hard drawn steel wire fabric of size 75 x25 mm mesh or other suitable size wire mesh to be fixed & firmly anchored to the concrete surface by means of "L" shaped mild steel shear key welded with existing reinforcement including the cost of materials, labour, tool & plants as approved by Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
7925	Details of cost for 10.00 sqm (i.e 77.50 kg.) MATERIAL L shaped 100mm long, 10mm dia mild steel shear key key to be provided at 0.5 mtr centre to centre in each direction Total no. of Shear key of MS Bar in 10sqm = 25 nos 25x0.10x0.617=1.55 kg	kg	1.55	67.10	104.01
0091	Welding charges of shear key to existing reinforcement	each	25.00	2.00	50.00
1021	Hard drawn steel wire fabric 75x25mm, weight 7.75kg/sqm 75x25 mm = 10.00 sqm + Add 5% wastage = 0.50 sqm Total = 10.50 sqm	sqm	10.50	400.00	4200.00
9977	Carriage at site LABOUR	L.S.	5.61	1.73	9.71
0103	Blacksmith 2nd class	day	1.00	448.00	448.00
0114	Beldar	day	1.00	368.00	368.00
	TOTAL				5179.72
	Add 1 % Water charges				51.80
	TOTAL				5231.52
	Add 15 % Contractor's profit and overheads				784.73
	Cost of 10 sqm				6016.25
	Cost of 1 sqm				601.62
	Say				601.60

26.41 Designing, providing, installing and fixing factory finished custom designed cold form Light Gauge Steel Framed super structure comprising of steel wall panel, trusses, purlins etc manufactured out of minimum 0.75 mm thick steel sheet as per design requirements. The steel sheet shall be galvanized (AZ-150 gms Aluminium Zinc Alloy coated steel having minimum yield strength 300-550 Mpa) conforming to AISI specifications and IBC 2009 for cold formed steel framing and construction and also as per IS: 875-1987, ISO 800-1984 and IS: 801- 1975. The wind load shall be as per provisions of IS 875 (part -III). LGSFS

frame shall be designed as per IS: 801 using commercially available software such as Frame CAD Pro-11.7/ STAAD PRO-V8i/ArchitekV2.5.16/ Revit architecture-2011 or equivalent. Proper usage of Connection Accessories like Heavy Duty Tension Ties, Light Duty Hold-ons, Twist Straps (to connect truss with wall frames), Strong Tie, Tie Rod, H-Brackets, Boxing Sections, L-Shaped Angles for better structural stability. The framing section shall be cold form C-type having minimum web depth 89 mm x 39mm flange x 11mm lip in required length as per structural design requirement duly punched with dimple/slot at required locations as per approved drawings. The slots will be along centre line of webs and shall be spaced minimum 250mm away from both ends of the member. The frame can be supplied in panelized or knock down condition in specific dimensions and fastened with screws extending through the steel beyond by minimum of three exposed threads. All self drilling tapping screws for joining the members shall have a Type II coating in accordance with ASTM B633(13) or equivalent corrosion protection of gauge 10 & 12, TPI 16 & 8 of length 20mm. The frames shall be fixed to RCC slab or Tie beam over Neoprene rubber using self expanding carbon steel anchor bolt of dia as per approved drawings. design subject to minimum 12mm diameter and 121mm length conforming to AISI 304 and 316 at 500mm c/c with minimum embedment of 100mm in RCC (RCC to be paid separately) and located not more than 300mm from corners or termination of bottom tracks complete in all respects. The item also includes the submission of stability reports duly examined and issued by any NIT/IIT. The rate includes the concept design, detailed design, fabrication of sections, transportation, installation and all required fixing arrangement at site as described above.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8579	Details of cost for 1.00 Kg MATERIAL Cold form light gauge Steel C-section of thickness 0.75mm i/c zink coating/sliting etc. = 1.00 + 0.05 (Add for wastage @5%) = 1.05 kg	kg	1.05	126.00	132.30
9977	Carriage Deduct for	L.S.	1.685	1.73	2.92
8580	Scrap value wastage of cold form light gauge steel	kg	-0.05	17.00	-0.85
0103	Labour for assembling/ fixing etc Blacksmith 2nd class	day	0.01	448.00	4.48
0114	Beldar	day	0.03	368.00	11.04
	TOTAL				149.89
	Add 1 % Water charges				1.50
	TOTAL				151.39
	Add 15 % Contractor's profit and overheads				22.71
	Cost for 1.00 kg				174.10
	Say				174.10

26.42 Providing and fixing of external wall system on Light gauge steel frame work with . Outer face having 6mm thick heavy duty fiber cement board fixed on 9mm thick heavy duty fiber cement board conforming to IS 14862:2000, category IV type A (High pressure steam cured) as per standard sizes fixed with self-

drilling / taping screws / fasteners @ 60cm c/c of approved make. A groove of 2 mm to 3mm shall be maintained and grooves shall be sealed with silicon based sealant. The board shall be fixed in a staggered pattern.Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm and internal face 12.5mm thick gypsum plaster board fixed on 8mm thick fiber cement board confirming to IS 14862:2000 of category III type B (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 Sqm MATERIALS				
0238	6 mm thick heavy duty fiber cement board 1x10 = 10 sqm +1.00 (Add for wastage @10%)Total = 11.00 sqm	sqm	11.00	440.00	4840.00
2636	GI Screws of gauge 10, length 45 mm for fixing cement fibre board to C section	each	40.00	3.00	120.00
0240	9 mm thick heavy duty fiber cement board 1x10 = 10 sqm +1.00 (Add for wastage @10%)Total = 11.00 sqm	sqm	11.00	659.00	7249.00
2635	GI Screws of gauge 10, length 25 mm for fixing cement fibre board to C section	each	40.00	2.75	110.00
Sub A/R- 1	Taping and finishing cement board joints Filling the groove of 2.3 mm between 6mm and 9mm thick fiber cement boards	sqm	10.00	81.05	810.50
0239	8mm thick heavy duty fiber cement board 1x10 = 10 sqm +1.00 (Add for wastage @ 10%)Total = 11.00 sqm	sqm	11.00	322.00	3542.00
2636	GI Screws of gauge 10, length 45 mm for fixing cement fibre board to C section	each	40.00	3.00	120.00
7009	12.5 mm thick tapered edge gypsum plain borad 1x10 = 10 sqm +1.00 (Add for wastage @10%)Total = 11.00 sqm	sqm	11.00	160.00	1760.00
2635	GI Screws of gauge 10, length 25 mm for fixing cement fibre board to C section	each	40.00	2.75	110.00
Sub A/R- 2	Taping and finishing cement board joints Filling the groove of 2.3 mm between 8mm thick fiber cement board and 12.5 mm thick gypsum plastic board	sqm	10.00	220.05	2200.50
	LABOUR				
	For cutting and fixing of cement and gypsum board				
0112	Carpenter 2nd class	day	2.00	448.00	896.00
0114	Beldar	day	6.00	368.00	2208.00
	TOTAL				23966.00
	Add 1 % Water charges				239.66
	TOTAL				24205.66
	Add 15 % Contractor's profit and overheads				3630.85
	Cost of 10.00 sqm				27836.51
	Cost of 1.00 sqm				2783.65
	Say				2783.65

Sub A/R-1 Filling the groove (i.e. 2-3mm gap between boards),taping and jointing of the first layer 6mm and 9mm thick fiber cement boards with epoxy based sealing compound or with silicon sealant. Second layer is fixed over it in a staggered pattern.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 Sqm				
	MATERIAL				
1248	Epoxy based sealing Compound	kg	0.14	502.00	70.28
	LABOUR				
0112	Carpenter 2nd class	day	0.0132	448.00	5.91
0114	Beldar	day	0.0132	368.00	4.86
	Cost of 1 sqm				81.05
	Say				81.05

Sub A/R-2 Fill the groove (i.e. 2-3mm gap between boards),taping and jointing 8mm thick fiber cement board and 12.5mm thick gypsum plaster boards with epoxy based sealing compound, Acrylic based sealing compound, Non woven reinforcement Tape as per direction of Engineer in charge.(Use a flexible knife so that no air bubble is entrapped. Allow 1-2 hours gap. Once hard tacky or set, apply a coat of Acrylic based sealing compound paste to flash fill the beveled area. After 2-4 hours go on to repeat a skin coat with Acrylic based sealing compound to securely embed the 40mm width (non woven reinforcement Tape. Use only flexible steel knife, such as provided with packs, to avoid air entrapment within compound. After overnight drying shrinkage apply a coat of acrylic based sealing compound to compensate shrinkage. Finally cover the bevel portion with any suitable overall skin coat with a desired full surface-leveler material).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 Sqm				
	MATERIAL				
1248	Epoxy based sealing Compound	kg	0.14	502.00	70.28
1249	Acrylic based sealing compound	kg	0.26	481.00	125.06
1250	Non woven reinforcement Tape	metre	25.00	0.14	3.50
	LABOUR				
0112	Carpenter 2nd class	day	0.026	448.00	11.65
0114	Beldar	day	0.026	368.00	9.57
	Cost of 1 sqm				220.06
	Say				220.05

26.43 Providing and fixing internal wall panels on Light gauge steel frame work with 12.5mm thick gypsum plaster board conforming IS 2095:2011 fixed on 8mm thick fiber cement board conforming to IS 14862:2000 of category III type B (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm. Proper taping and jointing to be done using fiber mesh tape and

epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 Sqm				
	MATERIAL				
0239	8mm thick heavy duty fiber cement board 2x10 = 20 sqm + 2.00 (Add for wastage @10%)= 22.00 sqm	sqm	22.00	322.00	7084.00
2635	GI Screws of gauge 10, length 25 mm for fixing cement fibre board to C section	each	80.00	2.75	220.00
0241	12.5 mm thick Gypsum plaster board 2x10 = 20 sqm + 2.00 (Add for wastage @10%)= 22.00 sqm	sqm	22.00	160.00	3520.00
2635	GI Screws of gauge 10, length 25 mm for fixing cement fibre board to C section	each	80.00	2.75	220.00
Sub A/R- 2	Taping and finishing cement board joints Rate as per Item No.Sub A/R- 2 of SH: Light Gauge Steel Framed Structure (LGSFS)	sqm	10.00	220.05	2200.50
	LABOUR				
	For cutting and fixing of cement and gypsum board				
0112	Carpenter 2nd class	day	1.11	448.00	497.28
0114	Beldar	day	3.33	368.00	1225.44
	TOTAL				14967.22
	Add 1 % Water charges				149.67
	TOTAL				15116.89
	Add 15 % Contractor's profit and overheads				2267.53
	Cost of 10.00 sqm				17384.42
	Cost of 1.00 sqm				1738.44
	Say				1738.45

26.44 Providing and fixing in all exterior face panels breathable vapour barrier underneath the cement fiber board as per National Building Code 2009 complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 10.00 Sqm				
	MATERIAL				
2637	Vapour barrier 10.00 sqm + 1.00 sqm (Add for wastage @10%) = 11.00 sqm	sqm	11.00	170.00	1870.00
	LABOUR				
	For fixing fixing 45 sqm vapour barrier				
0112	Carpenter 2nd class	day	0.22	448.00	98.56
0114	Beldar	day	0.22	368.00	80.96
	TOTAL				2049.52
	Add 1 % Water charges				20.50
	TOTAL				2070.02
	Add 15 % Contractor's profit and overheads				310.50
	Cost of 10 sqm				2380.52
	Cost of 1.00 sqm				238.05
	Say				238.05

26.45 Supplying and installation of moisture resistant/fire resistant 6 mm thick Heavy duty fiber cement board (High pressure steam cured) conforming to IS 14862:2000 of category III type B as per standard sizes fixed with self-drilling / tapping screws. Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
0238	Details of cost for 10.00 Sqm MATERIAL 6 mm thick heavy duty fiber cement board 10.00 sqm + 1.00 sqm (Add for wastage @10%)= 11.00 sqm	sqm	11.00	440.00	4840.00
2635	GI Screws of gauge 10, length 25 mm for fixing cement fibre board to C section	each	40.00	2.75	110.00
Sub A/R- 1	Taping and finishing cement board joints Rate as per Item No.Sub A/R- 1 of SH:Light Gauge Steel Framed Structure (LGSFS)	sqm	10.00	81.05	810.50
0112	LABOUR For cutting and fixing of cement and gypsum board 18.00 sqm	day	1.11	448.00	497.28
0114	Carpenter 2nd class	day	3.33	368.00	1225.44
	TOTAL				7483.22
	Add 1 % Water charges				74.83
	TOTAL				7558.05
	Add 15 % Contractor's profit and overheads				1133.71
	Cost of 10 sqm				8691.76
	Cost of 1.00 sqm				869.17
	Say				869.15

26.46 Providing and fixing in position, 200 mm thick factory made Expanded Polystyrene Core (EPS Core) wall panels consisting of EPS core sandwiched between two Engineered sheets of welded wire fabric mesh duly finished with shortcrete materials on outer faces. The fabric mesh shall be made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of the wall, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree) . The EPS core shall consist of 100 mm thick EPS of density not less than 20 kg/ per cum. Both the outer faces of the panel shall be finished by applying the layer of 50 mm thick cement mortar 1:3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting/guniting equipment etc at a pressure not less than 1 bar (100Kn/m²) and both surfaces finished with trowel. Fixing operations of wall panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8013	Details of cost for 1.20x3.00m= 3.60 sqm MATERIAL Factory made EPS Core wallpanel /roof panel sandwiched between two Engineered				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	welded wire fabric mesh of 3 mm dia G.I. wire mesh,with 50 mm pitch in both the directions, kept at 120-135 mm gap and interconnected by the zig zag G.I. wire of 3 mm dia at alternate row by welding. 3.60 sqm + 0.18 sqm (Add for wastage @5%)Total = 3.78 sqm	sqm	3.78	1650.00	6237.00
9999	Add for L-shape,U-shape & straight lap mesh Cement mortar 1:3 (1cement:3 coarse sand) 2x1.20x3.00x0.05= 0.36 cum	L.S.	208.00	1.73	359.84
3.8	Rate as per Item No.3.8 of SH: Mortar 10 mm TMT bars (2 nos.75 mm long) Aluminium C-channels (100mmx150mm long)	cum	0.36	4723.50	1700.46
9999	For fixing wall with foundation LABOUR	L.S.	312.15	1.73	540.02
9999	For carrying out shotcreting, shoring, leveling, and finishing the surface with trowel. TOTAL	L.S.	707.50	1.73	1223.98
	Add 1 % Water charges				10061.30
	TOTAL				100.61
	Add 15 % Contractor's profit and overheads				10161.91
	Cost of 3.60 sqm				1524.29
	Cost of 1 sqm				11686.20
	Say				3246.16
					3246.15

26.47 Providing and fixing in position, 230mm thick factory made Expanded Polystyrene Core (EPS Core) roof/floor panels made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of panel, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree). The EPS core shall consist of 100 mm thick EPS of density not less than 20kg/ per cum. The bottom side of the panel shall be finished by applying a layer of 60-65 mm thick cement mortar 1: 3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting equipment etc at a pressure of not less than 1 bar (100Kn/m²) and surface finished with trowel. The top face of the panel shall be provided and finished by applying 70-75 mm thick layer of cement concrete 1:1.5: 3 (1 cement :1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size). Fixing operations of roof/floor panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8013	Details of cost for 1.20x3.00m= 3.60 sqm MATERIAL Factory made EPS Core wallpanel /roof panel sandwiched between two Engineered welded wire fabric mesh of 3 mm dia G.I. wire mesh,with 50 mm pitch in both the directions, kept at 120-135 mm gap and				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
3.8	interconnected by the zig zag G.I. wire of 3 mm dia at alternate row by welding. sqm 3.78 1650.00 6237.00 3.60 sqm + 0.18 sqm (Add for wastage @5%) Total = 3.78 sqm Cement mortar 1:3 (1cement:3 coarse sand) 60mm thick on the bottom of roof slab =1x1.2x3.00x0.060= 0.216cum Rate as per Item No.3.8 of SH: Mortar Cement concrete 1:1.5:3	cum	0.22	4723.50	1020.28
5.3	70mm thick on the top of roof slab =1x1.20x3.00x0.07= 0.252 cum Rate as per Item No.5.3 of SH: Reinforced Cement Concrete	cum	0.25	7390.80	1862.48(A)
9999	Add for L-shape, U-shape & straight lap mesh LABOUR	L.S.	202.32	1.73	350.01
9999	For providing concreting, shotcreting, shoring, leveling, plastering and finishing the surface with trowel. TOTAL	L.S.	832.36	1.73	1439.98
	Add 1 % Water charges on all except (A) i.e. on (10909.75 - 1862.48) = 9047.27 TOTAL				10909.75
	Add 15 % Contractor's profit and overheads on all except (A) i.e. on (11000.22 - 1862.48) = 9137.74				90.47
	Cost of 3.60 sqm				11000.22
	Cost of 1 sqm				1370.66
	Say				12370.88
					3436.35
					3436.35

26.48 Providing and fixing aluminium formwork for monolithic construction RCC members using grade 5052 aluminium for panel sheets of minimum 4 mm thickness and grade 6061 (Type-6) aluminium for extruded sections. The tolerance of finished panels to be (-1 mm). Pins and wedges to be made of high grade mild steel. All complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 75.998 sqm say 76 sqm 2.7mx2.7mx1.00m Contact area = 10.8 sqm. MATERIAL Assuming shuttering material will become unserviceable after use of 100 times Adding for maintenance @ 10% of cost Taking salvage value after full use of material @ 35% of cost I Aluminium Formwork System 1 Wall (W) Panels a.) 2050X600mm, Qty. = 2 Nos = 2.460 sqm b.) 2050X300mm, Qty. = 2 Nos = 1.230 sqm c.) 2050X250mm, Qty. = 2 Nos = 1.025 sqm d.) 300X1150mm, Qty. = 1 Nos = 0.345 sqm Total = 5.06 sqm				

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8031	<p>2 WRB Panels a.) 2325x350mm, Qty. = 1 Nos = 0.814 sqm b.) 2325X250mm, Qty. = 2 Nos = 1.163 sqm c.) 2100X600 mm,Qty. = 24 Nos = 30.240 sqm d.) 2100X450mm, Qty. = 4 Nos = 3.780 sqm e.) 2100X300mm, Qty. = 2 Nos = 1.260 sqm f.) 2100X250 mm,Qty. = 2 Nos = 1.050 sqm g.) 350X1150mm, Qty. = 1 Nos = 0.403 sqm Total = 38.71 sqm</p> <p>3 Panels a.) 825X600mm, Qty. = 2 Nos = 0.990 sqm b.) 825X300 mm,Qty. = 2 Nos = 0.495 sqm c.) 825X250 mm,Qty. =2 Nos = 0.413 sqm d.) 650X600 mm,Qty. = 24 Nos = 9.360 sqm e.) 650X450 mm,Qty. = 4 Nos = 1.170 sqm f.) 650X300 mm,Qty. = 2 Nos = 0.390 sqm g.) 650X250 mm,Qty. = 2 Nos = 0.325 sqm Total = 13.143 sqm</p> <p>4 Deck Panels a.) 1100x450mm, Qty. = 14 Nos = 6.930 sqm b.) 1100x250mm,Qty. =2 Nos = 0.550 sqm c.) 750x450mm,Qty. = 1 Nos = 0.338 sqm Total = 7.818 sqm</p> <p>5 Kicker Panels a.) 125 x 2300mm, Qty. = 2 Nos = 0.576 sqm b.) 125 x 1150 mm, Qty. = 2 Nos = 0.288 sqm Total = 0.864 sqm</p> <p>6 Door Closing Panel (DCRB) a.) 1975 x 150mm, Qty. = 2 Nos = 0.593 sqm b.) 2325x150 mm, Qty. = 1 Nos = 0.349 sqm Total = 0.942 sqm G. Total = 66.537 sqm Qty taken for cost of using once = 66.537x0.75/100 = 0.499 sqm</p> <p>Aluminium sheets Grade 5052, 4 mm thick for wall panel/deck panel/WRB panel/Kicker Panels/door closing panels</p>	sqm	0.499	8500.00	4241.50
8032	<p>7 Internal Corner a.) 2350 mm Qty. = 3 Nos = 1.586 sqm b.) 2250 mm Qty. = 4 Nos.= 2.025 sqm c.) ICI 400x400 mm, Qty. = 10 Nos = 1.800 sqm Total = 5.411 sqm</p> <p>8 Column Corners a.) 2100 mm Qty. = 6 Nos = 2.52 sqm b.) 650 mm Qty. = 6 Nos = 0.78 sqm c.) 300 mm Qty. = 4 Nos = 0.24 sqm Total = 3.54 sqm G. Total = 8.951 sqm Qty taken for cost of using once = 8.951x0.75/100 = 0.0671325 = 0.0672</p> <p>Aluminium sheets Grade 5052, 4 mm thick for Internal Corner/Column Corners/</p> <p>9 Mid Soldier a.)1000 mm Qty. = 2 Nos = 0.2 sqm</p>	sqm	0.0672	11500.00	772.80

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
8033	10 End soldier a.) 800 mm Qty. = 2 Nos = 0.16 sqm b.) 750 mm Qty. = 2 Nos = 0.15 sqm Total = 0.31 sqm G.Total = 0.51 sqm Qty taken for cost of using once = $0.51 \times 0.75 / 100 = 0.003825 = 0.0038$ Aluminium sheets Grade 5052, 4 mm thick for Mid Soldier/End soldier II Accessories Assuming 35% as salvage value, 10% maintenance cost and 100 times use before becoming unserviceable Qty taken for cost of using once = $Qty \times 0.75 / 100$	sqm	0.0038	32000.00	121.60
8034	External Corner 2050 mm = $2 \times 0.75 / 100 = 0.015$	each	0.015	1400.00	21.00
8035	External Corner 825 mm = $2 \times 0.75 / 100 = 0.015$	each	0.015	565.00	8.48
8036	Soldier Tie 370 mm = $8 \times 0.75 / 100 = 0.06$	each	0.06	274.00	16.44
8037	Adjustable Prop - 2.00 x 2.00m = $8 \times 0.75 / 100 = 0.06$	each	0.06	1080.00	64.80
8038	Pin-50 = $936 \times 0.75 / 100 = 7.02$	each	7.02	15.00	105.30
8039	Pin-127 = $8 \times 0.75 / 100 = 0.06$	each	0.06	52.00	3.12
8040	Wedge = $944 \times 0.75 / 100 = 7.08$	each	7.08	14.00	99.12
8041	Wall Tie - 150 (355)mm = $168 \times 0.75 / 100 = 1.26$	each	1.26	45.00	56.70
8042	Polythene Sleeve 90 x 150mm = $168 \times 0.75 / 100 = 1.26$	each	1.26	3.00	3.78
8043	Polythene Roll - 150mm Long. = $168 \times 0.75 / 100 = 1.26$	each	1.26	6.00	7.56
8044	Vertical Soldier -1100mm = $4 \times 0.75 / 100 = 0.03$	each	0.03	351.00	10.53
8045	Wall Attached Bracket 600x1000mm = $8 \times 0.75 / 100 = 0.06$	each	0.06	936.00	56.16
8046	Allignment Pipe - 3.00 Mtr. = $2 \times 0.75 / 100 = 0.015$	each	0.015	960.00	14.40
8047	Allignment Bracket = $6 \times 0.75 / 100 = 0.045$	each	0.045	450.00	20.25
8048	Tie Rod for Bracket - 500mm = $12 \times 0.75 / 100 = 0.09$	each	0.09	108.00	9.72
8049	Anchor Wing Nut Ø100 mm = $17 \times 0.75 / 100 = 0.1275$	each	0.1275	60.00	7.65
8050	Debit Pin - 250mm = $5 \times 0.75 / 100 = 0.0375$	each	0.0375	56.00	2.10
8051	PVC Pipe Ø20mm - 150mm long = $12 \times 0.75 / 100 = 0.09$	each	0.09	5.00	0.45
8052	PVC Cone = $10 \times 0.75 / 100 = 0.075$	each	0.075	5.00	0.38
8053	Bolt+Nut - 16 x 80 mm = $10 \times 0.75 / 100 = 0.075$	each	0.075	30.00	2.25
8054	Flat Washer Ø16, 3mm thik = $16 \times 0.75 / 100 = 0.12$	each	0.12	5.00	0.60
8055	Bolt+Nut - 16 x 30 mm = $50 \times 0.75 / 100 = 0.375$	each	0.375	18.00	6.75
8056	Door Spacer 45x45x5 -1135mm Long = $2 \times 0.75 / 100 = 0.015$	each	0.015	340.00	5.10
8057	Door Spacer 45x45x5 - 985mm long = $2 \times 0.75 / 100 = 0.015$	each	0.015	295.00	4.43

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	LABOUR				
0116	Fitter (grade 1)	day	2.00	487.00	974.00
0117	Assistant Fitter or 2nd class Fitter	day	2.00	448.00	896.00
0114	Beldar	day	3.00	368.00	1104.00
9999	Shuttering oil	L.S.	220.00	1.73	380.60
9999	Cleaning of shuttering	L.S.	440.00	1.73	761.20
	TOTAL				9778.77
	Add 1 % Water charges				97.79
	TOTAL				9876.56
	Add 15 % Contractor's profit and overheads				1481.48
	Cost for 76 sqm.				11358.04
	Cost per sqm.				149.44
	Say				149.45