OFFICE OF THE ENGINEER-IN-CHIEF,
M.P., P.W.D. SATPURA BHAWAN, BHOPAL

SCHEDULE OF RATES FOR BUILDING WORKS (w.e.f. 15/06/2009)
(ERRATA/AMMENDMENT/ADDENDUM NO.6)

The rates of Chapter-II to Chapter-XXII of building SOR w.e.f. 15/06/2009 are revised as follows :-

CHAPTER-II
Excavation for foundation

2.1	Suface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of 2.1.1 all kings of soil rubbish, lead upto 50m and lift upto 1.5 m.	100 sqm	636.00
2.2	Clearing jungle including uprooting of rank vegetation,grass brush wood trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.	100 sqm	328.00
2.3	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of area cleared.	100 sqm	168.00
2.4	Felling trees of the girth (measured at a height of 1 m above ground level) including cutting of trunks and branches removing the roots and stacking of serviceable material and disposal of unserviceable material.		
2.4.1	Beyond 30 cm girth upto and including 60 cm girth	each	101.00
2.4.2	Beyond 60 cm girth upto and including 120 cm girth.	each	446.00
2.4.3	Beyond 120 cm girth upto and including 240 cm girth	each	2059.00
2.4.4	Above 240 cm girth	each	3556.00
2.5	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth upto 50 m and lift upto 1.5 m disposed soil to be levelled and neatly dressed:		
2.5.1	All kinds of soil	sqm	25.00
2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means in over areas foudation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposal of surplus excavated soil as dircted,within a lead of 50 m		
2.6.1	All kinds of soil.	Cum.	123.00
2.7	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth.1.5 m in width as well as 10 sqm on plan) including disposal of eccavated earth lead upto 50 m and lift upto 1.5m disposed earth to be levelled and neatly dressed.		
2.7.1	Ordinary rock	Cum.	197.00
2.7.2	Hard rock (requiring blasting)	Cum.	327.00
2.7.3	Hard rock (blsting prohibited)	Cum.	419.00
2.8	Excavation work in foundation trenches or drains not exceeding 1.5 m in width or 10 sqm on plan including dressing of sides ans ramming of bottoms lift upto 1.5 m including getting out the excavated soil and disposal of surplus.excavated soils as directed within a lead of 50 m.		
2.8.1	Odinary rock	Cum.	209.00
2.8.2	Hard rock (requiring blasting)	Cum.	353.00
2.8.3	Hard rock (blsssting prohibited)	Cum.	424.00
2.9	Excavating trenches of requried width for pipes. cables,etc including excavation for sockets and dressing of sides ramming of bottoms depth upto 1.5 m including gtting out the excavated soil and then returning the soil as required in layers not exceeding 20 cm. in depth including cosolidating each deposited layer by ramming watering etc. and disposing of surplus excavated soils as directed within a lead of 50 m :		
2.9.1	All kinds of soil		
2.9.1.1	pipes,cables etc not exceeding 80 mm dia.	metre	86.00
2.9.1.2	Pipes,cables etc. exceeding 80 mm dia but not exceeding 300 mm dia.	metre	140.00

2.9.1.3	pipes cables etc. exceedign 300 mm dia but not exceeding 600 mm	metre	219.00
2.1	Extra for excavating trenches for pipes cables etc in all kinds of soil for depth exceeding 1.5 m but not exceeding 3 m (Rate is over corresponding basic item for depth upto 1.5 m)	metre	133%
2.11	Extra for excavating trenches for pipes cables etc in all kinds of soil for depth exceeding 3m in depth but not exceeding 4.5m (Rate is over corresponding basic item for depth upto 1.5)	metre	340%
2.12	Excavatin trenches of required width for pipes,cables etc.including excavation for sockets,depth upto 1.5 m including getting out the excavated materials refilling the excavated soil as requried in layers not exceeding 20 cm in depth including cosolidating each deposited layers by ramming watering etc. stacking serviceable material for measurmements and disposal of unserviceable matrial as directed within a lead of 50 m		
2.12.1	Ordinary rock		
2.12.1.1	pipes,cables etc. not exceeding 80 mm dia	metre	146.00
2.12.1.2	pipes,cables etc. exceeding 80 mm dia but not exceeding 300 mm dia.	metre	316.00
2.12.1.3	pipes,cables etc. exceeding 300 mm dia but not exceeding 600 mm dia.	metre	365.00
2.12.2	Hard rock (requiring blasting)		
2.12.2.1	pipes,cables etc. exceeding 80 mm dia	metre	485.00
2.12.2.2	pipes,cables etc. exceeding 80 mm dia but not exceeding 300 mm dia.	metre	531.00
2.12.2.3	pipes,cables etc. not exceeding 300 mm dia but not exceeding 600 mm dia.	metre	559.00
2.12.3	Hard rock (requiring blasting)		
2.12.3.1	pipes,cables etc. not exceeding 80 mm dia	metre	230.00
2.12.3.2	pipes cables etc.exceeding 80 mm dia but not exceeding 300 mm dia 570	metre	570.00
2.12.3.3	pipes cables etc.exceeding 300 mm dia but not exceeding 300 mm dia 600	metre	656.00
2.13	Extra for excavating itrenches for pipes, cables etc in ordinary/hard rock exceeding 3m (Rate is over corresponding basic item for depth upto 1.5 m)	metre	104%
2.14	Extra for excavating trenches for pipes,cables etc. in ordinary/hard rock exceeding 3m in depth but not exceeding 4.5 m (Rate in over corresponding basic item for depth upto 1.5m)	metre	259%
2.15	Close timbering in trenches including strutting shoring and packing cavities (wherever requried) complete (measurements to be taken of the face area timbered).		
2.15.1	Depth not exceeding 1.5 m	sqm	81.00
2.15.2	Depth exceeding 1.5 but not exceeding 3m.	sqm	83.00
2.15.3	Dept exceeding 3m but not exceeding 4.5m	sqm	90.00
2.16	Close timbering in case of shafts wells. cesspits manholes and the like including stutting shoring and packing cavities (wherever required) etc. complete (mesurments to be taken of the face area timbered)		
2.16.1	Depth not exceeding 1.5	sqm	83.00
2.16.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	89.00
2.16.3	Depth exceeding 3m but not exceeding 4.5m	sqm	94.00
2.17	Close timbering over areas including strutting shoring and packing cavities (wherever required) etc. complete (measurements to be taken of the face area timbered):		
2.17.1	Depth not exceeding 1.5 m	sqm	71.00
2.17.2	Depth exceeding 1.5 but not exceeding 3 m	sqm	75.00
2.17.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	78.00
2.18	Extra for planking,strutting and packing materials for cavities (in close timbering) if requried to be left permanently in position (face area of timber permanently left to be measured.)	sqm	1061.00
2.19	Open timbering in trenches including strutting and shoring complete (measurements to be taken of the face area timbered):		
2.19.1	Depth nor exceeding 1.5 m	sqm	40.00
2.19.2	Depth exceedign 1.5 m but not exceeding 3 m	sqm	43.00
2.19.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	45.00

2.2	Open timbering in case of wells cesspits manholes and the like including strutting and shoring complete (Measurements to be taken face area timbered.):		
2.20.1	Depth not exceeding 1.5m	sqm	35.00
2.20.2	Depth exceeding 1.5 m but not exceeding 3m.	sqm	38.00
2.20.3	Depth exceeding 3m. but not exceeding 4.5m.	sqm	41.00
2.21	Open timbering over areas including strutting shoring etc. complete (Measurments tobe taken of the face area timbred)		
2.21.1	Depth not exceeding 1.5m	sqm	24.00
2.21.2	Depth exceeding 1.5 m but not exceeding 3m.	sqm	26.00
2.21.3	Depth exceeding 3m. but not exceeding 4.5m.	sqm	30.00
2.22	Extra for planking and strutting in open timbering in requried to be lef permanentely in postion. (Face area of the timber permanently left to be measured.)	sqm	534.00
2.23	Extra rate for quantities fo works executed.		
2.23.1	in or under water and/or liquid mud, including pumping out water as requried.	metre depth	20%
2.23.2	In or under foul position including pumping water as requried.	metre depth	25%
2.24	Filling availabel excavated earth (excluding rock) in trenches plinth sides of fundations etc.in layers not exceeding 20 cm in Depth.consolidating each deposited layer by ramming and watering lead up to 50 m and lift upto 1.5m	Cum.	56.00
2.25	Extra for every additioanl lift of 1.5m or part thereof in		
2.25.1	All kinds of soil	Cum.	23.00
2.25.2	Ordinary or hard rock	Cum.	41.00
2.26	supplying and filling in plinth with crusher stone dust/coarse sand under floors including watering ramming consolidating in layer not exceeding 20 cm in depth in layers not exceeding 20cm in depth and dressing complete.	Cum.	610.00
2.27	Supplying and filling in plinth with hard muram/hard copra under floors including watering ramming cosolidating and dressing complete.	Cum.	388.00
2.28	Exceeding holes upto 0.5cm including getting out the excavated soil then returning the soil as requried in layer not exceeding 20cm in depth. including cosolidating each deposited layer by ramming waterin etc. disposing fo surplus excavated soil. as directed within a lead of 50m. and lift upto 1.5cm		
2.28.1	All kinds of soil	each	66.00
2.28.2	Ordinary rock	each	107.00
2.28.3	Hard rock (requiring blasting)	each	194.00
2.28.4	Hard rock (blasting prohibited)	each	230.00
2.29	Diluting and injecting chemical emulsion for OSTCONSTRUCTIONAL anti-termite treatment 20% With chlorophysipuos/ lindare eusulsifiable concentrate including cost of emulsinfiable:		
2.29.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:		
2.29.1.1	With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration.	RM	36.00
2.29.2	Along the external wall below concrete or masonry apron using chemical emulsion @2.25 litres per linear metre including drilling and plugging holes etc.		
2.29.2.1	With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration.	RM	38.00
2.29.3	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 sand) to match the existing floor :		
2.29.3.1	With Chlorpyriphos/Lindane E.C. 20% with 1% concentration.	sqm	79.00
2.29.4	Treatment of existing masonry using chemical emulsion @ one litre per hole at 300 mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement : 2 sand) to the full depth of the hole :		

2.29.4.1	With Chlorpyriphos/Lindane E.C. 20% with 1% concentration.	metre	51.00
2.29.5	Treatment at points of contact of wood work by chemical emulsion Chlorpyriphos/ Lindane (in oil or kerosene based solution) @ 0.5 litres per hole by drilling 6 mm dia holes at downward angle of 45 degree at 150mm centre to centre and sealingthe same.	metre	135.00
2.3	Deduct for disposed soil not levelled and neatly dressed for all excavation item above	Cum.	17.00
2.31	Preconstruction curative Cum. preventive antitermite treatment to the building under construction by providing (i) surface treatment by spreading emulsion over the plinth area before laying the base concrete under floors @ 5.0 litres/Sqm.(ii) Pumping the emulsion in plinth masonry on filling side at floor junction @ 7.5 litres/Sqm. (iii) Pumping the emulsion from outer side of the plinth below ground alround the masonry @ 5.0 litres/Sqm as per I.S. 8944 Emulsion. (1Chlorpyrifos: 19 water) with five years service guarantee (Measurements to be taken for plinth area)	sqm	152.00
2.32	Making bore holes for providing dowel bars at designed depth in rock foundation by drilling 40 mm dia bore hole in rock including necessary bending hooking, in position and grouting with cement slurry etc. complete as per drawing and spectification. (Steel to be paid separately).	RM	225.00
	CHAPTER-III Mortars		
3.1	Cement mortar 1:2 (1 cement : 2 sand).	Cum.	4960.00
3.2	Cement mortar 1:3 (1 cement : 3 sand).	Cum.	4108.00
3.3	Cement mortar 1:4 (1 cement : 4 sand).	Cum.	3367.00
3.4	Cement mortar 1:5 (1 cement : 5 sand).	Cum.	2969.00
3.5	Cement mortar 1:6 (1 cement : 6 sand).	Cum.	2628.00
3.6	Cement mortar 1:2 (1 cement : 2 stone dust).	Cum.	4576.00
3.7	Cement mortar 1:2 (1 cement : 2 marble dust).	Cum.	5341.00
3.8	Cement mortar 1:5 (1 cement : 5 marble dust).	Cum.	2247.00
3.9	White cement mortar 1:2 (1 white cement : 2 marble dust).	Cum.	11130.00
3.10	White cement mortar 1:3 (1 white cement : 3 marble dust).	Cum.	8876.00
3.11	White cement mortar 1:5 (1 white cement : 5 marble dust).	Cum.	6035.00
	CHAPTER-IV Plain Cement Concrete		
4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All worki upto plinth level.		
4.1.1	With 20mm nominal size graded stone aggregate.		
4.1.1.1	M 25	Cum.	5791.00
4.1.1.2	M 20	Cum.	4406.00
4.1.1.3	M 15	Cum.	3926.00
4.1.1.4	M 10	Cum.	3335.00
4.1.2	With 40mm nominal size graded stone aggregate.		
4.1.2.1	M 15	Cum.	3866.00
4.1.2.2	M 10	Cum.	3258.00
4.1.2.3	M 7.5	Cum.	2928.00
4.1.2.4	M 5	Cum.	2646.00
4.1.3	With Flyash		
4.1.3.1	1:2:3½:9 (1 ordinary portland cement : 2 Fly ash : 3½ sand: 9 graded stone aggregate 40 mm nominal size)	Cum.	2836.00
4.1.3.2	1:2½:4:11 (1 ordinary portland cement : 2½ fly ash : 4 sand : 11 graded stone aggregate 40 mm nominal size)	Cum.	2538.00
4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. up to floor two level, excluding the cost of centering, shuttering and finishing :		
4.2.1	With 20mm nominal size graded stone aggregate		

4.2.1.1	M 25	Cum.	5992.00
4.2.1.2	M 20	Cum.	4645.00
4.2.1.3	M 15	Cum.	4189.00
4.2.1.4	M 10	Cum.	3611.00
4.2.2	With 40mm nominal size graded stone aggregate		
4.2.2.1	M 15	Cum.	4133.00
4.2.2.2	M 10	Cum.	3537.00
4.3	Centering and shuttering including strutting, propping etc. and removal of form work for :		
4.3.1	Foundations, footings, bases for columns.	sqm	146.00
4.3.2	Retaining walls,return walls,walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets etc.	sqm	222.00
4.3.3	Columns, piers, abutments, pillars, posts and struts.	sqm	229.00
4.4	Providing and laying cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centering, shuttering and finishing.		
4.4.1	M15 (With 20mm nominal size graded stone aggregrate)	Cum.	3926.00
4.4.2	M 10 (With 20mm nominal size graded stone aggregrate)	Cum.	3335.00
4.5	Providing and fixing up to floor two level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc. Including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 sand), cost of required centering, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 Cement : 3 sand) on exposed surfaces complete.		
4.5.1	M15 (With 20mm nominal size graded stone aggregate)	Cum.	5371.00
4.5.2	M10 (With 20mm nominal size graded stone aggregate)	Cum.	4851.00
4.6	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1 Cement : 3 sand) including the cost of required centering, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete.		
4.6.1	M15 (With 20mm nominal size graded stone aggregate)	Cum.	4732.00
4.7	Providing and fixing up to floor two level precast cement concrete solid block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 sand), cost of required centering, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete :		
4.7.1	M15 (With 20mm nominal size graded stone aggregate)	Cum.	6204.00
4.7.2	M10 (With 20mm nominal size graded stone aggregate)	Cum.	5683.00
4.8	Providing and fixing upto floor two level precast cement concrete hollow block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 sand), cost of required centering,shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete		
4.8.1	M15 (With 20mm nominal size graded stone aggregate)	Cum.	5399.00
4.8.2	M10 (With 20mm nominal size graded stone aggregate)	Cum.	5160.00
4.9	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggegate 12.5mm nominal size).	sqm	174.00
4.1	Providing and laying damp-proof course 50mm thick with cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size).	sqm	213.00
4.11	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50kg of cement.	per 50 kg cement	51.00
4.12	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	sqm	91.00
4.13	Extra for concrete work in superstructure above floor two level for each floors or part thereof.	Cum.	@ 1% of rate of concrete

4.14	Extra for laying concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	Cum. per meter depth	222.00
4.15	Extra for laying concrete in or under foul positions.	Cum.	86.00
4.16	Making plinth protection 50mm thick of cement concrete grade M 10 over 75mm bed of dry metal ballast 40mm nominal size well rammed and consolidated and filled with sand including finishing the top smooth (with 20mm nominal size graded stone aggregate.)	sqm	382.00
	CHAPTER-V **Reinforced Cement Concrete**		
5.1	Providing and laying in position specified grade of reinforced cement concrtete (with 20mm nominal size graded stone aggregate) excluding the cost of centering shuttering, finishing and reinforcement - All work up to plinth level.		
5.1.1	M 20 Nomial mix	Cum	4526.00
5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts suspended floor, roof slab, beams, etc. up to floor two level excluding cost of centering, shuttering, finishing and reinforcement :		
5.2.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	cum	4969.00
5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves,chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.		
5.3.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	cum	4442.00
5.4	Providing and laying up to floor two level reinforced cement concrete in kerbs, steps and the like excluding the cost of centering, shuttering, finishing and reinforcement with Concrete grade M20 Nomial mix (with 20mm normal size graded stone aggregade)	cum	4718.00
5.5	Reinforced cement concrete work in arches, archribs, domes, vaults, shells, folded plate and roofs having slope at any degree up to floor two level excluding the cost of centering, shuttering, finishing and reinforcement in Concrete grade.		
5.5.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	cum	4755.00
5.6	Add extra for reinforced cement concrete work in chimneys, shafts, up to floor two level excluding the cost of centering, shuttering, finishing and reinforcement.	cum	588.00
5.7	Reinforced cement concrete work in well-steining excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade		
5.7.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	cum	4576.00
5.8	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards up to floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.		
5.8.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	cum	3539.00
5.9	Centering and shuttering including strutting, propping etc. and removal of form for :		
5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.	sqm	146.00
5.9.2	Walls (any thickness) including attached pilasters butteresse s, plinth beams and string courses etc.up to plinth level.	sqm	222.00
5.9.3	Suspended floors, roofs, landings, balconies and access platform. Shelves (Cast in situ) Lintels, beams, beams, girders, bressumers and cantilevers, Columns, Pillars, Posts and Struts Walls in super structure.	sqm	229.00
5.9.4	All types of staircases including riser & landing.	sqm	285.00
5.9.5	Arches, domes, vaults up to 6 m span	sqm	795.00

5.9.6	Extra for arches, domes, vaults exceeding 6 m span	sqm	299.00
5.9.7	Chimneys and shafts	sqm	169.00
5.9.8	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards Weather shade, Chajjas, corbels etc., including edges.	sqm	298.00
5.9.9	Extra for shuttering in circular work or any other geometrical shape (20% of respective centering and shuttering items).	sqm	20% of respective item
5.9.10	Cornices and mouldings	sqm	371.00
5.9.11	Coffer / waffle slab of any size or shape as shown in the drawing.	sqm	817.00
5.1	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc. including cost of deshuttering and decentering at all levels, over a height of 4m, for every additional height of 1 metre or part thereof (Plan area to be measured)		
5.10.1	Suspended floors, roofs, landing, beams and balconies	sqm	130.00
5.11	Providing, hoisting and fixing up to floor two level precast reinforced cement concrete in shelves including setting in cement mortar 1:3 (1 cement : 3 sand), cost of required centering, shuttering and finishing with neat cement punning on exposed surfaces but excluding the cost of reinforcement with concrete grade M 15 (with 12.5 mm normal size graded stone aggregade)	cum	7941.00
5.12	Providing precast cement concrete Jali 1:2:4 (1cement :2sand:4 graded stone aggregate 6mm nominal size) reinforced with 1.6 mm dia mild steel wire including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1cement:3 fine sand) etc. complete excluding plastering of the jambs, ills and soffits.		
5.12.1	50 mm thick	sqm	500.00
5.12.2	40 mm thick	sqm	438.00
5.12.3	25 mm thick	sqm	428.00
5.13	Encasing rolled steel sections, in beams and columns, with cement concrete M 20 (1 cement:1.5 sand: 3 graded stone aggregate 20mm nominal size) including centering and shuttering complete but excluding cost of reinforcement.	cum	5996.00
5.14	Encasing rolled steel section in grillages with cement concrete M20 (1 cement: 1.5 sand: 3 graded stone aggregate 20 mm nominal size) including centering and shuttering but excluding cost of expanded metal and hangers.	cum	4155.00
5.15	Extra for providing and fixing expanded metal mesh of size 20x60mm and strands 3.25mm wide 1.6mm thick weighing 3.64 kg. per sqm. for encasing of rolled steel sections in beams, columns and grillages excluding cost of hangers.	sqm	412.00
5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire up to floor two level including all wastage etc. complete.		
5.16.1	Mild steel and Medium Tensile steel bars.	kilogram	48.00
5.16.2	Hard drawn steel wire	kilogram	54.00
5.16.3	Cold twisted bars (CTD)	kilogram	48.00
5.16.4	Hot rolled deformed bars	kilogram	48.00
5.16.5	Hard drawn steel wire fabric	kilogram	62.00
5.16.6	Thermo-Mechanically Treated bars.(TMT)	kilogram	48.00
5.17	Add extra for providing reinforcement above Floor two level for every additional floor or part there of.	kilogram	1% of the respective Item
5.18	Providing and fixing in position copper plate as per design for expansion joints.	kilogram	407.00
5.19	Providing and filling in position, blown bitumen in expansion joints 25mm thick.	sqm	450.00
5.2	Providing and filling in position bitumen mix filler of Proportion 80 kg. of hot bitumen, 1 kg. Of cement and 0.25 cubicmetre of sand for expansion joints 25 mm thick.	sqm	115.00

5.21	Providing and fixing in position 25 mm thick bitumen impregnated fibre board conforming to IS: 1838 including cost of primer, sealing compound in expansion joints.	sqm	404.00
5.22	Providing and fixing sheet covering over expansion joints with iron screws as per design to match the colour / shade of wall treatment.		
5.22.1	Non-asbestos fibre cement board 6mm thick as per IS:14862.		
5.22.1.1	150mm wide.	metre	82.00
5.22.1.2	200mm wide	metre	108.00
5.22.2	Aluminium fluted strips 3.15mm thick.		
5.22.2.1	150 mm wide.	metre	373.00
5.22.2.2	200 mm wide.	metre	495.00
5.23	Providing for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	metre	14.00
5.24	Extra for laying reinforced cement concrete in or under water and/ or liquid mud including cost of pumping or bailing out water and removing slush etc., complete.	Cum per	221.00
5.25	Extra for laying reinforced cement concrete in or under foul positions.	cum	82.00
5.26	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including all lift of concrete to si te of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. M-20 grade reinforced cement concrete by using 403 kg of cement per cum of concrete. All work upto floor II level.	cum	5014.00
5.27	Providing and laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for a lead up to 10kms having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS:9103 to accelerate/ retard setting of concrete, improve workability without impai ring strength and durability as per di rection of the Engineer-in-charge. M-20 grade Reinforced cement concrete by using 403kg of cement per Cum. of concrete. All works up to 50 mt height above plinth level	cum	5534.00
5.28	Add for providing richer mixes respectively at all floor levels.		
5.28.1	Providing M-25 grade concrete by using 410kg of cement per Cum. of concrete instead of M-20 grade B.M.C/ R.M.C	cum	35.00
5.28.2	Providing M-30 grade concrete by using 420kg of cement per Cum. of concrete instead of M-20 grade B.M.C/ R.M.C	cum	69.00
5.28.3	Providing M-35 grade concrete by using 428kg of cement per Cum. of concrete instead of M-20 grade B.M.C./ R.M.C	cum	124.00
5.28.4	Providing M-40 grade concrete by using 435kg of cement per Cum. of concrete instead of M-20 grade B.M.C./ R.M.C	cum	174.00
5.29	Add or deduct for using more/less cement respectively than the quantity as provided in the item of batch mix concrete / RMC as arrived as per mix design.	quintal	661.00
5.3	Extra for RCC work above floor II level for each floor or part there off.	cum	@1%of respective ithem
5.31	Extra for carriage of R.M.C. beyond the ini tial lead of 10km.	Cum/Km	24.00
	CHAPTER-VI Brick Work		
6.1	Brick work with well burnt chimney in bulls patent trench kiln manifactured by ghol process crushing strength not less than 40kg /sqcm and water absorption not more than 15% in foundation and plinth.		
6.1.1	Cement mortar 1:4 (1 cement : 4 sand)	cum	4102.00
6.1.2	Cement mortar 1:6 (1 cement : 6 sand)	cum	3888.00

6 .2	Brick work with well burnt chimney bricks in bulls patent trench kiln, crushing strength not less than 25kg /sqcm and water absorption not more than 20% in foundation and plinth		
6.2.1	Cement mortar 1:4 (1 cement : 4 sand)	cum	2708.00
6.2.2	Cement Mortar 1:6 (1 cement : 6 sand).	cum	2519.00
6.3	Brick work with well brunt open bhatta, bricks, crushing strength not less than 25kg /sqcm and water absorpt ion not more than 20% in foundation and plinth		
6.3.1	Cement Mortar 1:6 (1 cement : 6 sand).	cum	2248.00
6.4	Brick work with M.S. bricks of class designation 40 in superstructure above plinth level up to floor II level in all shapes and si ze s i n :		
6.4.1	Cement mortar 1:4 (1 cement : 4 sand)	cum	4347.00
6.4.2	Cement mortar 1:6 (1 cement : 6 sand)	cum	4139.00
6.5	Extra for brick work in superstructure above floor II level for each additional floor or part thereof.	cum	Add @ 1% of respective item
6.6	Extra for forming cavity 5cm to 7.5cm wide in cavity walls with necessary weep and vent holes including use of cores and cost of providing and fixing bitumastic coated M.S. ties 300mm long of 25x3mm section at not less than 3 ties per sqm as per approved design.	sqm	56.00
6.7	Brick work in plain arches in superstructure including centering and shuttering complete for span up to 6 metres with M.S. brick of class designation 40 in cement mortar 1:3 (1 cement : 3 sand).	cum	5918.00
6.8	Brick work in gauged arches in superstructure in cement mortar 1:3 (1 cement : 3 sand) including centering and shuttering complete, for span up to 6 meters with M.S. Brick of class designation 40.	cum	6816.00
6.9	Extra for additional cost of centering for arches exceeding 6m span including all shuttering, bolting, wedging and removal (Area of the soffit to be easured).	sqm	600.00
6.1	Half brick masonry with M.S. brick of class designation 40 in super structure above plinth level up to floor II level		
6.10.1	Cement mortar 1:3 (1 cement : 3 sand)	sqm	504.00
6.10.2	Cement mortar 1:4 (1 cement : 4 sand)	sqm	482.00
6.11	Half brick masonry with M.S. bricks of class designation 25 in superstructure above plinth level up to floor II level.		
6.11.1	Cement mortar 1:3 (1 cement :3 sand)	sqm	370.00
6.11.2	Cement mortar 1:4 (1 cement :4 sand)	sqm	347.00
6.12	Extra for half brick masonry in superstructure, above floor II level for every floor or part thereof respective item.	sqm	Add @ 1% of respective item
6.13	Extra for providing and placing in position 2 Nos. 8mm dia. M.S. bars at every third course of half brick masonry (with M.S. bricks	sqm	55.00
6.14	Honey-comb brick work 10 cm thick with bricks of class designation 40 in cement mortar 1:4 (1 cement : 4 sand).	sqm	386.00
6.15	Extra for laying brick work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete	cum	222.00
6.16	Extra for laying brick work in or under foul position	cum	86.00
6.18	Brick work with modular fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, class designation 100 average compressive strength in super structure above plinth level up to floor II level in :		
6.18.1	Cement mortar 1:4 (1 cement : 4 sand)	cum	4124.00
6.18.2	Cement mortar 1:6 (1 cement : 6 sand)	cum	2900.00

6.21	Providing and laying autoclaved aerated cement blocks masonry with 100mm thick AAC blocks in super structure above plinth level up to floor II level in cement mortar 1:4 (1 cement : 4 sand) The rate includes providing and placing in position 2 Nos. 8 mm dia M.S. bars at every third course of masonry work	cum	3747.00
6.22	Extra for AAC block masonry in superstructure above floor II level for every floor or part there of respective item.	cum	Add @ 1% of respective item

CHAPTER-VII
Stone Works

7.1	Random rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 Sand : 12 graded stone aggregate 20mm nominal size) at plinth level with :		
7.1.1	Cement mortar 1:6 (1 cement : 6 sand)	cum	2256.00
7.2	Extra for random rubble masonry with hard stone in superstructure above plinth level and upto floor two level, including leveling up with cement concrete 1:6:12 (1 cement : 6 sand : 12 graded stone aggregate 20mm nominal size) at window sills, ceiling level and the like.	cum	453.00
7.3	Extra for random rubble masonry with hard stone in superstructure above floor II level for every floors or part thereof	cum	Add @ 1% of respective item
7.4	Extra for random rubble masonry with hard stone in :		
7.4.1	Square or rectangular pillars	cum	170.00
7.4.2	Circular pillars.	cum	507.00
7.5	Extra for random rubble masonry with hard stone curved on plan for a mean radius not exceeding 6 m.	cum	286.00
7.6	Coursed rubble masonry foundation and plinth wi th : (f irst sort) wi th hard stone in		
7.6.1	Cement mortar 1:6 (1 cement : 6 sand)	cum	2471.00
7.7	Coursed rubble masonry (second sort) with hard stone in foundation & plinth with :		
7.7.1	Cement mortar 1:6 (1 cement : 6 sand)	cum	2340.00
7.8	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above plinth level and upto floor two level.	cum	445.00
7.9	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above floor II level for every floors or part thereof	cum	390.00
7.1	Extra for coursed rubble masonry with hard stone (first or second sort) in :		
7.10.1	Square or rectangular pi llars	cum	187.00
7.10.2	Circular pillars.	cum	574.00
7.11	Extra for coursed rubble masonry with hard stone(first or second sort) curved on plan for a mean radius not exceeding 6 m.	cum	228.00
7.12	Stone work in plain ashlar in super structure upto floor two level in cement mortar 1:6 (1 cement : 6 sand) including pointing with cement mortar 1:2 (1 white cement : 2 marble dust/sand) with an admixture of pigment matching the stone shade :		
7.12.1	One face dressed.		
7.12.1.1	Red sand stone	cum	16098.00
7.12.1.2	White sand stone	cum	16137.00
7.12.2	Both face dressed.		
7.12.2.1	Red sand stone.	cum	21352.00
7.12.2.2	White sand stone	cum	20223.00
7.13	Stone work plain ashlar in arches in cement mortar 1:3 (1 cement : 3 sand) including centering, shuttering and pointing with white cement mortar 1:2 (1 white cement : 2 marble dust/sand) with an admixture of pigment matching the stone shade.		
7.13.1	Red sand stone	cum	18590.00
7.13.2	White sand stone	cum	18768.00
7.14	Stone work plain ashlar in domes in cement mortar 1:3 (1 cement : 3 sand) including centering, shuttering and pointing with white cement mortar 1:2 (1 white cement : 2 marble dust/sand) with an admixture of pigment matching the stone shade.		
7.14.1	Red sand stone	cum	26672.00
7.14.2	White sand stone	cum	26849.00
7.15	Stone work ashlar punched (ordinary) in superstructure upto floor two level in cement mortar 1:6 (1 white cement : 6 sand) including pointing with cement mortar 1:2 (1 white cement : 2 stone dust/sand) with an admixture of pigment matching the stone shade.		

7.15.1	Red sand stone.		
7.15.1.1	One faced punched.	cum	15514.00
7.15.1.2	Double faced punched	cum	18875.00
7.15.2	White sand stone.		
7.15.2.1	Single face punched.	cum	15593.00
7.15.2.2	Double faced punched.	cum	19053.00
7.16	Extra for stone work, plain ashlar or ashlar punched above floor two level for every floor or part thereof.	cum	390.00
7.17	Extra for plain ashlar or ashlar punched in :		
7.17.1	Square or rectangular pi llars	cum	1198.00
7.18	Extra for stone work; plain ashlar or ashlar punched curved on plan with a mean radius not exceeding 6 m.	cum	833.00
7.19	Extra for additional cost of centering for arches exceeding 6m span including all strut ting, bol ting, wedging etc. and removal (area of soffit to be measured).	sqm	543.00
7.2	Stone work sunk or moulded or sunk and moulded upto floor Two level in cement mortar 1:6 (1 cement : 6 sand) including pointing with white cement mortar 1:2 (1 white : 2 marble dust/sand) with an admixture of pigment matching the stone shade :		
7.20.1	Red sand stone	cum	20881.00
7.20.2	White sand stone	cum	21350.00
7.21	Extra for stone work sunk or moulded or sunk and moulded or carved in :		
7.21.1	Triangular or Square or rectangular pillars	cum	2921.00
7.21.2	Circular or polygonal pillars	cum	4428.00
7.22	Extra for stone work sunk or moulded in cornices.	per metre per cm girth	12.00
7.23	Stone work (machine cut edges) for wall lining etc. (veneer work) backing filled with a grout of 12mm thick cement mortar 1:3 (1 cement : 3 sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust/sand) with an admixture of pigment matching the stone shade : (To be secured to the backing by means of cramps which shall be paid for separately) :		
7.23.1	Red sand stone - exposed face fine dressed with rough b a cki ng .		
7.23.1.1	70 mm thick.	sqm	1595.00
7.23.1.2	60 mm thick.	sqm	1387.00
7.23.1.3	50 mm thick	sqm	1312.00
7.23.1.4	40 mm thick.	sqm	1838.00
7.23.1.5	30 mm thick.	sqm	1101.00
7.23.2	Red sand stone - Exposed face machine cut and table rubbed with rough backing.		
7.23.2.1	70 mm thick.	sqm	1849.00
7.23.2.2	60 mm thick.	sqm	1761.00
7.23.2.3	50 mm thick	sqm	1673.00
7.23.2.4	40 mm thick.	sqm	16008.00
7.23.2.5	30 mm thick.	sqm	1550.00
7.23.3	White sand stone - exposed face fine dressed with rough backing .		
7.23.3.1	70 mm thick.	sqm	1474.00
7.23.3.2	60 mm thick.	sqm	1397.00
7.23.3.3	50 mm thick	sqm	1331.00
7.23.3.4	40 mm thick.	sqm	1243.00
7.23.3.5	30 mm thick.	sqm	1167.00
7.23.4	White sand stone - Exposed face machine cut and table rubbed with rough backing.		
7.23.4.1	70 mm thick.	sqm	1862.00
7.23.4.2	60 mm thick.	sqm	1786.00
7.23.4.3	50 mm thick	sqm	1709.00
7.23.4.4	40 mm thick.	sqm	1679.00
7.23.4.5	30 mm thick.	sqm	1555.00
7.24	Extra for stone work (veneer work) curved on plan with a mean radius not exceeding 6 m.	cum	1198.00

7.25	Providing and fixing stainless steel cramps of required size and shape for anchoring stone wall lining to the backing or securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 sand) including making the necessary chases in stone and holes in wall s wherever required.	kilogram	615.00
7.26	Providing and fixing stone dowels double wedge shape as per design in cement mortar 1:2 (1 cement : 2 sand) including making the necessary chases	each	25.00
7.27	Providing and fixing copper pins 7.5 cm long 6 mm diameter for securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 sand) including making the necessary chases.	each	22.00
7.28	Providing and fixing sloping chajja of stone 40 mm thick and upto 80 cm wide beyond the wall as measured along the slope in cement mortar 1:4 (1 cement : 4 sand) with 12mm diameter anchoring steel bar 45 cm long fixed in each stone and upported on and including with bricks cave of class designation 40 in cement mortar 1:4 (1 cement : 4 sand) including pointing in cement mortar 1:2 (1 white cement: 2 stone dust) wi th an admi xture of pigment matching the stone shade:		
7.28.1	Red sand stone:		
7.28.1.1	With M.S Bricks	sqm	817.00
7.28.2	White sand stone		
7.28.2.1	With M.S. bricks	sqm	817.00
7.29	Providing and fixing horizontal chajja of stone 40 mm thick and upto 80 cm project ion in cement mortar 1:4 (1 cement : 4 sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) wi th an admi xture of pigment matching the stone shade: :		
7.29.1	Red sand stone	sqm	516.00
7.29.2	White sand stone	sqm	516.00
7.3	30mm red sand stone sun-shade (chisel-dressed) supported on red sand stone brackets, fixed in walls with cement mortar 1:4 (1 cement : 4 sand) including finishing complete.	sqm	557.00
7.31	Providing and fixing red sand stone brackets 55x22.5x45cm sunk and moulded including roviding and fixing with 4 Nos. gun metal cramp 25x6mm 30 cm long and dowel bars 7.5 cm long 6 mm dia as per design.	each	1684.00
7.32	Stone work, plain in copings, cornices, string courses and plinth courses, upto 75 mm thick in Cement mortar 1:6 (1 cement : 6 sand) including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of igment matching the stone shade.		
7.32.1	Red sand stone	cum	2069.00
7.32.2	White sand stone	cum	2073.00
7.33	Providing and fi xing stone jali 40mm thi ck through out in cement mortar 1:3 (1cement :3 sand) including pointing in white cement mortar 1:2 (1white cement: 2 stone dust) with an admixture of pigment , matching the stone shade, jali slab without any chamfers etc		
7.33.1	Red sand stone	sqm	4544.00
7.33.2	White sand stone	sqm	4544.00
7.34	Extra for laying stone work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	CumKm	222.00
7.35	Extra for laying stone work in or under foul position.	cum	86.00
7.36	Wall lining butch work upto 10m height with red/ white sand stone 40 mm thick rough facing on the exposed surface with stone strips of minimum length 300 mm and requi red width including embedding every tenth layer and bottom most layer in masonry or concrete after making necessary chases of size 75x75mm and by providing layer of 75mm thick strips i/c 12mm thick bed of cement mortar 1:3 (1 Cement : 3 sand) i/c ruled pointing in cement mortar 1:2 (1 white cement: 2 stone dust) with an admixture of pigment to match the shade of stone complete as per direction of Engineer-in- charge.	sqm	1063.00

7.37	Stone work (machine cut edges) for wall lining upto 10 m height etc. (Veneer work) backing filled with a grout of 12mm thick cement mortar 1:3 (1 Cement : 3 sand) and jointed with Cement mortar 1:2 (1 cement : 2 stone dust) including rubbing and poli shing complete. (To be secured to the backing by means of cramps which shall be paid for separately)		
7.37.1	25mm thick Kota stone slabs exposed face dressed and rubbed.	sqm	945.00
7.38	Stone tile work for wall lining upto 10 m height with special adhesive over 12mm thick bed of cement mortar 1:3 (1 cement : 3 sand) including point ing in white cement with an admi xture of pigment to match the stone shade.		
7.38.1	8mm thick (mirror polished and machine cut edge)		
7.38.1.1	Grani te stone of any colour and shade.	sqm	1265.00
7.38.1.2	Raj Nagar plain white marble/ Udaipur green marble/ Zebra black marble.	sqm	1067.00
7.39	Extra for stone work for wall lining on exterior walls of height more than 10 m from ground level for every addi tional height of 3 m or part there of.	sqm	63.00
7.4	Providing and fixing dry cladding upto 10 metre heights with 30mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and/ or wi th the help of cramps, pins etc. and sealing the joints wi th approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately.)		
7.40.1	Red sand stone.	sqm	1121.00
7.40.2	White sand stone	sqm	1121.00
7.41	Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone) on walls at all heights using M.S. square/ rectangular tube in the required pattern as per architectural drawing including cost of cutting, bending, welding etc. The frame work shall be supported in wall with the help of MS brackets/ lugs of angle iron/ flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete block 1:2:4 (1 cement :2 sand :4 graded stone aggregate 20mm nominal size) of size 300x230x300mm including cost of necessary centring and shuttering and with approved expansion hold fasteners on CC/RCC surface including dril ling necessary holes. Approved cramps/ pins etc. shall be welded to the frame work to support stone cladding the steel work will be given a priming coat of Zinc primer as approved by Engineer-in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execut ion). The frame work shall be fi xed in true hori zontal & verti cal lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid	kilogram	101.00
7.42	Providing and fixing adjustable stainless steel cramps of approved quality and of required shape and size adjustable with stainless steel nuts bolts and washer (total weight not less than 260 gms) for dry stone cladding fixed on frame work at suitable location including making necessary recesses in stone slab, drilling requi red holes etc complete as per direction of the Engineer-in-charge.	each	350.00
	CHAPTER-VIII **Marble Works**		
8.1	Marble work gang saw cut (polished and machine cut) of thickness 16mm for wall lining (veneer work) in cement mortar 1:3 (1 cement : 3 sand) including pointing with while cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment to match the marble shade. (To be secured to the backing by means of cramps, which shall be paid for separately) At all floor levels .		
8.1.1	Raj Nagar Plain white marble/ Udaipur green marble/ Zebra black marble./ katni marble		
8.1.1.1	Area of slab upto 0.50 sqm	sqm	1820.00
8.1.1.2	Area of slab over 0.50 sqm	sqm	2070.00

8.2	Providing and fixing 16mm thick gang saw cut mi rror poli shed premoulded and prepolished) machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and pol i shing to edge to give high gloss finish etc. complete at all levels.(Sample to be got approved by Engineer-in-charge.		
8.2.1	Raj Nagar Plain white marble/ Udaipur green marble/ Zebra black marble/ katni marble		
8.2.1.1	Area of slab upto 0.50 sqm. But not less than 0.30 sqm	sqm	1566.00
8.2.1.2	Area of slab over 0.50 sqm.	sqm	1806.00
8.2.2	Granite of any colour and shade		
8.2.2.1	Area of slab upto 0.50 sqm But not less than 0.30 sqm	sqm	2892.00
8.2.2.2	Area of slab over 0.50 sqm.	sqm	3004.00
8.3	Providing edge moulding to 16mm thick marble stone counters, Vani ties etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in- Charge.		
8.3.1	Marble work	metre	109.00
8.3.2	Granite work.	metre	135.00
8.4	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive ncluding cleaning etc. complete.	metre	129.00
8.5	Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/Grani te/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	each	182.00
8.6	Mirror polishing on kota stone marble work/Granite work/stone work where ever required to give high glossy finish complete.	sqm	107.00
8.7	Providing and fi xing cramps of requi red si ze & shape in RCC/ CC backing with cement mortar 1:2 (1 cement :2 sand) including drilling necessary hole in stones and embedding the cramp in the hole (fastener to be paid separately).		
8.7.1	Gunmetal cramps.	kg	582.00
8.7.2	Stainless steel cramps.	kg	615.00
8.8	Providing and fixing expansion hold fasteners on C.C. /R.C.C. surface backing including drilling necessary holes and the cost of bolt etc complete.		
8.8.1	Wedge expansion type		
8.8.1.1	Fastener with threaded dia 6 mm.	each	20.00
8.8.1.2	Fastener with threaded dia 10 mm	each	22.00
8.8.1.3	Fastener with threaded dia 12 mm.	each	40.00
8.9	Stone tile (polished) work for wall lining over 12mm thick bed of cement mortar 1:3 (1 cement : 3 sand) and cement slurry @ 3.3 kg/sqm including pointing in white cement with pigment to mach the shade of stone etc. complete.		
8.9.1	8mm thick.		
8.9.1.1	Raj nagar plain whi te marble/ Udaipur green marble/ Zebra black marble.	sqm	986.00
8.9.1.2	Granite of any colour and shade.	sqm	1356.00
8.1	Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement: 2 sand: 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.		
8.10.1	White Agaria Marble Stone.	sqm	2872.00
8.10.2	Granite Stone of approved shade.	sqm	3289.00

CHAPTER-IX
Wood Work & PVC Work

9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position.		
9.1.1	Second class teak wood	cum	68608.00
9.1.2	Sal wood	cum	47780.00
9.1.3	Kiln seasoned and chemically treated Hollock wood.	cum	46580.00
9.2	Providing laminated veneer lumber conforming to IS:14616 and TAD -15: 2001 (Part B) in factory made frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position as per directions of Engineer-in-charge.	cum	110615.00
9.3	Providing wood work in frames of false ceiling, partitions etc. sawn and put up in position :		
9.3.1	Sal wood	cum	42626.00
9.3.2	Kiln seasoned and chemically treated Hollock wood	cum	44758.00
9.4	Extra for additional labour for circular works, such as in frames of fan light		
9.4.1	Second class teak wood	cum	6882.00
9.4.2	Sal wood	cum	4185.00
9.4.3	Kiln seasoned and chemically treated Hollock wood.	cum	4659.00
9.5	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws excluding, panelling which will be paid for separately.		
9.5.1	Second class teak wood		
9.5.1.1	35 mm thick shutters	sqm	2279.00
9.5.1.2	30 mm thick shutters	sqm	2004.00
9.5.2	Kiln seasoned and chemically treated Hollock wood.		
9.5.2.1	35 mm thick shutters	sqm	1295.00
9.5.2.2	30 mm thick shutters	sqm	1178.00
9.6	Providing and fixing 35 mm thick factory made laminated veneer lumber door shutter conforming to IS 14616 and TADS 15:2001 (Part B) including ISI marked black enameled M.S. butt hinges with necessary screws as per directions of Engineer-in-charge and panelling with panels		
9.6.1	12mm thick plain grade -1, medium density flat pressed three layer particle board FPT-I or graded wood parti cle board FPT-I IS: 3087 marked bonded wi th BWP type synthetic resin adhesive as per IS : 848	sqm	2279.00
9.6.2	12 mm thick pre-laminated particle board (decorative lamination on both sides) grade - 1, medium density flat pressed, three layer particle board FPT - I or graded wood particle board FPT - I, conforming to IS 3087 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre- laminated conforming to IS : 12823 Grade 1, Type - II marked:	sqm	2546.00
9.6.3	12 mm thick one side Pre-laminated particle board (decorative lamination on one side and other sides balancing lamination) grade layer particle board FPT - I or graded wood particle board - 1 medium density flat pressed, three FPT-1 conforming to IS : 3087 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-laminated conforming to IS : 12823 Grade -1, Type II marked:	sqm	2346.00
9.7	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or ebates to be easured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick :		
9.7.1	Second class teak wood	sqm	1822.00
9.7.2	Kiln seasoned and chemically treated Hollock wood	sqm	1033.00
9.7.3	Pl y wood 5 pl y, 9 mm thi ck :		
9.7.3.1	Decorative plywood both side decorative veneer (Type - I) conforming to IS 1328 BWR type.	sqm	1235.00

9.7.3.2	Decorative plywood one side decorative veneer and commercial veneer on other face (Type 1) conforming to IS 1328 BWR Type	sqm	1219.00
9.7.4	Ply wood 7 ply, 9 mm thick :		
9.7.4.1	Decorative plywood one side decorative veneer and commercial veneer on other face (Type 1) conforming to IS 1328 BWR Type	sqm	1379.00
9.7.5	Particle Board 12 mm thick		
9.7.5.1	Plain particle board flat pressed, 3 layer or graded wood particle board medium density Grade I, IS : 3087 marked.	sqm	669.00
9.7.5.2	Veneered flat pressed three layer or graded wood particle board with commercial veneering on both sides conforming to IS:3097, grade I.	sqm	884.00
9.7.5.3	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side, Grade-I, Type II IS: 12823 marked.	sqm	1164.00
9.7.5.4	Pre-laminated particle board with decorative lamination on both sides, Grade I, Type II, IS:12823 marked.	sqm	1235.00
9.8	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick. Coir veneer board (conforming to IS :14842-2000)		
9.8.1	12 mm thick	sqm	1044.00
9.9	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes including black enamelled ISI marked M.S butt hinges with necessary screws.		
9.9.1	Second class teak wood		
9.9.1.1	35 mm thick	sqm	2859.00
9.9.1.2	30 mm thick	sqm	2545.00
9.9.2	Kiln seasoned and chemically treated Hollock wood		
9.9.2.1	35 mm thick	sqm	1702.00
9.9.2.2	30 mm thick	sqm	1380.00
9.1	Providing and fixing factory made laminated veneer lumber glazed shutter conforming to IS: 14616 and TADS 15:2001 (Part B) , using 4mm thick float glass panes for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws as per directions of Engineer-in-charge		
9.10.1	30 mm thick shutters	sqm	1908.00
9.11	Extra for providing heavy sheet float glass panes instead of ordinary float glass in glazed doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured		
9.11.1	5.5 mm thick instead of 4 mm thi ck	sqm	160.00
9.12	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	181.00
9.13	Deduct for providing pin headed glass panes instead of ordinary float glass panes weighing 4 mm thick in doors, windows and clerestory windows, shutters (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	228.00
9.14	Extra for providing ISI marked Stainless Steel butt hinges instead of black enamelled M.S. but t hinges wi th necessary screws. (Shutter area to be measured).	sqm	140.00
9.15	Deduct if fixed shutters (without hinges) are provided instead of openable shutters for doors, windows or clerestory windows with		
9.15.1	Stainless steel but t hinges wi th stainless steel screws :		
9.15.1.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	128.00
9.15.2	Black enamelled MS butt hinges with necessary screws		
9.15.2.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	46.00
9.16	Providing and fi xing 25 mm thi ck shut ters for cup board etc. :		
9.16.1	Panelled or panelled & glazed shutters		

9.16.1.1	Second class teak wood including ISI marked anodised aluminium butt hinges with necessary screws.	sqm	2186.00
9.16.2	Glazed shutters :		
9.16.2.1	Second class teak wood including ISI marked anodised aluminium butt hinges with necessary screws.	sqm	2140.00
9.17	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I) or graded wood particle board IS : 3087 marked to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately) :		
9.17.1	12 mm thick	sqm	482.00
9.17.2	18 mm thick	sqm	623.00
9.18	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) parti cle board or graded wood parti cle board IS : 3087 marked with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately).		
9.18.1	18 mm thick	sqm	1093.00
9.18.2	25 mm thick	sqm	1214.00
9.19	Providing and fixing 25 mm thick shutters for cupboards etc. including ISI marked black enamelled M.S. butt hinges with necessary screws :		
9.19.1	Panelled or panelled and glazed shutters		
9.19.1.1	Second class teak wood	sqm	2110.00
9.19.2	Glazed shutters		
9.19.2.1	Second class teak wood	sqm	2240.00
9.2	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.		
9.20.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	sqm	1832.00
9.20.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	sqm	1699.00
9.20.3	5 mm thick (for cupboard) including ISI marked nickel plated bright fini shed M.S. Piano hinges IS : 3818 marked with necessary screws.	sqm	1678.00
9.21	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorati ve type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters :		
9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	1431.00
9.21.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	sqm	1283.00
9.21.3	25mm thick (for cupboard) including ISI marked nickel plated bright finished MS piano hinges with necessary screws.	sqm	1244.00
9.22	Extra for providing and fixing flush doors with decorative veneering		
9.22.1	On one side in i tem no. 9.21	sqm	261.00
9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured) Over item no. 9.20 and 9.21.	sqm	328.00
9.24	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :		
9.24.1	Rectangular or square.	sqm	127.00
9.24.2	Circular.	sqm	167.00
9.25	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).		
9.25.1	Decorative type door.	sqm	288.00

9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	sqm	76.00
9.27	Providing and fixing 35mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or/and black enamelled M.S. butt hinges with necessary screws :		
9.27.1	Second class teak wood.	sqm	2551.00
9.27.2	Kiln seasoned and chemically treated Hollock wood.	sqm	1559.00
9.28	Providing and fixing 35mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked stainless steel butt hinges with necessary screws :		
9.28.1	Second class teak wood.	sqm	2667.00
9.28.2	Kiln seasoned and chemically treated Hollock wood.	sqm	1674.00
9.29	Providing and fixing 30mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked Stainless Steel butt hinges with necessary screws :		
9.29.1	Second class teak wood.	sqm	2325.00
9.29.2	Kiln seasoned and chemically treated Hollock wood.	sqm	1477.00
9.3	Providing and fixing 30mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or /and black enamelled M.S. butt hinges with necessary screws :		
9.30.1	Second class teak wood.	sqm	2238.00
9.30.2	Kiln seasoned and chemically treated Hollock wood.	sqm	1389.00
9.31	Providing and fixing wire gauge laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 :2001 (Part B) using galvanised wire gauge with average width of aperture 1.4mm in both directions with wire of dia 0.63mm as per IS :1568 for doors, windows and clerestory windows including ISI marked bright finished or/ and black enamelled M.S. butt hinges with necessary screws as per directions of Engineer-in-charge		
9.31.1	35 mm thick shutters	sqm	2065.00
9.31.2	30 mm thick shutters	sqm	1812.00
9.32	Providing 50x50x50mm 2nd class teak wood plugs including cutting brick work and fixing in cement mortar 1:3 (1 cement : 3 fine sand) and making good the walls etc.	each	13.00
9.33	Providing and fixing expandable fasteners of specified size with necessary plastic sleeves and galvanised M.S. screws including drilling holes in masonry work /CC/ R.C.C. and making good etc. complete		
9.33.1	25 mm long	each	14.00
9.33.2	32 mm long	each	17.00
9.33.3	40 mm long	each	20.00
9.33.4	50 mm long	each	21.00
9.34	Providing and fixing 2nd class teak wood plain lining tongued and grooved on and including wooden plugs complete with necessary screws and priming coat on unexposed surface.		
9.34.1	40 mm thick.	sqm	4551.00
9.34.2	25 mm thick.	sqm	2916.00
9.34.3	20 mm thick.	sqm	2255.00
9.34.4	12 mm thick.	sqm	1423.00
9.35	Providing and fixing in wall lining flat pressed three layer (medium density) parti cle board or graded wood Pre-laminated one side decorative lamination on other side balancing lamination Grade I, Type II , IS : 12823 marked including priming coat on unexposed surface, with necessary fixing arrangement and screws etc. complete :		
9.35.1	12 mm thick	sqm	1017.00

9.35.2	18 mm thick	sqm	1186.00
9.35.3	25 mm thick	sqm	1311.00
9.36	Providing and fixing specified wood frame work consisting of battens 50x25mm fixed with rawl plug and drilling necessary holes for rawl plug etc. including priming coat complete.	cum	70810.00
9.36.1	Hollock wood		
9.37	Providing and fixing plywood 4 mm thick one side decorative veneer conforming to IS: 1328 (type-1) for plain lining / cladding with necessary screws, priming coat on unexposed surface with:		
9.37.1	Decorative veneer facings of approved manufacture.	sqm	722.00
9.38	Providing and fixing 4mm thick coir veneer board, ISI marked IS : 14842 - 2000, plain lining with necessary screws, priming coat on unexposed surface etc., complete.	sqm	642.00
9.39	Providing and fixing skirting of Pre-laminated with (one side decorative and other side balancing lamination) flat pressed, 3 layer or graded particle board (medium density) Grade I, Type II, IS :12823 marked, with necessary fixing arrangements and screws including drilling necessary holes for rawl plugs etc. and priming coat on nexposed surface complete		
9.39.1	18 mm thick	sqm	1300.00
9.39.2	25 mm thick	sqm	1425.00
9.4	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :		
9.40.1	2nd class teak wood		
9.40.1.1	50x12 mm	metre	125.00
9.40.1.2	50 x 20 mm	metre	120.00
9.40.2	Hollock wood		
9.40.2.1	50x12 mm	metre	55.00
9.40.2.2	50x20 mm	metre	74.00
9.41	Providing and fixing plain jaffri of 35x10 mm laths placed 35 mm apart (frames to be paid separately) including fixing 50x12 mm beading complete with :		
9.41.1	Second class teak wood.	sqm	1472.00
9.42	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 3087 marked including top cover of 6 mm commercial pl y wood conforming to IS: 303 BWR grade, ni ckel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets including fixing with 25x3 mm M.S. flat 10 cm long and rawl plugs 50 mm long (designation 10 no.) etc all complete	metre	309.00
9.43	Providing and fixing 18 mm thick, 150 mm wide pelmet of coir veneer board ISI marked IS : 14842 - 2000, including top cover of 6 mm coir veneer board, nickle plated M.S. Pipe 20 mm dia. (heavy type) curtain rod with ni ckel plated brackets including fixing with 25x3 mm M.S. Flat 10 cm long and rawl plug 50 mm long (designation 10 No.) etc., all complete	metre	392.00
9.44	Extra for using veneered part i cle board conforming to IS 3097 Grade I, in item of pelmet 18mm thick 150mm wide.		
9.44.1	Non decorat i ve veneer on both sides.	metre	30.00
9.44.2	Particle board with decorative veneering on both sides.	metre	87.00
9.45	Providing and fi xing teak wood lipping of si ze 25x3mm in pelmet .	metre	21.00
9.46	Providing and fixing curtain rods of 1.25 mm thick chromium plated brass plate, with two chromium plated brass brackets fixed with C.P. brass screws and wooden plugs, etc., wherever necessary compl ete :		
9.46.1	12 mm dia.	metre	238.00
9.46.2	20 mm dia.	metre	258.00
9.46.3	25 mm dia.	metre	370.00
9.47	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		
9.47.1	20 mm dia (heavy type)	metre	100.00
9.47.2	25 mm dia (heavy type)	metre	105.00

9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.		
9.48.1	Fixed to steel windows by welding.	kg	69.00
9.48.2	Fixed to openings /wooden frames with rawl plugs screws etc.	kg	75.00
9.49	Providing and fixing expanded metal 20x60mm strands 3.25mm wide and 1.6mm thick for windows etc. including 62x19mm beading of IInd class teak wood.	sqm	848.00
9.5	Providing and fixing hard drawn steel wire fabric 75x25 mm mesh of weight not less than 7.75 Kg per sqm to window frames etc. including 62x19 mm beading of second class teak wood.	sqm	895.00
9.51	Providing and fixing fly proof galvanised M.S. wire gauge to windows and clerestory windows using gal vani sed M.S. wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.		
9.51.1	With 2nd class teak wood beading 62X19 mm	sqm	731.00
9.51.2	With 12 mm mild steel U beading.	sqm	416.00
9.52	Add extra for providing S.S wire gauge of average width of aperture 1.4mm with wire gauge of 0.63mm instead of M.S wire gauge for item 9.27, 9.28, 9.29, 9.30, 9.51	sqm	209.00
9.53	Deduct for fixing 75x25 mm hard drawn steel wire fabric of weight not less than 7.75 Kg. per sqm in panelled and glazed door and window shutter instead of glass sheet 4 mm thick.	sqm	8.00
9.54	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal si ze)	each	54.00
9.55	Providing beams including hoi st ing, fi xing in posi tion and applying wood preservative for the unexposed surfaces, etc. complete with :		
9.55.1	Sal wood.	cum	41494.00
9.55.2	Hollock wood.	cum	42585.00
9.56	Providing and fixing ISI marked M.S. pressed butt hinges bright finished with necessary screws etc. complete :		
9.56.1	125x65x2.12 mm	each	24.00
9.56.2	100x58x1.90 mm	each	9.00
9.56.3	75x47x1.70 mm	each	8.00
9.56.4	50x37x1.50 mm	each	3.00
9.57	Providing and fixing IS : 1341 marked M.S. heavy weight but thinges with necessary screws etc. complete :		
9.57.1	125x65x2.12 mm	each	43.00
9.57.2	100x58x1.90 mm	each	25.00
9.57.3	75x47x1.70 mm	each	15.00
9.57.4	50x37x1.50 mm	each	8.00
9.58	Providing and fixing ISI marked oxidised M.S. pressed butt hinges with necessary screws etc. complete.		
9.58.1	125x65x2.12 mm	each	23.00
9.58.2	100x58x1.90 mm	each	15.00
9.58.3	75x47x1.70 mm	each	12.00
9.58.4	50x37x1.50 mm	each	6.00
9.59	Providing and fixing ISI marked oxidised M.S. pressed Parliamentary hinges with necessary screws etc.complete :		
9.59.1	125x65x2.12 mm	each	53.00
9.59.2	100x58x1.90 mm	each	39.00
9.59.3	75x47x1.70 mm	each	35.00
9.59.4	50x37x1.50 mm	each	31.00
9.59A	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete :		
9.59A.1	150 mm	each	127.00
9.59A.2	125 mm	each	117.00
9.59A.3	100 mm	each	85.00
9.6	Providing and fixing oxidised M.S. double acting spring hinges with necessary screws etc. complete.		
9.60.1	150 mm	metre	114.00

9.60.2	125 mm	metre	100.00
9.60.3	100 mm	metre	69.00
9.61	Providing M.S. Piano hinges ISI marked IS : 3818 finished with nickel plating and fixing with necessary screws etc., complete		
9.61.1	Overal l width 35 mm	metre	97.00
9.61.2	Overal l width 50 mm	metre	95.00
9.61.3	Overal l width 65 mm	metre	102.00
9.62	Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete :		
9.62.1	300x16 mm	each	107.00
9.62.2	250x16 mm	each	99.00
9.63	Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete :		
9.63.1	250x10 mm	each	58.00
9.63.2	200x10 mm	each	40.00
9.63.3	150x10 mm	each	28.00
9.63.4	100x10 mm	each	22.00
9.64	Providing and fixing ISI marked 85x42mm oxidised M.S. pull bolt lock conforming to IS : 7534 with necessary screws bolts, nut and washers etc. complete.	each	62.00
9.65	Providing and fixing ISI marked oxidised M.S. door latches conforming to IS:5930 with screws etc. complete :		
9.65.1	300x20x6 mm	each	60.00
9.65.2	250x20x6 mm	each	55.00
9.66	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete :		
9.66.1	125 mm	each	18.00
9.66.2	100 mm	each	10.00
9.66.3	75 mm	each	9.00
9.67	Providing and fixing oxidised M.S. hasp and staple (safety type) conforming to IS : 363 with necessary screws etc. complete :		
9.67.1	150 mm	each	16.00
9.67.2	115 mm	each	15.00
9.67.3	90 mm	each	13.00
9.68	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete.		
9.68.1	300 mm weighing not less than 200 gms.	each	44.00
9.68.2	250 mm weighing not less than 150 gms.	each	38.00
9.68.3	200 mm weighing not less than 120 gms.	each	33.00
9.69	Providing and fixing oxidised M.S. Safety chain with necessary fixtures for doors. (Weighting not less than 450 gms.)	each	110.00
	STAINLESS STEEL FITTINGS		
9.7	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :		
9.70.1	125x65x2.12 mm	each	56.00
9.70.2	100x58x1.90 mm	each	45.00
9.70.3	75x47x1.70 mm	each	31.00
9.70.4	50x37x1.50 mm	each	29.00
9.71	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		
9.71.1	125x64x2.50 mm	each	64.00
9.71.2	100x60x2.50 mm	each	46.00
9.71.3	75x50x2.50 mm	each	35.00
9.72	Providing and fixing bright finished brass butt hinges with necessary screws etc. complete :		
9.72.1	125x85x5.5 mm (heavy type)	each	589.00
9.72.2	125x70x4 mm (ordinary type)	each	114.00
9.72.3	100x85x5.5 mm (heavy type)	each	497.00
9.72.4	100x70x4 mm (ordinary type)	each	85.00
9.72.5	75x65x4 mm (heavy type)	each	173.00
9.72.6	75x40x2.5 mm (ordinary type)	each	40.00
9.72.7	50x40x2.5 mm (ordinary type)	each	25.00

9.73	Providing and fixing bright finished brass parliamentary hinges with necessary screws etc. complete :		
9.73.1	150x125x27x5 mm	each	453.00
9.73.2	125x125x27x5 mm	each	427.00
9.73.3	100x125x27x5 mm	each	405.00
9.73.4	75x100x20x3.2 mm	each	311.00
9.74	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :		
9.74.1	250x10 mm	each	282.00
9.74.2	200x10 mm	each	252.00
9.74.3	150x10 mm	each	192.00
9.74.4	100x10 mm	each	136.00
9.75	Providing and fixing bright finished brass door latch with necessary screws etc. complete :		
9.75.1	300x16x5 mm	each	214.00
9.75.2	250x16x5 mm	each	200.00
9.76	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	442.00
9.77	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	401.00
9.78	Providing and fixing bright finished brass night latch including necessary screws etc. complete (best make of approved quality).	each	1109.00
9.79	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers including necessary screws etc. complete (best make of approved quality) :		
9.79.1	40 mm	each	128.00
9.79.2	50 mm	each	154.00
9.79.3	65 mm	each	161.00
9.79.4	75 mm	each	194.00
9.8	Providing and fixing 50 mm bright finished brass cup board or wardrobe knob with necessary screws (best make of approved quality)	each	177.00
9.81	Providing and fixing bright finished brass handles with screws etc. complete :		
9.81.1	125 mm	each	122.00
9.81.2	100 mm	each	113.00
9.81.3	75 mm	each	86.00
9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	each	130.00
9.83	Providing and fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	each	803.00
9.84	Providing and fixing IS : 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete.	each	1070.00
9.85	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	each	60.00
9.86	Providing and fixing bright finished brass ca sement stays (straight peg type) with necessary screws etc. complete :		
9.86.1	300 mm weighing not less than 330 gms	each	148.00
9.86.2	250 mm weighing not less than 280 gms	each	131.00
9.86.3	200 mm weighing not less than 240 gms	each	114.00
9.87	Providing and fixing bright finished brass hasp and staple (safety type) with necessary screws etc.complete:		
9.87.1	150 mm	each	150.00
9.87.2	115 mm	each	122.00
9.87.3	90 mm	each	98.00
9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	775.00

9.89	Providing and fixing chromium plated brass night latch including necessary screws etc. complete (Best make of approved quality).	each	708.00
9.9	Providing and fixing special quality chromium plated brass cupboard locks with six levers including necessary screws etc.complete (Best make of approved quality) of :		
9.90.1	Size 40 mm	each	154.00
9.90.2	Size 50 mm	each	161.00
9.90.3	Size 65 mm	each	194.00
9.90.4	Size 75 mm	each	201.00
9.91	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	each	49.00
9.92	9.92 Providing and fixing chromium plated brass handles with necessary screws etc. complete:		
9.92.1	125 mm	each	213.00
9.92.2	100 mm	each	173.00
9.92.3	75 mm	each	127.00
9.93	Providing and fixing chromium plated brass ca sement window fastenerwith necessary screws etc. complete.	each	86.00
9.94	Providing and fixing chromium plated brass casement stays (straight peg type) with necessary screws etc. complete :		0.00
9.94.1	300 mm weighing not less than 330 gms	each	274.00
9.94.2	250 mm weighing not less than 280 gms	each	247.00
9.94.3	200 mm weighing not less than 240 gms	each	221.00
9.95	Providing and fixing ISI marked aluminium butt hinges ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:		
9.95.1	125x75x4 mm	each	89.00
9.95.2	125x63x4 mm	each	85.00
9.95.3	100x75x4 mm	each	77.00
9.95.4	100x63x4 mm	each	74.00
9.95.5	100x63x3.2 mm	each	77.00
9.95.6	75x63x4 mm	each	49.00
9.95.7	75x63x3.2 mm	each	45.00
9.95.8	75x45x3.2 mm	each	24.00
9.96	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :		
9.96.1	300x16 mm	each	183.00
9.96.2	250x16 mm	each	155.00
9.97	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
9.97.1	300x10 mm	each	83.00
9.97.2	250x10 mm	each	74.00
9.97.3	200x10 mm	each	63.00
9.97.4	150x10 mm	each	68.00
9.97.5	100x10 mm	each	39.00
9.98	Providing and fixing aluminium pull bolt lock anodised ISI marked (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour and shade with necessary screws bolts, nut and washers etc. complete.	each	120.00
9.99	Providing and fixing 50cm long aluminium kicking plate 100x3.15 mm anodised (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour or shade with necessary screws etc. complete.	each	158.00

9.1	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
9.100.1	125 mm	each	56.00
9.100.2	100 mm	each	40.00
9.100.3	75 mm	each	32.00
9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete		
9.101.1	Single rubber stopper	each	44.00
9.101.2	Twin rubber stopper	each	56.00
9.102	Providing and fixing aluminium casement stays ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour and shade with necessary screws etc. complete.	each	98.00
9.103	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of pproved quality).	each	817.00
9.104	Providing and fixing aluminium tee channels (heavy duty) with rollers, stop end in pelmets as curtain rod.	metre	83.00
	GYPSUM BOARD PARTITIONS		
9.105	Providing and fixing partition upto ceiling height onsisting of G.I. frame and required board including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of grade 175 in consisting of floor and ceiling channel 50mm wide having equal flanges of 32mm and 0.5mm thick fixed to the floor and ceiling at the spacing of 610mm centre to centre with dash fastener of 12.5mm dia meter 40mm length and the studs 48mm wide having one flange of 34mm and other flange 6mm and 0.50mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610mm centre to centre by 6mm dia bolts and nuts at both ends of partition fixed flush to wall with rawl plugs at spacing of 450mm centre to centre and fixing of boards to either side of frame work by 20mm long drive wall crews on 300mm centre to studs, floor and ceiling channels at the spacing of centre, including jointing and finishing to a flush finish with ecommended jointing compound, jointing tape, joint finisher and two coats of primer suitable for board as per manufacture's specification all complete.		
9.105.1	67mm overall thickness partition with 8.5mm thick double skin glass reinforced Gypsum (GRG) board conforming to IS: 2095: part III.	sqm	1727.00
9.105.2	75mm overall thickness partition with 12.5mm thick double skin plain Gypsum board conforming to IS: 2095: part I	sqm	909.00
9.105.3	66mm overall thickness Partition with 8mm thick double skin Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process with Compressive Strength 225 kg/sq.cm, Bending Strength 100 kg/ sg.cm.	sqm	1082.00
9.105.4	66mm overall thickness partition using 8mm thick double skin non- asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (High pressure steam cured) as per IS: 14862 with suitable fibre cement screw	sqm	1163.00
9.106	Providing and fixing PTMT handles with necessary screws etc. complete.		
9.106.1	125x34x24 mm weighing not less than 23 gms	each	44.00
9.106.2	150x34x24 mm weighing not less than 26 gms	each	48.00
9.107	Providing and fixing PTMT Butt hinges with necessary screws tc. complete.		
9.107.1	75x60x10 mm fitted with 5.5 mm dia M.S. Bright Bar Rod weighing not less than 34 gms	each	60.00
9.107.2	100x75x10 mm fitted with 5.5 mm dia MS Bright Bar Rod weighing not less than 53 gms.	each	78.00

9.108	Providing and fixing PTMT Tower Bolts with 12 mm one piece rod inside and necessary screws etc., complete.		
9.108.1	152x42x18 mm weighing not less than 60 gms.	each	91.00
9.108.2	202x42x18 mm weighing not less than 78 gms.	each	105.00
9.109	Providing and fixing PTMT door catcher of length 72mm and dia. of 42mm with suitable washers weighing not less than 33gms.	each	35.00
9.11	Providing and fixing Bamboo jaffery/ fencing consisting of superior quality 25mm dia (Average) half cut bamboo placed vertically and fixed together with three numbers horizontal running members of hollock wood in scantling of section 50X25mm fixed with nails and G.I wire to existing surface complete as per direction of Engineer-in-charge.	sqm	1679.00
9.111	Providing and fixing wooden moulded corner beading of triangular shape to the junction of panelling etc. with iron screws,plugs and priming coat on unexposed surface etc. complete 2nd class teak wood.		
9.111.1	50x50mm (base and height).	metre	76.00
9.112	Providing and fixing 2nd class teak wood lipping/ moulded beading or taj beading of size 18X5mm fixed with wooden adhesive of approved quality and screws/ nails on the edges of the Pre-laminated particle board as per direction of Engineer-incharge.	metre	26.00
9.113	Providing and fixing bright finished 100mm mortice lock with 6 levers without pair of handles for aluminium door with necessary screws etc complete (Best make of approved quality) as per direction of Engineer-in- charge.	each	254.00
9.114	Providing and fixing magnetic catcher in cupboard / ward robe shutters including fixing with necessary screws etc. Complete (Best make of approved quality.		
9.114.1	Triple strip vertical type.	each	23.00
9.114.2	Double strip (horizontal type).	each	20.00
9.115	Providing and fixing powder coated telescopic drawer channels with necessary screws etc. complete as per directions of Engineer-in-charge.		
9.115.1	300MM long	Pair	170.00
9.115.2	450 MM long	Pair	230.00
9.115.3	500 MM long	Pair	281.00
9.116	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by P/F stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	each	16.00
9.117	Providing and fixing factory made PVC door frame made of PVC extruded section having an overall dimension as below (tolerance ±1mm) with wall thickness 2.0mm ± 0.2mm, corners of the door frame to be mitred and welded of plastic, galvanized brackets and stainless steel screws. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19mm and 1mm ± 0.1mm wall thickness and 3 nos.stainless steel hinges fixed to the frame complete as per manufacturers specification and direction of Engineer-in-charge		
9.117.1	Extruded section profile size 48x40 mm.	metre	167.00
9.117.2	Extruded section profile size 50x42 mm	metre	176.00
9.118	Providing and fixing to existing door frames		

9.118.1	24 mm thick factory made PVC door shutters made of styles and rails of a PVC hollow section of size 59x24 mm and wall thickness 2 mm ± 0.2 mm with inbuilt edging on both sides. The styles and rails mitred and joined at the corners by means of M.S. anised/plastic brackets of size 5x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm ± 0.1 mm wall thickness.The lock rail made up of 'H' section, a PVC hollow section of size 100x24 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of stic/galvanised M.S. 'U' cleats. The shutter frame filled. with a PVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in- charge. (For W.C. and bathroom door shutter).	sqm	2550.00
9.118.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a PVC hollow section of size 60x30 mm and wall thickness 2 mm ± 0.2 mm with inbuilt corative moulding edging on one side. The styles and rails mitred and joined at the corners by means of M.S.galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a PVC hollow section of size 100x30 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats.The shutter frame filled with a PVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and astened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	sqm	2750.00
9.118.3	25mm thick PVC flush door shutters made out of a one piece Multi chamber extruded PVC section of the size of 762mm X 25mm or less as per requirement with an average wall thickness of 1mm ± 0.3mm. PVC foam end cap of size 23x10mm are provided on both vertical edges to ensure the overall thickness of 25mm. An M.S. tube having dimensions 19mm x 19mm is inserted along the hinge side of the door. Core of the door shutter should be filled with High Density Polyurethane foam. The Top & Bottom edges of the shutter are covered with an end-cap of the size 25MM X 11MM. Door shutter shall be reinforced with special polymeric reinforcements as per manufactures' specification and direction of Engineer-in-charge to take up necessary hardware and fixtures. Stickers indicating the locations of hardware will be pasted at appropriate places	sqm	2883.00
9.119	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size complete as per manufacturers specification and direction of Engineer-in-Charge.	metre	439.00

9.12	Providing and fixing to existing door frames.		
9.120.1	30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top,bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2)thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S.frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in- charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter).	sqm	2516.00
9.120.2	30mm thick factory made solid both side Pre-laminated panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5mm thick heat moulded Pre-laminated PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side Prelaminated PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per irection of Engineer-in-charge. Manufacturer's specification & drawing bathroom door hutter).	sqm	2916.00
9.121	Providing and fixing of Fiber Glass Reinforced plastic (FRP) Door Frames of three legged of cross-section 90mm x 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness .The laminate doorframe molded with fire resistant grade unsaturated polyester resin and chopped mat .Doorframe laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiberglass from all sides. M.S. stay shall be provided at the bottom to steady the frame.	metre	475.00
9.122	Providing and fixing to existing door frames.		
9.122.1	30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5mm thick FRP laminate for panels and conforming to IS: 14856 - 2000 including fixing to frames.	sqm	2248.00

9.122.2	30mm thick fiberglass reinforced plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin,moulded to 3mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF) /Polystyrene foam to be used as filler material throughout the hollow panel,casted monolithically with testing parameters of F.R.P. laminate conforming to table - 3 of IS: 14856 : 2000, complete as per direction of Engineer-in-charge.Providing and fixing factory made door frame (single rebate) made of solid	sqm	2916.00
9.123	PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 60mm width & 30mm thickness and shall be fixed to wall as per instructions of engineer-in-charge using 100x8 sheet metal CSK screws	metre	501.00
9.124	Providing and fixing 28 mm thick door shutter made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 71mm width & 28mm thick as styles and rails. Joints are made using solvent adhesive and GI 'C' sections (39mm x 19mm x 0.6mm thick) or M S pipe (40mm x 20mm) stiffener frame insert & telescopic polymeric 'L' corners .The panel shall be filled with 3mm thick high - pressure compact laminate as per manufacturer's specifications and direction of Engineer-in-charge, cover moulding shall be provided for covering fixing screws and elegant look.(for W.C. and bathroom door shutter).	sqm	2916.00
9.125	Providing and fixing PVC rigid foam sheet 1mm thick on existing door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive.	sqm	499.00
9.126	Providing and fixing 12mm thick panelling or panelling and glazing in panelled or panelled and glazed shutters for doors,windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25mm to 40mm thick		
9.126.1	Marine plywood of lamination / painting quality and conforming to IS: 710	sqm	1419.00
9.126.2	Fire retardant plywood of lamination / painting quality conforming to IS: 5509. Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality onforming to IS : 2046 Type S including cost of adhesive of approved quality	sqm	1331.00
9.127	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of aproved quality		
9.127.1	1.5 mm thick.	sqm	760.00
9.127.2	1.0 mm thick.	sqm	650.00
9.128.	Providing and fixing factory made Fiberglass Reinforced plastics (F.R.P.) chajja 4mm thick of required colour, size and design made by Resin Transfer Moulding (RTM) Machine Technology, resulting in void free compact laminate in single piece, having smooth gradual slope curvature for easy drainage of water and duly reinforced by 2nos. vertically and 1nos. horizontally 50x2mm thick M.S. flat with 12mm in built hole for grouting on the existing wall along with the 50mm flanges duly inserted and sealed in the wall complete in one single piece casted ,including all necessary fittings . The FRP Chajja should be manufactured using unsaturated Polyester resin as per IS: 6746 duly reinforced with fibre glass chopped strand mat (CSM) as per IS: 11551 complete with protective Gel coat U/V coating on Top for complete resistance from the xtreme of temperature, weather & sunlight,	sqm	5320.00

9.129	Providing and fixing cup board shutters 25mm thick, with Prelaminated flat pressed three layer particle board or graded wood particle board IS: 12823 marked exterior grade (Grade l Type ll) having one side decorative lamination and other side balancing lamination including IInd class teak wood lipping of 25mm wide x12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of the Engineer-in-Charge	sqm	1319.00
9.13	Providing and fixing cup board shutters with 25mm thick veneered particle board IS : 3097 marked exterior grade (Grade I) of approved make including IInd class teak wood lipping of 25mm wide x 12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of Engineer-in-Charge.		
9.130.1	With decorative veneering on one side and commercial veering on other side.	sqm	1072.00
9.130.2	With non decorative veneering on both sides.	sqm	965.00
9.131	Providing and fixing factory made Pre-laminated particle board flat pressed three layer or graded wood particle board with one side decorative finish and other side balancing lamination conforming to IS: 12823 Grade l Type ll, of approved design, and edges sealed with water resistant paint and lipped with aluminium 'U' type edge beading all-round the shutter, including fixing with angle cleat, grip strip, cadmium plated steel screws including fixing of aluminium hinges 100x63x4 mm etc. complete as per architectural drawing and direction of Engineer-in-Charge (Cost of 'U' beading and hinges will be paid for separately).		
9.131.1	25 mm thick.	sqm	1050.00
9.132	Providing and fixing aluminum U beading of required size to Prelaminated /flush door shutter including fixing etc. complete as per direction of Engineer-in-charge.	kg	413.00
9.133	Providing and fixing, in position concealed G.I. section for wall paneling using board of required thickness fixed on the 'W' profile (0.55mm thick) having a knurled web of 51.55mm and two flanges of 26mm each with lips of 10.55 mm placed @ 610mm C/C in perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm. Perimeter channel is fixed on the floor and the ceiling with the nylon sleeves @ 610mm C/C with fully threaded self- tapping drywall screws. Board is fixed to the 'W' profile with 25 mm countersunk ribbed head screws @ 200mm C/C., all complete as per the drawing & directions of engineer-in-charge the joints of the boards are finished with specially formulated jointing compound and 48mm wide jointing tape to provide seamless finish.		
9.133.1	Tapered edge calcium silicate board made with calcareous & siliceous materials reinforced with cellulose fiber manufactured through autoclaving process to give stable crystalline structure with compressive strength 225 kg/sq.cm, Bending strength 100 kg/sq.cm.		
9.133.1.1	10mm thick.	sqm	779.00
9.133.2	Non -asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (high pressure steam cured) as per IS 14862 with suitable fibre cement screw.		
9.133.2.1	8 mm thick.	sqm	631.00
9.133.3	Gypsum board conforming to IS: 2095 - 1996:Part -I		
9.133.3.1	12.5 mm thick.	sqm	493.00

9.134	Providing and fixing to existing door frames Polywood 24mm thick factory made PVC door shutters made of styles and rails of a pvc hollow section of size 59X24mm and wall thickness 2mm±0.2mm with inbuilt edging on both sides.The styles and rails mitred and joined at the corners by means of M.S.galvanized\Plastic brackets of size 75X220mm and 1mm stainless steel screws.The styles of the shutter reinforced ny inserting galvanized M.S.tube of size 20X20mm and 1mm±0.1mm wall thickness.The lock rail made up of 'H' section,a PVC hollow section of size 100X24mm and 2mm±0.2mm wall thickness fixed to the shutter styles by means of plastic/galvanized M.S.'U' cleats. The shutter frame filled with a PVC multi-chambered single panel of size not less 620mm having over all thickness of 20mm and 1mm±0.1mm wall thickness.The panels filled vertically and tie bar at two places by inserting horizontally 6mm galvanized M.S.rod and fastened with nuts and washers,complete as per cturer's specification and direction of Engineer-in-charge.(for W.C.and bathroom door shutter).	sqm	2415.00
9.135	Providing and fixing to existing door frame Polywood 30mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a PVC hollow section of size 60X30mm and wall thickness 2mm±0.2mm with inbuilt decorative moulding edging on one side.The styles and rails mitred and joined at the corners by means of M. S. galvanized/plastic brackets of size 75x220 mm having wall thickness 1.0mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanized M. S. tube of size 20x20 mm an d 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a PVC hollow section of size 100x30 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/galvanized M.S 'U' cleats. The shutter frame filled with a PVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm anized M. S rod and fastened with nuts and washers, complete as per manufactuer's specification and direction of Engineer-in-charge.	sqm	2760.00
9.136	Providing and fixing to existing door frame Polywood 38mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a PVC hollow section of size 90X38mm and wall thickness 2mm±0.2mm. The styles and rails mitred and joined at the corners by means of M. S. galvanized/plastic brackets of size 75x220 mm having wall thickness 1.0mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanized M. S. tube of size 25x20 mm and 1 mm ±0.1 mm wall thickness. The lock rail made up of 'H' section, a PVC hollow section of size 105x38 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/galvanized M.S 'U' cleats. The shutter frame filled with a PVC multi-chambered PVC panel of size 100CX20 MM with 1.2 mm ± 0.1 mm wall thickness., complete as per manufactuer's specification and direction of Engineer-in-charge.	sqm	2875.00
9.137	Providing and fixing Polywood factory made PVC door frame made of PVC extruded section having an overall dimension as below (tolerance ± 1mm) with wall thickness 2.00mm±0.2mm,corners of the door frame to be mitred and welded of plastic, galvanized brackets and stainless steel screws.The hinge side vertical of the frames reinforced by galvanized M.S.tube of size 19 X 19mm and 1mm±0.1mm wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per facturers specification and direction of Engineer-in-charge.		
9.137.1	Extruded section profile size 48X40mm.	Rmtr	223.00
9.137.2	Extruded section profile size 42X50mm.	Rmtr	223.00

9.138	Providing and fixing Polywood factory made PVC door frame made of PVC extruded section having an overall dimension as below (tolerance ± 1mm) with wall thickness 2.00mm±0.2mm, corners of the door frame to be mitred and joined at the corners by means of plastic, galvanized brackets and stainless steel screws.The hinge side vertical of the frames reinforced by galvanized M.S.tube of size 19 X 38 mm and 1mm±0.1mm wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per nufacturers specification and direction of Engineer-in-charge.		
9.138.1	Extruded section profile size 50X60mm	Rmtr	265.00
9.139	Providing and fixing Polywood factory made PVC door frame made of PVC extruded section having an overall dimension as below (tolerance±1mm) with wall thickness 2.00mm±0.2mm, corners of the door frame to be mitred and joined at the corners by means of plastic, galvanized brackets and stainless steel screws.The hinge side vertical of the frames reinforced by galvanized MS.tube of size 19X38mm and 1mm±0.1mm wall thickness and 3nos. stainless steel hinges fixed to the frame complete as per nufacturers pecification and direction of Engineer-in-charge.		
9.139.1	Extruded section profile size 53 X 60 MM	Rmtr	265.00
9.14	Providing and fixing to exisiting door frame Polywood 35mm thick factory made Polyvinyl Chloride (PVC) door shutter made of stiles and rails of a PVC hollow section of size 35X110mm and wall thickness 2mm 0.2mm with inbuilt decorative moulding edging on one side. The stiles of the utter reinforced by inserting PVC section of size 28x30mm of 1.5mm 0.2mm wall thickness. Stiles and rails miltred and welded at the corners.The lock rail made up of 'H' section, a PVC profile section of size 35x105mm and 2mm 0.2mm wall thickness welded to the shutter stile, the shutter frame filled with a PVC multichambered single panel of size not less than 610mm, having overall thickness of 20mm and 1mm 0.1mm wall thickness with 20mm moulding panel beading of size 8.5x15mm.complete as per manufacturer's specification and direction of Engineer-incharge	sqm	3278.00
9.141	PVC FALSE CEILING (Flush Type) PW625 Providing and fixing of false ceiling with grid of M.S. tube section of size 25mm X 25mm and with a wall thickness of 1.2mm±0.2mm Polywood. The side pipe and the intermediate pipes is fixed to the roof from the top with the help of ceiling angles/wire and mild steel grid shall be painted with one coat of red lead primer, grid shall be covered by the PVC profile section of size 6mm X 250mm with wall thickness of 0.80mm±0.2mm, with the help of self tapping screw of 6mm X 13mm, 6mm X 19mm. Necessary cutouts for electric connections, lighting, air conditioning etc. shall be provided at required place. The perimeter edge shall be covered by extruded PVC corner beading section of size 9mm X 28mm or 25mm X 30mm with a wall thickness of 1mm±0.2mm fixed by applying cynoacrylic adhesive or self taping screw. All complete as per manufacturer's specification and direction of Engineer-incharge..	sqm	1152.00
9.142	PVC DOOR – 35 MM (Single Panel/glass/louver) Providing and fixing to existing door frame 35mm thick factory made Polyvinyl Chloride (PVC) door shutter made of stiles and rails of a PVC profile section of size 35x110mm and wall thickness 2mm ±0.2mm with inbuilt decorative moulding edging on one side.The stiles and rails with inserting of PVC reinforcement section of size 27x30mm mitre and welded at the corners. The stiles of the shutter reinforced by inserting PVC section of size 30mm / galvanized M.S. tube of size 25x25mm and 1mm ±0.1mm wall thickness. The lock rail made up of 'H' section, a PVC profile section of size 35x105mm and 2mm ± 0.2mm wall thickness welded to the shutter stile with a PVC profile section single panel of size not less than 620mm, having overall thickness of 20 mm and 1 mm±0.1 mm wall thickness with 20 mm panel beading of size 8.5x15mm/glass (4mm thick plain)/Louver section of size 48mm x 9mm,louver frame of size 15mm x 32 mm as per manufactures specification and direction of Engineer-in-charge.	sqm	2818.00

9.143	Providing and fixing of Wall Paneling on grid made out of PVC profile Section of size 21 x 17 mm Polywood with wall thickness of 1.5 mm ±0.2mm, fixed on existing wall with wood screw of size 50 mm X 8 mm with rowel plug at a spacing of 900 mm center.PVC profile section of Size 150mm X 10 mmwith a wall thickness of 1 mm ±0.2mm to be fixed on the grid by self taping screw of size 19 mm x 6 mm. Necessary cut out for electrical connection to be provide at required palace Polywood. The edge and periphery, finally to be covered by extruded PVC beading Section of size 28 mm X 12 mm with a wall thickness 1.00mm ± 0.2mm. All complete as per manufacturer's specification and direction of Engineer-in-charge.	sqm	1329.00
9.144	Openable PVC Windows (Outward/Inward) Providing and fixing of PVC casement openable windows (outward / inward) produced by ISO 9001:2000 Qaulity Management System and 14001:2004 Environmental Management System certified company, having : Frame: Made from the Extruded PVC Window Profile Section Polywood of size 60 x 60mm having outer wall thickness of 2.25mm (+/- 0.2mm) and 3 box multi-chamber construction, White in finish, duly reinforced with 1.2mm thick G/J/U/O TYPE GI section. All the four corners shall be mitered cut & thermal elded so as to form window frame. Frame shall be milled with drain and air equalizer hole in order to be water tight and for drainage of acCum.ulated water, if any, to outer side. Fix Mullion made of 76 x 60mm PVC Profile Section with steel reinforcement shall be provided in windows having 2 or more openable shutters, as per the requirement. Frame shall have 'O' type EPDM gasket fitted in in-built groove of frame profile for proper air & sound insulation of	sqm	6917.00
	the shutter. Shutter: The shutter of outward openable window shall be made of size 78 x 60mm and shutter of inward openable window shall be made of size 73 x 60mm Extruded 3 box multi-chamber PVC Window Profile Section of white colour having outer wall thickness of 2.25mm (+/- 0.2mm) provided with reinforcement of 1.2mm thick G/J/U/O TYPE GI section duly mitered cut & thermal welded at all corners and fitted with PVC glazing bead of size 34 x 20mm with 'K' & 'O' type inner and outer EPDM weather seal gaskets alongwith 5mm thick ISI make plain float glass. All welding joints of frame and shutter shall be cleaned and milled with the CNC mechanism to provide uniform grooved finish on all visible joints. Hardware: Window shutters are fixed with frame on 2.5mm thick SS301 Grade Friction Hinge System to keep the window opened at desired angle. Friction Hinge also enables easy cleaning of glass on both side from the inside of building. Locking of windows is provided with multi-point transmission gear (ESPAG) with white finish powder-coated handle. Installation at Site: Complete window is to be installed on site with 10 x 100mm fastners with white cap in existing pre-finished wall cut-out cemented to glass level plane at all height & width and silicon glue is applied to fill up the crevices between wall and window frame. Complete in all respect as per the drawing and specifications and direction of engineer-in-charge		
	CHAPTER-X **Steel Work**		
10.1	Structural steel work in single section fixed with or without connecting plate including cutting, hosting, fixing in psotion and applying a priming coat of approved steel primer all complete.	kg	50.00
10.2	Structural steel work riveted, bolted or welded in builtup for all type sections, trusses and framed work, including cutting,hoisting, fixing in position and applying a priming coat of approved steel primer all complete:	kg	51.00
10.3	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size with top and bottom rail of T-iron 40x40x6mm with 40mm dia, steel pulleys complete with bolts, nuts, locking arrangement, stoppers,handles, including applying a priming coat of approved steel primer.	sqm	3141.00

10.4	Providing and fixing 1mm thick M.S. sheet sliding-shutters with frame and diagonal braces of 40x40x6mm angle iron, 3mm M.S.gusset plates at the junction and corners 25mm dia pulley, 40x40x6mm angle and T-iron guide at the top and bottom respectively including applying a priming coat of approved steel primer.	sqm	2467.00
10.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
10.5.1	Using M.S. angels 40x40x6 mm for diagonal braces	sqm	2053.00
10.5.2	Using flats 30x6mm for diagonal braces and central cross piece.	sqm	1952.00
10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 and M.S. top cover of required thickness for rolling shutters.		
10.6.1	80x1.25mm M.S. laths with 1.25 mm thick top cover	sqm	1791.00
10.6.2	80x1.20 mm M.S. laths with 1.20 mm thick top cover.	sqm	1226.00
10.6.3	80x0.90 mm M.S. laths with 0.90 mm thick top cover.	sqm	1149.00
10.7	Providing and fixing ball bearing for rolling shutters.	each	637.00
10.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.		
10.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area.	sqm	532.00
10.8.2	Exceeding 16.80 sqm in area.	sqm	599.00
10.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia. M.S. bar instead of laths as per design approved by Engineer-in- charge.(area of grill to be measured).	sqm	281.00
10.1	Fixing only standard steel glazed doors, windows and ventilators in walls with 15x3mm lugs 10 cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including fixing of float glass panes with glazing clips and special metal-sash putty of approved make, or metal beading with screws glass panes cut to size and glazing clips or metal beading with screws, shall paid separately wide item no 10.27)	kg	28.00
10.11	Providing and fixing factory made ISI marked steel glazed doors,windows and ventilators side /top /centre hung with beading and all members such as K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges,pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design. (glass panes paid sepertely)	kg	174.00
10.12	Extra for providing and fixing steel beading of approved shape and section with screw instead of lazing clips and metal sash putty in steel doors, windows, ventilators and composite units.	metre	23.00

10.13	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded with 15x3 mm lugs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with dash fastener or with fixing clips or with bolts and nuts as require including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.	kg	59.00
10.14	Providing and fixing pressed steel door frames confirming to IS: 4351manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike- plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:		
10.14.1	Single rebate (size, 80 mm x 50 mm)	metre	360.00
10.14.2	Single rebate (size, 100 mm x 50 mm)	metre	380.00
10.14.3	Double rebate (size, 115 mm x 50 mm)	metre	400.00
10.15	Providing and fixing M.S. Tubular frames for doors, windows,ventilators and cupboard with rectangular section made of 1.60mm thick M.S. Sheet, joints mitred and welded and grinded finish profiles required size with 15x3mm lugs 10cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 1cement : 3 sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primers.	kg	100.00
10.16	Steel work in built up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.		
10.16.1	Hot finished welded type tubes.	kg	78.00
10.16.2	Hot finished seamless type tubes	kg	85.00
10.16.3	Electric resistance or induction butt welded tubes	kg	99.00
10.17	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	each	87.00
10.18	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height,top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	each	140.00
10.19	Providing and fixing M.S. round holding down bolts with nuts and washer plates complete.	kg	68.00
10.2	Providing and fixing bolts including nuts and washers complete.	kg	85.00
10.21	Providing and fixing M.S. rivets of sizes in position.	kg	86.00
10.22	Welding by gas or electric plant including transportation of plant at site etc. complete	cm	3.00
10.23	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. hoisting, fixing in position and applying a priming coat of approved steel		
10.23.1	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	kg	61.00
10.23.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	kg	64.00

10.24	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.		
10.24.1	M.S. tube.	kg	81.00
10.24.2	E.R.W. tubes	kg	104.00
10.24.3	G.I. pipes.	kg	77.00
10.25	Providing and fixing glazing in steel doors windows, ventilator, shutters & partitions etc. per hitectural drawing & asper direction of engineer-in-charge.With steel beading metal sash puttey.		
10.25.1	With float glass 4mm thick	sqm	743.00
10.25.2	With float glass 5.5mm thick	sqm	920.00
10.25.3	With float glass 8mm thick	sqm	1105.00
10.26	Supplying and fixing at site:		
10.26.1	R.C.C. Standards post/ struts/rails/ poles 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 including fixing (cost of earth works in excavation, concrete works in foundation to be paid separately).	cum	14625.00
10.26.2	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.	kg	52.00
10.27	Supplying and fixing turn buckles & straining bolts for barbed wire fencing.	each set	107.00
10.28	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 9.38 kg per 100 metres (min) between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar nibs 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.		
10.28.1	With G.I. barbed wire (2- ply 12 gauge)	metre	7.00
10.28.2	With G.I. barbed wire (7 strand 16 gauge)	metre	24.00
10.29	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 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.		
10.29.1	With G.I. barbed wire (2- ply 12 gauge)	metre	7.00
10.29.2	With G.I. barbed wire (7 Strand 16 gauge)	metre	24.00
10.3	Providing and fixing Welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x60cm of mix 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40mm 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 45x50cm 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)		
10.30.1	25 x 25mm size 12 gauge	sqm	399.00
10.30.2	50 x 25mm size 12 gauge	sqm	325.00
10.30.3	50 x 50mm size 12 gauge	sqm	281.00
10.31	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50mm including strengthening with 2mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer- in-charge.		
10.31.1	Made of G.I. wire of dia 4mm	sqm	435.00

10.31.2	Made of G.I. wire of dia. 4mm, PVC coated to achieve outer dia. not less than 5mm in required colour and shade.	sqm	468.00
10.32	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia. 3mm including strengthening with 2mm dia. wire or nuts, bolts and washers as required complete as per the direction of Engineerin- charge.	sqm	539.00
	CHAPTER-XI **Flooring**		
11.1	Cement concrete flooring 1:2:4 (1 Cement : 2 Sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps et. complete (Area of panels not exceeding 2 sqm.)		
11.1.1	40mm thick with 20mm nominal size stone aggregate.	sqm	239.00
11.2	52 mm thick cement concrete flooring with concrete hardener topping under layer 40 mm thick cement concrete 1:2:4 (1cement : 2 sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix 2 graded stone aggregate 6 mm nominal size) by volume .hardening compound is mixed @ 2 litre per 50kg of cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	351.00
11.3	62 mm thick cement concrete flooring with concrete hardener topping under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix 2 graded stone aggregate 6mm nominal size) by volume. Hardening compound is mixed @ 2 litre per 50kg of cement or as per manufactures specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	396.00
11.4	Cement plaster skirting (up to 30 cm height) with cement mortar 1:3 (1 cement : 3 sand) finished with a floating coat of neat cement.		
11.4.1	18 mm thick.	sqm	209.00
11.5	Cement concrete pavement with 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete.	cum	4250.00
11.6	Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.	sqm	17.00
	TARRAZO FLOORING		
11.7	40 mm thick marble chips flooring rubbed and polished to granolithic finish, under layer 34 mm thick cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1mm to 4mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume including cement slurry etc. complete :		
11.7.1	Dark shade pigment with ordinary cement.	sqm	384.00
11.7.2	Light shade pigment with white cement	sqm	432.00
11.7.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	412.00
11.7.4	White cement without any pigment	sqm	390.00
11.7.5	Light shade pigment with ordinary cement.	sqm	411.00
11.7.6	Ordinary cement without any pigment.	sqm	361.00
11.8	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 31mm thick cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 9mm thick with white, black,chocolate, grey, yellow or green marble chips of sizes from 4mm to 7mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder : 7 marble chips) by volume including cement slurry etc. complete.		
11.8.1	Dark shade pigment with Ordinary cement.	sqm	393.00
11.8.2	Light shade pigment with white cement	sqm	461.00

11.8.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	432.00
11.8.4	White cement without any pigment.	sqm	420.00
11.8.5	Light shade pigment with ordinary cement.	sqm	432.00
11.8.6	Ordinary cement without any pigment.	sqm	369.00
11.9	40 mm thick marble chips flooring, rubbed and polished to granolithicfinish, under layer 28 mm thick cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 12mm thick with white, black,chocolate, grey yellow or green marble chips of sizes from 7mm to 10mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 2:3 (2 cement marble powder mix : 3 marble chips) by volume including cement slurry etc. complete :		
11.9.1	Dark shade pigment with Ordinary cement.	sqm	419.00
11.9.2	Light shade pigment with white cement	sqm	498.00
11.9.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	451.00
11.9.4	White cement without any pigment.	sqm	435.00
11.9.5	Light shade pigment with ordinary cement.	sqm	431.00
11.9.6	Ordinary cement without any pigment.	sqm	382.00
11.1	Marble chips skirting (up to 30 cm height) rubbed and polished to granolithic finish, top layer 6 mm thick with white,black, chocolate,grey, yellow or green marble chips of sizes from smallest to 4 mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume :		
11.10.1	18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 sand) :		
11.10.1.1	Dark shade pigment with Ordinary cement.	sqm	447.00
11.10.1.2	Light shade pigment with white cement	sqm	486.00
11.10.1.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	466.00
11.10.1.4	White cement without any pigment.	sqm	462.00
11.10.1.5	Light shade pigment with ordinary cement.	sqm	457.00
11.10.1.6	Ordinary cement without any pigment.	sqm	430.00
11.11	Providing and fixing glass strips of required hight in joints of terrazo/ cement concrete floors.		
11.11.1	40 mm wide and 4 mm thick.	metre	25.00
11.12	Extra for laying terrazo flooring on staircase treads not exceeding 30 cm in width including cost of forming, nosing etc.	sqm	24.00
11.13	Crazy marble stone flooring including filling the gaps with light shadepigment with white cement marble powder mixture (3parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black or white and black marble chips of sizes from 1mm to 4mm nominal size by volume) and under layer 25mm thick cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 12.5 mm nominal size) rubbing, polishing and cement slurry etc. complete :		
11.13.1	18 mm thick crazy marble stone white, black or as specified.	sqm	598.00
11.14	Precast terrazo tiles 22mm thick with graded marble chips of size upto 12mm laid in floors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete with precast tiles on 20mm thick bed of cement mortar 1:4 (1 cement :4 sand) :		
11.14.1	Light shade using white cement	sqm	745.00
11.14.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	612.00
11.14.3	Dark shade using ordinary cement.	sqm	599.00
11.14.4	Ordinary cement without any pigment.	sqm	561.00
11.15	Extra if terrazo tiles are laid in treads of steps not exceeding 30 cm in width.	sqm	22.00
11.16	Precast terrazo tiles 20 mm thick with graded marble chips of sizes upto 12 mm in skirting and risers of steps not exceeding 30 cm in height on 12 mm thick ement plaster 1:3 (1 cement :3 sand) jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete with tiles of :		

11.16.1	Light shade using white cement	sqm	729.00
11.16.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	660.00
11.16.3	Dark shade using ordinary cement.	sqm	626.00
11.16.4	Ordinary cement without any pigment.	sqm	592.00
11.17	Chequered terrazo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete on 20 mm thick bed of cement mortar 1:4 (1 cement :4 sand) :		
11.17.1	Light shade using white cement	sqm	692.00
11.17.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	641.00
11.17.3	Dark shade using ordinary cement.	sqm	604.00
11.17.4	Ordinary cement without any pigment.	sqm	572.00
11.18	Chequerred precast cement concrete tiles in any size 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 sand).		
11.18.1	Light shade using white cement	sqm	980.00
11.18.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	1208.00
11.18.3	Dark shade using ordinary cement.	sqm	622.00
11.18.4	Ordinary cement without any pigment.	sqm	601.00
11.19	Providing and fixing 10mm thick acid and or alkali resistant tiles of approved make and colour using acid and or alkali resisting mortar bedding and joints filled with acid and or alkali resisting cement as per IS : 4457 complete as per the direction of Engineer-in- Charge.		
11.19.1	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 sand).		
11.19.1.1	Acid and alkali resistant tile.	sqm	1004.00
11.19.2	In dado/skirting on 12mm thick mortar 1:4 (1 acid proof cement: 4 sand).		
11.19.2.1	Acid and alkali resistant tile.	sqm	1045.00
11.2	Tile work in skirting, risers of steps and dado (up to 2 m height) over 12 mm thick bed of cement mortar 1:3 (1 cement :3 sand) and jointed with grey cement slurry @ 3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade complete.		
11.20.1	Marble tiles (polished) Raj Nagar.		
11.20.1.1	8 mm thick.	sqm	699.00
11.21	Marble stone flooring with 16 mm thick marble stone (sample of marble shall be approved by ngineer-in-charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement:4 sand)laid and jointed with grey cement slurry including rubbing and polishing complete with : (Area of Slabs over 0.50sqm)		
11.21.1	Makrana white second quality.	sqm	3302.00
11.21.2	Raj Nagar plain.	sqm	921.00
11.21.3	Agaria White/ katani marble	sqm	1921.00
11.21.4	Black Zebra.	sqm	987.00
11.21.5	Udaipur/Baroda green marble	sqm	1128.00
11.21.6	Pink plain marble.	sqm	1116.00
11.21.7	Jaisalmer yellow	sqm	1116.00
11.22	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 metre.	sqm	148.00
11.23	Kota / cuddapah stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) :		
11.23.1	25 mm thick.	sqm	771.00
11.24	Kota /cuddapahstone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	sqm	806.00

11.25	40 mm thick stone flooring over 20 mm (average)thick base of cement mortar 1:5 (1 cement : 5 sand) including pointing with cement mortar 1:2 (1 cement : 2 sand) with an admixture of pigment to match the shade of stone. Red sand stone / White sand stone)		
11.25.1	Rough chiseled dressed stone	sqm	307.00
11.25.2	Fine dressed stone	sqm	415.00
11.26	Providing nosing in treads of steps of Kota stone/ sand stone slab./ Marble stone i/c rubbing polishing etc. Complete.	metre	31.00
11.27	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre.	sqm	8.00
11.28	25mm wooden planking, tongued and grooved in flooring including fixing with iron screws complete with :		
11.28.1	Second class teak wood	sqm	2177.00
11.28.2	Second class sal wood	sqm	1780.00
11.29	38mm thick wood block flooring of first class teak wood laid over 25mm thick leveling layer of cement concrete 1:2:4 (1 cement : 2 sand 4 graded stone aggregate 10mm nominal size) to be paid separately coated with a thin layer of hot bitumen (blown type) @ 2.45 kg per sqm. including fixing blocks in position after dipping in hot bitumen (blown type) up to half depth, planed, levelled smooth and finished complete.	sqm	4382.00
11.3	Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm 10cm long forked at end 60cm apart (minimum three lugs to be provided) including necessary welding and applying a priming coat of approved primer on exposed surface etc. complete.	kg	55.00
11.31	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS : 15622 (6-7mm thickness) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete	sqm	629.00
11.32	Providing and laying Ceramic glazed floor tiles of any size (9-10mm thickness) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 sand) including pointing the joints with white cement and matching pigment etc., complete.	sqm	848.00
11.33	Providing and laying Ceramic glazed floor tiles of any size (9-10mm thickness) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory,Grey, Fume Red Brown laid on 20mm thick bed of Cement Mortar 1:4 (1 Cement : 4 sand) including pointing the joints with white cement and matching pigments etc., complete.	sqm	873.00
11.34	Providing and laying polished vitrified floor tiles in different sizes of 10mm thickness with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement and matching pigments etc., complete.		
11.34.1	Size of Tile 50x50 cm	sqm	998.00
11.34.2	Size of Tile 60x60 cm	sqm	1102.00
11.34.3	Size of Tile 80x80 cm	sqm	1677.00
11.34.4	Size of Tile 100x100 cm	sqm	1871.00
11.35	Deduct for not using 20mm thick cement mortar 1:4 (1 cement : 4 sand) bedding.	sqm	113.00
11.36	Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477 , using 5kg. adhesive per sqm of tile area, in average 3mm thickness	sqm	605.00

11.37	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 and of approved size and shape laid in required colour and pattern over and including 40mm thick compacted bed of course sand filling the joints with sand etc. all complete as per the direction of Engineer in charge.	sqm	422.00
11.38	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade reflective type rubber modulded glossy colour paving block made by block making machine with strong vibratory compaction and of approved size and shape laid in required colour and pattern over and including 60mm thick compacted bed of stone dust filling the joints with sand etc. all complete as per the direction of Engineer in charge including locking edges wherever required wihing cement concrete M15 grade or cement mortor 1:3 with pigment of required shade to match the colour /shade of block including cost of labour, material , etc. all complete	sqm	544.00
11.39	Granite stone flooring with 18mm thick granite stone (sample of granite shall be approved by ngineer-in-charge) over 20mm (average) thick base of cement mortar 1:4 (1 cement :4 sand) laid and jointed with white cemtent slurry mixed with pigment of required shade to match the shade of stone complete. (area of slab over 0.50 sqm) (item to be executed only in public buildings.)		
11.39.1	Black Granite stone	sqm	2146.00
11.39.2	All shades other than black	sqm	2722.00

CHAPTER-XII
Roofing and Ceiling

12.1	Providing currugated G.S. steel roofing including vertical/curved surface fixed with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead including a cost of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/vertical or curved surfaces) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.		
12.1.1	1.00mm thick with zinc coating not less than 275gm/m²	sqm	790.00
12.1.2	0.80mm thick with zinc coating not less than 275gm/m²	sqm	667.00
12.1.3	0.63 mm thick with zinc coating not less than 275gm/ m²	sqm	554.00
12.2	Extra for straight cutting in C.G.S. sheet roofing for making opening of area exceeding 40 sq. decimeter for chimney stacks, sky light etc. :		
12.2.1	1.00 mm thick	metre	21.00
12.2.2	0.80 mm thick	metre	16.00
12.2.3	0.63 mm thick	metre	16.00
12.3	Extra for circular cutting in C.G.S. sheet roofing for making opening of area exceeding 40 square decimeter :		
12.3.1	1.00 mm thick	metre	120.00
12.3.2	0.80 mm thick	metre	95.00
12.3.3	0.63 mm thick	metre	95.00
12.4	Providing ridges or hips of width 60 cm over all width plain G.S. sheet fixed with polymer coated J. or L hooks, bolts and nuts 8 mm dia. G.I. limpet and bitumen washers complete.		
12.4.1	0.80mm thick with zinc coating not less than 275gm/m²	metre	388.00
12.4.2	0.63 mm thick with zinc coating not less than 275gm/ m²	metre	373.00
12.5	Providing valleys of 90cm wide overall in plain G.S. sheet fixed with polymer coated J, or L hooks, bolts and nuts 8mm dia.. G.I.limpet and bitumen washers complete :		
12.5.1	1.60mm thick with zinc coating not less than 350gm/m²	metre	867.00
12.6	Providing flashing of 40 cm over all width in plain, G.S. sheet fixed with polymer coated J, or L hooks, bolts and nuts, G.I. limpet and bitumen washer complete, bent to shape and fixed in wall with cement mortar 1:3 (1cement : 3 sand).		
12.6.1	1.60mm thick with zinc coating not less than 275gm/m²	metre	302.00
12.7	Providing and fixing 15 cm wide 45 cm over all semi circular plain G.S. sheet gutter with iron brackets 40x3mm size, bolts,nuts and washers etc. including making necessary connections with rain water pipes complete.		
12.7.1	0.80mm thick with zinc coating not less than 275gm/m²	metre	375.00
12.7.2	0.63 mm thick with zinc coating not less than 275gm/ m²	metre	300.00
12.8	Providing non-asbestos high impact Polypropylene reinforced cement 6mm thick corrugated sheets (as per IS: 14871) roofing up to any pitch and fixing with polymer coated J, or L hooks,bolts and nuts 8mm dia.G.I. plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete excluding the cost of purlins, rafters and trusses: corrugated sheets and including cutting to size and shape wherever required.	sqm	270.00
12.9	Straight cutting in non- asbestos polypropylene reinforced cement corrugated, semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimeter for chimney stacks, skylights etc.	metre	16.00
12.1	Circular cutting in non-asbestos polypropylene reinforced cement corrugated/semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimeter.	metre	45.00
12.11	Providing and fixing wind ties of 40x 6mm flat iron section	metre	86.00
12.12	Providing and fixing ridges and hips in non-asbestos fibre cement high impact polypropylene reinforced roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete.		
12.12.1	Corrugated serrated adjustable ridges	metre	274.00
12.12.2	Plain wing adjustable ridges	metre	274.00

12.12.3	Close fitting adjustable ridges	metre	304.00
12.12.4	Unserrated adjustable hips	metre	329.00
12.13	Providing and fixing non-asbestos fibre cement high impactpoly propylene reinforced roofing accessories in all colours with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers or with self drilling fastener and EPDM washer etc. complete:		
12.13.1	Corrugated apron pieces	metre	191.00
12.13.2	Eave's filler pieces	metre	164.00
12.13.3	North light curves	metre	311.00
12.13.4	ventilator curves	metre	430.00
12.13.5	Barge boards	metre	348.00
12.13.6	Ridge finials	metre	169.00
12.13.7	Special north light curves	metre	424.00
12.13.8	S type louvers	metre	173.00
12.14	Providing flat iron brackets 50x3mm size with necessary bolts,nuts and washers etc. for fixing asbestos cement/G.S. sheets gutters with purlins.	metre	46.00
12.15	Painting top of roofs with bitumen of approved quality at 17kg per 10 sqm impregnated with a coat of sand at 60 cudm per 10sqm including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete :		
12.15.1	With residual type petroleum bitumen of penetration 80/100	sqm	83.00
12.16	Providing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 sand) mixed with 2% integral water proofing compound laid over a bed of 20 mm thick cement mortar 1:4(1cement:4 sand) and finished neat complete.	sqm	500.00
12.17	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 sand : 4 stone aggregate 10mm and down graded) including finishing with cement mortar 1:3 (1 Cement : 3 fine sand) as per standard design:		
12.17.1	In 75x75mm deep chase	metre	82.00
12.18	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 ement : 2 sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. Sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement 3 sand) and a coat of neat cement rounding the edge sand: making and finishing the outlet complete.	each	173.00
12.19	Providing sand stone slab for roofing and laying them in cement mortar 1 : 4 (1 cement : 4 sand) over wooden karries or R.C.C. battens (Karries and battens to be paid separately) including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 coarse sand) complete :		
12.19.1	Red sand stone slab		
12.19.1.1	40 to 50 mm thick	sqm	355.00
12.19.2	White sand stone slab :		
12.19.2.1	40 to 50 mm thick	sqm	324.00
12.2	Providing and fixing insulating board ceiling of approved quality with necessary nails etc. complete (frame work to be paid separately) :		
12.20.1	Natural colour insulating board		
12.20.1.1	12 mm thick	sqm	392.00
12.20.2	White face insulating board		
12.20.2.1	12 mm thick	sqm	495.00
12.20.3	Flame retardant face insulating board		
12.20.3.1	12 mm thick	sqm	458.00
12.21	Providing and fixing flat pressed 3 layer medium density particle board or graded particle board (Grade I) IS: 3087 marked in ceiling with necessary nails etc. complete (frame work to be paid separately) :		
12.21.1	12 mm thick	sqm	546.00

12.22	Providing and fixing plain Multipurpose Cement board (High Pressure steam cured) as per IS : 14862 : 2000) with suitable fibre cement screw in ceiling etc. complete (frame work to be paid separately) :		
12.22.1	6 mm thick cement board	sqm	370.00
12.23	Extra for Circular cutting and waste in ceiling with:		
12.23.1	2nd class teak wood planks 20 mm thick	metre	297.00
12.23.2	Natural colour insulating board		
12.23.2.1	12 mm thick	metre	114.00
12.23.3	White face insulating board		
12.23.3.1	12 mm thick	metre	127.00
12.23.4	Flame retardant face insulating board		
12.23.4.1	12 mm thick	metre	122.00
12.23.5	Standard quality hard board sheet		
12.23.5.1	3 mm thick	metre	112.00
12.23.5.2	4.5 mm thick	metre	115.00
12.24	Extra for providing and fixing ceiling to curved surfaces in narrow widths	sqm	81.00
12.25	Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087 finished with a coat of aluminium primer on both sides & edges and two coats of synthetic enamel paint of approved quality on exposed face fixed to a grid made out of anodised luminium(with 15 micron anodic coating) T-sections 35 x15x1.5 mm size main runners and cross runners 3.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats. The suspenders shall be placed 600x 1200 mm centre to centre including fixing to the frame with C.P brace screws and applying a priming coat of zinc chromate yellow primer (aluminium frame work shall be paid separately).	sqm	227.00
12.26	Extra for providing 3 mm thick translucent white acrylic plastic sheets of approved quality in false ceiling instead of 12 mm thick plain/or with design particle board ceiling tiles in item above.	sqm	388.00
12.27	Providing 10 mm thick plaster of Paris (gypsum anhydrous) ceiling up to a height of 5 m above floor level over first class sal/saj wood strips 25x6 mm with 10 mm gap in between and reinforced with rabbit wire mesh fixed to wooden frame (frame work to be paid separately) :		
12.27.1	Flat surfaces	sqm	467.00
12.27.2	Curved surfaces	sqm	712.00
12.28	Extra for any sunk or raised mouldings in the plaster of Paris (Gypsum anhydrous) ceiling	sqm	176.00
12.29	Extra for providing plaster of Paris (Gypsum anhydrous) ceiling above 5metres height from floor level.	sqm per m. height	47.00
12.3	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8193 density 24kg/m3, 50mm thick, wrapped in 200 G Virgin Polythene bags fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5mm x 24g wire and mesh, for top most ceiling of building.	sqm	496.00
12.31	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS: 8193. Density 16kg/m3, 50mm thick, wrapped in 200G Virgin Polythene bags placed over existing false ceiling and held in position by criss-cro ssing GI wire.	sqm	262.00
12.32	Thermal Insulation of roofing with Expanded polystyrene fixed with suitable adhesive to the false ceiling as per the directions of the Engineer-in-charge:		
12.32.1	With Type N - Normal 50 mm thick	sqm	251.00
12.32.2	With Type SE - Self Extinguishing type 50 mm thick	sqm	346.00

12.33	Providing and fixing on wall face unplasticised Rigid PVC Rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes. for working pressure of 4kg/cm2		
12.33.1	75 mm diameter	metre	156.00
12.33.2	90 mm diameter	metre	208.00
12.33.3	110 mm diameter	metre	259.00
12.34	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC Rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS :5382 leaving 10 mm gap for thermal expansion.		
12.34.1	Coupler		
12. 34.1.1	75 mm	each	183.00
12. 34.1.2	90 mm	each	214.00
12. 34.1.3	110 mm	each	245.00
12. 34.2	Single pushfit Coupler :		
12. 34.2.1	75 mm	each	230.00
12. 34.2.2	90mm	each	265.00
12. 34.2.3	110 mm	each	299.00
12. 34.3	Single tee with door		
12. 34.3.1	75x75x75 mm	each	308.00
12. 34.3.2	90x90x90 mm	each	383.00
12. 34.3.3	110x110x110 mm	each	459.00
12. 34.4	Single tee without door		
12. 34.4.1	75x75x75 mm	each	308.00
12. 34.4.2	90x90x90 mm	each	370.00
12. 34.4.3	110x110x110 mm	each	432.00
12. 34.5	Bend 87.5°		
12. 34.5.1	75 mm bend	each	163.00
12. 34.5.2	90 mm bend	each	210.00
12. 34.5.3	110 mm bend	each	259.00
12. 34.6	Shoe		
12. 34.6.1	75 mm Shoe	each	277.00
12. 34.6.2	90 mm shoe	each	381.00
12. 34.6.3	110 mm Shoe	each	485.00
12.35	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 sand) and making good the wall etc.complete.		
12.35.1	75 mm	each	115.00
12.35.2	110 mm	each	158.00
12.36	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	each	72.00

12.37	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with :		
12.37.1	12.5 mm thick tapered edge gypsum board conforming to IS: 2095- Part I.	sqm	681.00
12.38	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	each	106.00
12.39	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc.The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% Ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.		
12.39.1	2mm thick corrugated (2.5" or 4.2" or 6") or stepdown (2" or 3" or 6") as specified.	sqm	812.00
12.39.2	2mm thick flat.	sqm	728.00
12.4	Providing & fixing pressed clay tile (Mangalore tile) 20 mm nominal thickness and of approved size and as per approved pattern ceiling on steel frame work complete (steel frame work to be paid separately).	sqm	228.00
12.41	Providing & laying pressed clay tile ridge (Mangalore tile) of 20mm thickness of approved pattern ceiling over steel frame work complete (steel frame work to be paid separately).	sqm	102.00

12.42	Supply & installation of silicon modified polymer precoated galvanised iron profile sheets (size,shape and pitch of corrugation as approved by Engineer-in-charge)0.50 mm +/- 5% total coated thickness (TCT) thick Zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge.The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses nd including cutting to size and shape wherever required.	sqm	527.00
12.43	Providing and fixing silicon modified polymer precoated galvanised steel sheet roofing accessories 0.50 mm +/- 5% total coated thickness (TCT) thick Zinc coating 120gsm as per IS:277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws or with polymer coated J or hooks,bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers complete :		
12.43.1	Ridges plain (500 - 600mm)	metre	555.00
12.43.2	Flashings/ Aprons.(Upto 600 mm)	metre	544.00
12.43.3	North light curves.	metre	611.00
12.43.4	Barge board (Upto 300 mm).	metre	618.00
12.43.5	Crimp curve	sqm	651.00
12.43.6	Gutter (600 mm over all girth).	metre	646.00
	CHAPTER-XIII Finishing Work		
13.1	12mm cement plaster of mix.		
13.1.1	1:4 (1 cement: 4 sand)	sqm	104.00
13.1.2	1:6 (1 cement: 6 sand)	sqm	92.00
13.2	15 mm cement plaster on rough side of single or half brick wall of mix :		
13.2.1	1:4 (1 cement: 4 sand)	sqm	122.00
13.2.2	1:6 (1 cement: 6 sand)	sqm	107.00
13.3	20 mm cement plaster of mix :		
13.3.1	1:4 (1 cement: 4 sand)	sqm	148.00
13.3.2	1:6 (1 cement: 6 sand)	sqm	130.00
13.4	12 mm cement plaster 1:3 (1 cement: 3 sand) finished with a floating coat of neat cement.	sqm	139.00
13.5	15 mm cement plaster 1:3 (1 cement: 3 sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.	sqm	152.00
13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 sand) finished with a top layer 6mm thick cement plaster 1:6 (1 cement: 6 fine sand).	sqm	135.00
13.7	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 sand) and a top layer 6mm thick cement plaster 1:3 (1 cement: 3 sand) finished rough with sponge.	sqm	152.00
13.8	6 mm cement plaster of mix :CM 1:3 (1 cement: 3 sand)	sqm	79.00
13.9	6 mm cement plaster 1:3 (1 cement: 3 sand) finished with a floating coat of neat cement and thick coat of lime wash for bearing of R.C.C. slabs and beams.	sqm	115.00
13.1	Neat cement punning	sqm	26.00
13.11	Rough cast plaster upto 10m height above ground level with a mixture of sand and gravel or crushed stone from 6mm to 10mm nominal size dashed over and including the fresh plaster in two layers, under layer 12mm cement plaster 1:4 (1cement: 4sand) and top layer 10mm cement plaster 1:3 (1cement:3 sand) mixed with 10% finely grounded hydrated lime by volume of cement.13.11.1 Ordinary cement finish using ordinary cement	sqm	247.00

13.12	Pebble dash plaster upto 10m height above ground level with a mixture of washed pebble or crushed stone 6mm to 12.5mm nominal size dashed over and including fresh plaster in two layers under layer 12mm cement plaster 1:4 (1cement: 4 sand) and top layer 10mm cement plaster with cement mortar 1:3 (1cement: 3 sand) mixed with 10% finely grounded hydrated lime by volume of cement.	sqm	235.00
13.12A	Providing sand faced plaster to concrete or brick masonry surfaces in all positions in two coats, base coat of 13 mm thick in cement mortar 1:4 (1 cement : 4 sand), clearing the surface by combing it and finishing coat of 8 mm. thick in cement mortar 1:3 (1 cement: 3 sand) and surface taking out grains by mechanical arrangement by with cost of all material, labour, and T & P including all lead, lift and scaffolding etc. complete.	sqm	228.00
13.13	Extra for providing and mixing water proofing material in cement plaster work in proportion mended by the manufacturers. For each bag of 50 kg cement used in the mix	each	52.00
13.14	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	20.00
13.15	Extra for plastering on circular work not exceeding 6 m in radius:		
13.15.1	In one coat	sqm	9.00
13.15.2	In two coats	sqm	14.00
13.16	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:		
13.16.1	In one coat	sqm	125.00
13.16.2	In two coats	sqm	207.00
13.17	Extra for plastering :		
13.17.1	Spherical ceiling	sqm	33.00
13.17.2	Groined ceiling	sqm	37.00
13.17.3	Flewing soffits	sqm	22.00
13.18	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	sqm	68.00
13.19	Extra for lining out plaster to imitate stone or concrete blocks walling	sqm	21.00
13.2	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 sand) :		
13.20.1	Flush Band	cm per mtr	2.00
13.20.2	Sunk Band	cm per mtr	2.00
13.20.3	Raised Band	cm per mtr	2.00
13.20.4	Moulded Band	cm per mtr	3.00
13.21	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement: 4 sand):		
13.21.1	Flush Band	cm per mtr	2.00
13.21.2	Sunk Band	cm per mtr	2.00
13.21.3	Raised Band	cm per mtr	3.00
13.21.4	Moulded Band	cm per mtr	4.00
13.22	18 mm thick moulded cement mortar band in two coats under layer 12mm thick with cement mortar 1:5 (1 cement: 5 sand) top layer 6mm thick with cement mortar 1:4 (1 cement: 4 sand).	cm per mtr	3.00
13.23	Pointing on stone work with cement mortar 1:3 (1 cement: 3 sand) :		
13.23.1	Flush/ Ruled pointing	sqm	77.00
13.23.2	Raised and cut pointing	sqm	139.00
13.24	Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement: 3 marble dust)	sqm	160.00
13.25	Pointing on stone slab ceiling with cement mortar 1:2 (1 cement:2 fine sand):		
13.25.1	Flush/ Ruled pointing	sqm	45.00
13.26	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.	sqm	3.00
13.27	White washing with lime to give an even shade:		
13.27.1	New work (three or more coats)	sqm	8.00
13.28	Colour washing such as green, blue or buff to give an even shade :		
13.28.1	New work (two or more coats) with a base coat of white washing with lime	sqm	11.00
13.28.2	New work (two or more coats) with a base coat of whiting	sqm	11.00

13.29	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whiting to give an even shade.	sqm	32.00
13.3	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade		
13.30.1	New work (two or more coats) over and including priming coat with cement primer.	sqm	52.00
13.31	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
13.31.1	Two or more coats on new work.	sqm	36.00
13.32	Applying one coat of cement primer of approved brand and manufacture on wall surface :		
13.32.1	Cement primer.	sqm	22.00
13.33	Finishing walls with water proofing cement paint of required shade :		
13.33.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	sqm	36.00
13.34	Finishing walls with textured exterior paint of required shade :		
13.34.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	sqm	121.00
13.35	Finishing walls with Acrylic Smooth exterior +paint of required shade:		
13.35.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	68.00
13.36	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
13.36.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	75.00
13.37	Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications :		
13.37.1	Two or more coats applied @ 1.25 ltr/10 sqm. Over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	sqm	82.00
13.37.2	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 or manufacture	sqm	68.00
13.37.3	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 or manufacture	sqm	68.00
13.38	Extra for applying water proofing cement paint as primer applied @ 2.29 kg/ 10 sqm instead of primer for exterior finishing in Item No. 13.37.1	sqm	1.00
13.39	Applying priming coat :		
13.39.1	With ready mixed pink/Grey primer of approved brand and manufacture on wood work (hard & soft wood)	sqm	23.00
13.39.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	sqm	23.00
13.39.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	sqm	18.00
13.39.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	sqm	10.00
13.40 (A)	Painting one thin coat with white lead of approved brand and sqm 25.00 manufacture on wet or patchy portion of plastered surfaces	sqm	29.00
13.40 (B)	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per nufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.		
13.40B.1	On steel work	sqm	102.00
13.40B.2	On concrete work	sqm	105.00
13.41	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade		

13.41.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution.	sqm	52.00
13.42	Applying a coat of mordant solution on G.S. sheet :		
13.42.1	With a solution of 38 gms of copper acetate in a litre of soft water	sqm	20.00
13.42.2	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.	sqm	14.00
13.43	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming of ready mixed zinc chromate yellow primer on new work :		
13.43.1	100 mm diameter pipes	metre	17.00
13.43.2	150 mm diameter pipes	metre	29.00
13.44	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.		
13.44.1	100 mm diameter pipes	metre	25.00
13.44.2	150 mm diameter pipes	metre	38.00
13.45	Painting with oil type wood preservative of approved brand and manufacture:		
13.45.1	New work (two or more coats)	sqm	17.00
13.46	Providing and applying two coats of fire retardant paint unthinned on cleaned wood/ply surface @3.5sqm per litre percoat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.	sqm	313.00
13.47	Coal tarring two coats on new work using 0.16 and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	20.00
13.48	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:		
13.48.1	Two or more coats on new work	sqm	53.00
13.49	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
13.49.1	Two or more coats on new work	sqm	43.00
13.5	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:		
13.50.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of pproved brand and manufacture	sqm	64.00
13.51	Painting with aluminium paint of approved brand and manufacture to give an even shade .		
13.51.1	Two or more coats on new work	sqm	51.00
13.52	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade:		
13.52.1	Two or more coats on new work.	sqm	62.00
13.53	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:		
13.53.1	Two or more coats on new work.	sqm	33.00
13.54	Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade:		
13.54.1	Two or more coats on new work.	sqm	47.00
13.55	Varnishing with varnish of approved brand and manufacture		
13.55.1	Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.	sqm	62.00
13.55.2	Two or more coats glue sizing with spar varnish or an under coat of flatting varnish.	sqm	68.00
13.56	French spirit polishing :		
13.56.1	Two or more coats on new works including a coat of wood filler.	sqm	92.00
13.57	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :		
13.57.1	New work	sqm	48.00
13.58	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture	sqm	21.00

13.59	Lettering with black Japan paint of approved brand and manufacture	per letter per cm height sqm	1.00
13.6	Washed stone grit plaster on exterior walls of height upto 10 M. above level in two layers, under layer 12mm cement plaster 1:4 (1 cement: 4 sand) furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15mm cement plaster 1:1/2:2 (1 cement: 1/2 sand : 2 stone chipping 10mm 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).	sqm	319.00
13.61	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 :		
13.61.1	15 mm wide and 15 mm deep groove	metre	15.00
13.61.2	20 mm wide and 15 mm deep groove	metre	17.00
13.62	Extra for washed grit plaster on exterior walls of height more than 10m from ground level for every additional height of 3 m or part thereof.	sqm	47.00
13.63	Extra for washed stone grit plaster on circular work not exceeding 6m in radius (in two coats).	sqm	28.00
13.64	Forming groove of uniform size from 12x12mm and upto 25x15mm in plastered surface as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repairs to the edges of plaster panel and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	metre	17.00
13.65	Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.	sqm	98.00
13.66	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.	sqm	162.00
13.67	Providing and fixing broken glass in cement mortar 1.6 including cost of mortar, over compound walls	sqm	48.00
13.68	Providing & fixing chicken mesh as per ISI specification and in the required with 50mm long Bombay nails on vertical and horizontal junctions of RCC and brick wall including scaffolding and all lead and lift etc. complete before plastering upt 10 meter height.	sqm	85.00
13.69	Providing and applying special putty in two coats based materials varnish, Belgium chalk, turpentile oil, white paint,shafeda including sand papering for making the surface smooth for applying any or vinyl paints including all cost of material and labour etc complete.	sqm	33.00
13.7	Providing and applying Birla/J.K. or equivalent wall care exterior/interior mix putty for outer surface i/c sand pappering for making the surface smooth for applying any or vinyle paint with all cost of materials, labours, and scaffolding etc. in all position complete.(this Item is to be executed only in new public buildings).	sqm	95.00
13.71	Providing and fixing ceramic steel green/black chalk board (vitereous enameled ceramic steel surface). of sizes.		
13.71.1	size 1200mmx1800mm	each	9258.00
13.71.2	size 1200mmx2400mm	each	12018.00
13.71.3	size 1200mmx3000mm	each	14950.00

CHAPTER-XIV
Repairs to Building work

14.1	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.l5 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 within 50meters lead:		
14.1.1	With cement mortar 1:4 (1cement: 4 coarse sand).	sqm	161.00
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 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 within 50 meters lead :		
14.2.1	Door chowkhats	each	432.00
14.2.2	Window chowkhats	each	262.00
14.2.3	Clerestory window chowkhats	each	190.00
14.3	Fixing chowkhat in existing opening in brick / RCC wall with dash fasteners/chemical fasteners of appropriate size (3nos on each vertical member of door chowkhat and 2 nos. on each vertical member of window chowkhas including Cost of dash fasteners/ chemical fastener	each	174.00
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 isposal of mulba/ rubbish to the nearest municipal dumping ground.		
14.4.1	For door/ window/ clerestory window.	sqm	284.00
14.5	Renewing glass panes, with putty and nails wherever necessary:		
14.5.1	Float glass panes of thickness 4 mm	sqm	599.00
14.5.2	Float glass panes of thickness 5.5 mm	sqm	823.00
14.6	Renewing glass panes, with wooden fillets wherever necessary:		
14.6.1	Float glass panes of thickness 4 mm	sqm	680.00
14.6.2	Float glass panes of thickness 5.5 mm	sqm	902.00
14.7	Renewing glass panes and refixing existing wooden fillets:		
14.7.1	Float glass panes of thickness 4 mm	sqm	669.00
14.7.2	Float glass panes of thickness 5.5 mm	sqm	787.00
14.8	Supplying and fixing new wooden fillets wherever necessary:		
14.8.1	2nd class teak wood fillets	metre	24.00
14.9	Renewal of old putty of glass panes (length)	metre	13.00
14.1	Refixing old glass panes with putty and nails	sqm	10.00
14.11	Fixing old glass panes with wooden fillets (excluding cost of fillets) mulba/ rubbish to the nearest municipal dumping ground.	sqm	127.00
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 and making good and painting exposed portion of the clamps complete.	each	137.00
14.13	Replacing sand stone slabs in roofing laid in cement mortar 1:4 (1 cement : 4 sand) including necessary repair and cement pointing with the same motar complete including disposal of rebbish to dumping ground with in 50metres of lead		
14.13.1	Red/ white sand stone slabs 30 to 50 mm thick	sqm	388.00
14.14	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 within 50 metres lead.	sqm	14.00
14.15	Taking out wind ties from roof including cutting out rusted bolts,nuts etc. and removing materials to any distance within compound and stacking.	kg	2.00
14.16	Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufactuer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.	metre	36.00

14.17	Renewing bottom rail and/or top rubber of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.	kg	97.00
14.18	Pumping out water caused by springs, tidal or river seepage,broken water mains or drains and the like	kilo litre	49.00
14.19	Providing and fixing curtain rods of 1.25mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.		
14.19.1	20 mm diameter.	metre	382.00
14.19.2	25 mm diameter.	metre	422.00
14.2	Providing and fixing M.S. round or square bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.	kg	52.00
14.21	Providing joists (karries) including hoisting fixing in position and applying wood preservative on unexposed surface etc. complete with:		
14.21.1	Sal wood.	cum	4163.00
14.22	White washing with lime to give an even shade :		
14.22.1	Old work (two or more coats)	sqm	5.00
14.22.2	Old work (one or more coats)	sqm	3.00
14.23	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	sqm	4.00
14.24	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.	sqm	15.00
14.25	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :		
14.25.1	Old work (one or more coats)	sqm	18.00
14.26	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.	sqm	5.00
14.27	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade		
14.27.1	Old work (one or more coats)	sqm	24.00
14.28	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 and of required colour on old work :		
14.28.1	75 mm diameter pipes	metre	9.00
14.28.2	100 mm diameter pipes	metre	12.00
14.28.3	150 mm diameter pipes	metre	18.00
14.29	Painting with oil type wood preservative of approved brand and manufacture :		
14.29.1	Old work (one or more coats)	sqm	13.00
14.3	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade :		
4.30.1	One or more coats on old work.	sqm	35.00
14.31	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
14.31.1	One or more coats on old work.	sqm	28.00
14.32	Painting with aluminium paint of approved brand and manufacture to give an even shade :		
14.32.1	One or more coats on old work.	sqm	31.00
14.33	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
14.33.1	One or more coats on old work.	sqm	38.00
14.34	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
14.34.1	One or more coats on old work.	sqm	22.00
14.35	French spirit polishing :		
14.35.1	One or more coats on old work	sqm	47.00
14.36	Polishing on wood work with ready made wax polish of approved brand and manufacture :		
14.36.1	Old work	sqm	25.00

14.37	Re-lettering with black Japan paint of approved brand and manufacture.	per letter per cm height sqm	1.00
14.38	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.	sqm	23.00
14.39	Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
14.39.1	One or more coats on old work.	sqm	17.00
14.4	Finishing walls with water proofing cement paint of required shade :		
14.40.1	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litrs/10 sqm complete including cost of Priming coat	sqm	33.00
14.41	Finishing walls with textured exterior paint of required shade :		
14.41.1	Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm	sqm	106.00
14.41.2	Old work (One or more coats) applied @ 1.82 ltr/10 sqm.	sqm	62.00
14.42	Finishing walls with Acrylic Smooth exterior paint of required shade :		
14.42.1	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface).	sqm	49.00
14.42.2	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	32.00
14.43	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
14.43.1	Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface.	sqm	56.00
14.43.2	Old work (one or more coats applied @ 0.83 ltr/10 sqm).	sqm	37.00
14.44	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black orrosive bitumastic paint approved brand and manufacture on old work :		
14.44.1	100 mm diameter pipes	sqm	9.00
14.44.2	150 mm diameter pipes	sqm	16.00
14.45	Varnishing with varnish of approved brand and manufacture		
14.45.1	One or more coats with copal varnish.	sqm	28.00
14.45.2	One or more coats with spar varnish.	sqm	31.00
14.46	Melamine polishing on wood work (one or more coat).	sqm	55.00
14.47	Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.	sqm	22.00
14.48	40 mm thick stone flooring over 20 mm (average)thick base of cement mortar 1:5 (1 cement : 5 sand) including pointing with cement mortar 1:2 (1 cement : 2 sand) with an admixture of pigment to match the shade of stone. Red sand stone / White sand stone) stone to be supplied by the epartment.		
14.48.1	Rough chiseled dressed stone	sqm	186.00
14.48.2	Fine dressed stone	sqm	237.00
14.49	Coursed rubble masonry (second sort) with hard stone in Cement mortar 1:6 (1 cement : 6 sand) (Stone shall be supplied by the department)	cum	1873.00

CHAPTER-XV
Dismantling and Demolation

15.1	Demolishing lime concrete manually/by mechanical means and disposal of material within 50 meters lead as per direction of Engineer-in-Charge.	cum	160.00
15.2	Demolishing cement concrete manually/ by mechanical means		
15.2.1	1:3:6 or richer mix	cum	457.00
15.2.2	1:4:8 or leaner mix	cum	282.00
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 - incharge.	cum	667.00
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-incharge.	cum	577.00
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.	sqm	216.00
15.6	Extra for crapping, cleaning and straightening reinforcement from R.C.C. or R.B. work	kg	2.00
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	cum	132.00
15.7.2	In lime mortar with old mughal bricks	cum	334.00
15.7.3	In lime mortar	cum	160.00
15.7.4	In cement mortar	cum	385.00
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	1000 nos	863.00
15.8.2	From brick work in lime mortar	1000 nos	992.00
15.8.3	From brick work in cement mortar	1000 nos	1236.00
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	cum	217.00
15.9.2	In cement mortar	cum	460.00
15.1	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 50m lead as per direction of Engineer-in-charge:		
15.10.1	In lime mortar	cum	275.00
15.10.2	In cement mortar	cum	538.00
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	cum	190.00
15.11.2	In cement mortar	cum	219.00
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	each	67.00
15.12.2	Of area beyond 3 sq. metres	each	92.00
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	each	26.00
15.13.2	Of area beyond 3 sq. metres	each	35.00
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:	cum	811.00
15.15	Extra for dismantling trusse s, 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 sq centimetres and above	cum	117.00

15.15.2	Of sectional area below 40 square centimetres.	metre	0.35
15.16	Extra for dismantling trusse s, 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 sq centimetres and above	cum	166.00
15.16.2	Of sectional area below 40 square centimetres.	metre	0.69
15.17	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:		
15.17.1	R.S. Joists	kg	0.58
15.17.2	Channels, angles, tees and flats	kg	0.46
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 50metres lead.	kg	1.00
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.	kg	0.69
15.2	Extra for dismantling trusse s, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres	kg per metre span	0.17
15.21	Extra for dismantling trusse s, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres	kg per metre span	0.17
15.22	Extra for marking of structural steel work required to be reerected.	kg	0.81
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	sqm	17.00
15.23.2	For thickness of tiles above 25mm and upto 40mm	sqm	20.00
15.24	Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :	cum	247.00
15.25	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	51.00
15.26	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	19.00
15.27	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:		
15.27.1	G.S. Sheet	sqm	30.00
15.27.2	Asbestos sheet	sqm	14.00
15.28	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	cum	503.00
15.29	Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.	metre	4.00
15.3	Dismantling and stacking within 50m lead, fencing posts or struts including all earth work and dismantling of concrete etc.inbaseof		
15.30.1	T' or 'L' iron or pipe	each	55.00
15.30.2	R.C.C.	each	63.00
15.31	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.	each	6.00
15.32	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	7.00
15.33	Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.	sqm	12.00
15.34	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.	sqm	14.00
15.35	Dismantling wooden boardings in lining of walls and partitions,excluding supporting members but including stacking within 50 metres lead :		
15.35.1	Up to 10 mm thick	sqm	12.00
15.35.2	Thickness above 10 mm up to 25 mm	sqm	15.00
15.35.3	Thickness above 25 mm up to 40 mm	sqm	17.00

15.36	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead:		
15.36.1	Thickness up to 40 mm	sqm	54.00
15.36.2	Thickness above 40 mm up to 75 mm	sqm	82.00
15.37	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.	sqm	10.00
15.38	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :		
15.38.1	75 to 80 mm dia pipe.	metre	14.00
15.38.2	100 mm dia pipe	metre	14.00
15.38.3	150 mm dia pipe	metre	15.00
15.39	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 :		
15.39.1	15 mm to 40 mm nominal bore	metre	30.00
15.39.2	Above 40 mm nominal bore	metre	36.00
15.4	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		
15.40.1	Up to 150 mm diameter	metre	78.00
15.40.2	Above 150 mm dia up to 300 mm dia.	metre	105.00
15.40.3	Above 300 mm diameter	metre	141.00
15.41	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 into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	136.00
15.42	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 into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	81.00
15.43	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 into municipal dumps within 50 metres lead including refilling the excavated gap.	each	184.00
15.44	Dismantling of flushing cistern of any size including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	174.00
15.45	Dismantling of C.I. sluice valve including stacking of useful materials		
15.45.1	Up to 150 mm diameter	each	64.00
15.45.2	Above 150 mm diameter	each	219.00
15.46	Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.	each	130.00
15.47	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 :		
15.47.1	120 x 120 cm (outside to outside)	each	207.00
15.47.2	210 x 120 cm (outside to outside)	each	317.00
15.47.3	320 x 120 cm (outside to outside)	each	449.00
15.48	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.	sqm	10.00
15.49	Dismantling aluminium/ Gypsum partitions, doors, windows,fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50m lead as directed by Engineer-in-charge.	sqm	10.00

15.5	Demolishing C.C. /R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1000m, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	cum	874.00
15.51	Dismantling of flexible pavement (bituminous courses) by 1129 as per direction of Engineer-in-charge.mechanical means and disposal of dismantled material up to a lead of 1000 metres,	cum	104.00
	CHAPTER-XVI **Drilling of Tube Well**		
16.1	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size of mild steel casing pipe or housing pipe (for gravel packed bore) in all strata other than hard rock and only boulders including all works pertaining to boring complete.		
16.1.1	From 00 to 30 mts. below G.L.	RM	350.00
16.1.2	Above 30 to 60 mts. below G.L.	RM	403.00
16.1.3	Above 60 to 120 mts. below G.L.	RM	470.00
16.1.4	Above 120 to 180 mts. below G.L.	RM	537.00
16.2	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size of mild steel casing pipe or housing pipe (for gravel packed bore) in all strata other than hard rock and only boulders all works pertaining to boring complete.		
	TO SUIT 125MM DIA. MILD STEEL CASING PIPE		
16.2.1	From 00 to 30 mts. below G.L.	RM	403.00
16.2.2	Above 30 to 60 mts. below G.L.	RM	455.00
16.2.3	Above 60 to 120 mts. below G.L.	RM	536.00
16.2.4	Above 120 to 180 mts. below G.L.	RM	604.00
16.3	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size of mild steel casing pipe or housing pipe (for gravel packed bore) in all strata other than hard rock and only boulders including all works pertaining to boring complete		
	TO SUIT 150MM DIA. MILD STEEL CASING PIPE		
16.3.1	From 00 to 30 mts. below G.L.	RM	472.00
16.3.2	Above 30 to 60 mts. below G.L.	RM	604.00
16.3.3	Above 60 to 120 mts. below G.L.	RM	672.00
16.3.4	Above 120 to 180 mts. below G.L.	RM	738.00
16.4	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size of mild steel casing pipe or housing pipe (for gravel packed bore) in all strata other than hard rock and only boulders including all works pertaining to boring complete.		
	TO SUIT 200MM DIA. MILD STEEL CASING PIPE		
16.4.1	From 00 to 30 mts. below G.L.	RM	604.00
16.4.2	Above 30 to 60 mts. below G.L.	RM	672.00
16.4.3	Above 60 to 120 mts. below G.L.	RM	705.00
16.4.4	Above 120 to 180 mts. below G.L.	RM	752.00
16.5	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size of mild steel casing pipe in hard rock and boulders including all works pertaining to boring complete.		
	TO SUIT 100MM DIA. MILD STEEL CASING PIPE		
16.5.1	From 00 to 30 mts. below G.L.	RM	470.00
16.5.2	Above 30 to 60 mts. below G.L.	RM	537.00
16.5.3	Above 60 to 120 mts. below G.L.	RM	672.00
16.5.4	Above 120 to 180 mts. below G.L.	RM	805.00
16.6	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size o mild steel casing pipe in hard rock and boulders including all works pertaining to boring complete.		
	TO SUIT 125MM DIA. MILD STEEL CASING PIPE		
16.6.1	From 00 to 30 mts. below G.L.	RM	537.00
16.6.2	Above 30 to 60 mts. below G.L.	RM	604.00
16.6.3	Above 60 to 120 mts. below G.L.	RM	782.00
16.6.4	Above 120 to 180 mts. below G.L.	RM	873.00

16.7	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size o mild steel casing pipe in hard rock and boulders including all works pertaining to boring complete.		
	TO SUIT 150MM DIA. MILD STEEL CASING PIPE		
16.7.1	From 00 to 30 mts. below G.L.	RM	604.00
16.7.2	Above 30 to 60 mts. below G.L.	RM	672.00
16.7.3	Above 60 to 120 mts. below G.L.	RM	805.00
16.7.4	Above 120 to 180 mts. below G.L.	RM	940.00
16.8	Drilling of tube well perfectly vertical for the specified depth below the ground level of a suitable size of mild steel casing pipe in hard rock and boulders including all works pertaining to boring complete.		
	TO SUIT 200MM DIA. MILD STEEL CASING PIPE		
16.8.1	From 00 to 30 mts. below G.L.	RM	672.00
16.8.2	Above 30 to 60 mts. below G.L.	RM	745.00
16.8.3	Above 60 to 120 mts. below G.L.	RM	953.00
16.8.4	Above 120 to 180 mts. below G.L.	RM	1107.00
16.9	Providing, supplying and fixing M.S. blank casing pipes as specified in position perfectly vertical including transportation charges in the bore up to the required depth below ground level as specified in all strata including cutting, threading, coupling and all other operations pertaining to it and jointing materials etc. complete		
16.9.1	M.S. blank seamless ca sing pipe 100 mm dia	RM	403.00
16.9.2	M.S. blank seamless ca sing pipe 125 mm dia.	RM	644.00
16.9.3	M.S. blank seamless ca sing pipe 150 mm dia	RM	805.00
16.9.4	M.S. blank seamless ca sing pipe 175 mm dia.	RM	1006.00
16.9.5	M.S. blank seamless ca sing pipe 200 mm dia.	RM	1209.00
16.9.6	E.R.W.M.S. casing pipe 100 mm dia.	RM	255.00
16.9.7	E.R.W.M.S. casing pipe 125mm dia.	RM	336.00
16.9.8	E.R.W.M.S. casing pipe 150 mm dia.	RM	376.00
16.9.9	E.R.W.M.S. casing pipe 175 mm dia.	RM	570.00
16.9.10	E.R.W.M.S. casing pipe 200 mm dia.	RM	672.00
16.1	Extra for slotted or perforated casing pipe as per item 16.10 above.		
16.10.1	100 mm dia	RM	121.00
16.10.2	125 mm dia	RM	147.00
16.10.3	150 mm dia	RM	168.00
16.10.4	175 mm dia	RM	175.00
16.10.5	200 mm dia	RM	191.00
16.11	Labour for lowering and fixing of above pipes up to the required depth for above item, below the ground level as specified in all strata including cutting, threading, coupling and all other operations pertaining to the same and jointing material etc. complete.		
16.11.1	M S Pipe 100 mm dia.	RM	14.00
16.11.2	M S Pipe 125 mm dia.	RM	21.00
16.11.3	M S Pipe 150 mm dia.	RM	29.00
16.11.4	M S Pipe 175 mm dia.	RM	30.00
16.11.5	M S Pipe 200 mm dia.	RM	33.00
16.11.6	M S Pipe 225 mm dia.	RM	40.00
16.12	Providing, supplying and fixing M. S. blank socket or mild steel plug or screw caps of the standard make affixed on the top end of the casing pipe on the complete bore including all lead etc. complete as specified and directed.		
16.12.1	Blank socket or Mild steel plug 100 mm dia	each	201.00
16.12.2	Blank socket or Mild steel plug 125 mm dia	each	235.00
16.12.3	Blank socket or Mild steel plug 150 mm dia	each	268.00
16.12.4	Blank socket or Mild steel plug 175 mm dia	each	336.00
16.12.5	Blank socket or Mild steel plug 200 mm dia	each	369.00
16.13	Labour only for fixing M. S. blank soc ket or mild steel plug or screw caps of the standard make affixed on the top end of the casing pipe on the complete bore including all lead etc.complete as specified and directed.		
16.13.1	100 mm dia.	each	7.00
16.13.2	125 mm dia.	each	14.00

16.13.3	150 mm dia.	each	21.00
16.13.4	175 mm dia.	each	33.00
16.13.5	200 mm dia.	each	40.00
16.14	Providing gravel packing with uniformly graded pack materials pea gravel 3mm to 10mm size of approved quality including collection, stacking, washing and packing in layers of suitable thickness in the annual space that is to be gravel packed including all lead and lift etc. complete.	cum	672.00
16.15	Labour of gravel packing with pea gravel of gravel size as supplied departmentally at the Housing Board Store including washing and packing in layers of suitable thickness as required by manual labour including all leads and lifts etc. complete.	cum	67.00
16.16	Providing and assembling in tube 32mm dia G.I. medium class pipes conforming to IS : 238 Part-I 1985 in 2 meters pieces including cutting of full length pipe threading providing and fixing one extra socket of medium class for each piece etc. complete per piece at 3 meters.	each	537.00
	CHAPTER-XVII **Sanitary Installation**		
17.1	Providing and fixing water closet squatting pan (Indian type W.C. Pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flusing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixture 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 580x440mm with integral type foot rests.	each	2838.00
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.	each	6564.00
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 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	each	2657.00
17.2.2	W.C. pan with ISI marked black solid plastic seat and lid	each	2630.00
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, 40mm 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	each	3788.00
17.3.2	W.C. pan with ISI marked black solid plastic seat and lid	each	3761.00
17.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm 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.	each	1848.00
17.4.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.	each	2951.00
17.4.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern.	each	3813.00
17.4.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.	each	5154.00

17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm 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.	each	4497.00
17.5.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.	each	9443.00
17.5.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern.	each	9469.00
17.5.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.	each	11814.00
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. 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 half stall urinal with 5 litre P.V.C. automatic flushing cistern.	each	2796.00
17.6.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.	each	4544.00
17.6.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern.	each	6040.00
17.6.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.	each	7342.00
17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P.brass pillar taps,32 mm C.P. brass wa ste 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.	each	1716.00
17.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap.	each	1530.00
17.7.3	White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps.	each	1556.00
17.7.4	White Vitreous China Flat back wash basin size 550x400mm with single 15 mm C.P. brass pillar tap.	each	1356.00
17.7.5	White Vitreous China Angle back wash basin size 600x480 mm with single 15 mm C.P. brass pillar tap.	each	1428.00
17.7.6	White Vitreous China Angle back wash basin size 400x400mm with single 15 mm C.P. brass pillar tap.	each	1262.00
17.7.7	White Vitreous China Flat back wash basin size 450x300mm with single 15 mm C.P. brass pillar tap.	each	1249.00
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 operated levers.	each	2705.00
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.	each	2170.00
17.7.10	Stainless Steel ISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap.	each	2919.00
17.7.11	Stainless Steel ISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap.	each	2717.00
17.7.12	Oval shape wash basin over counter/under counter with 15 mm C.P brass pillar tap (Counter to be paid sepratly)	each	1996.00
17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	each	910.00
17.8A	Extra for providing china coloured wash basin/china coloured pedestal for was basin.	each	240.00

17.9	Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste of standard pattern, 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 600x450x250 mm.	each	2315.00
17.1	Providing and fixing Stainless Steel ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and 40 mm stainless steel plug 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 250mm.	each	5618.00
17.10.1.2	510x1040 mm bowl depth 225mm.	each	4322.00
17.10.1.3	510x1040 mm bowl depth 200mm.	each	4041.00
17.10.1.4	510x1040 mm bowl depth 178mm.	each	3908.00
17.10.2	Kitchen sink without drain board		
17.10.2.1	610x510 mm bowl depth 200 mm.	each	3175.00
17.10.2.2	610x460 mm bowl depth 200 mm.	each	2975.00
17.10.2.3	470x420 mm bowl depth 178 mm.	each	2318.00
17.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass t rap 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 450x300x150mm	each	1927.00
17.11.2	Size 600x450x200mm	each	2689.00
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 600x450x25mm	each	749.00
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	each	840.00
17.13.2	Orissa pattern W.C. pan of size 580x440 mm	each	1173.00
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	each	240.00
17.15	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	each	913.00
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	each	1175.00
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	Pair	170.00
17.17.2	250x125x25 mm	Pair	144.00
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	each	992.00
17.18.2	10 litre capacity - coloured	each	1696.00
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	each	2198.00
17.19.2	10 litre (full flush) capacity-coloured	each	2291.00
17.2	Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :		
17.20.1	White solid plastic seat with lid	each	431.00
17.20.2	Black solid plastic seat with lid	each	405.00
17.21	Extra for providing coloured other than black solid P.V.C.plastic seat and cover in European type W.C. pan, instead of white plastic seat and cover.	each	67.00
17.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	each	138.00

17.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively.	each	674.00
17.24	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.	each	1372.00
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 630x450mm.	each	899.00
17.25.2	Flat back wash basin of size 550x400mm.	each	726.00
17.25.3	Angle back wash basin of size 600x480mm.	each	799.00
17.25.4	Angle back wash basin of size 400x400mm.	each	633.00
17.25.5	Flat back wash basin of size 450x300mm	each	619.00
17.25.6	Surgeon type wash basin of size 660x460mm.	each	1206.00
17.26	Providing and fixing kitchen sink including making all connections excluding cost of fittings		
17.26.1	17.26.1 White glazed fire clay sink of size 600x450x250mm.	each	1818.00
17.27	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:		
17.27.1	Size 450x300x150 mm.	each	1017.00
17.27.2	Size 600x450x200 mm	each	1778.00
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	each	67.00
17.28.1.2	40 mm dia	each	81.00
17.28.2	Flexible pipe		
17.28.2.1	32 mm dia	each	74.00
17.28.2.2	40 mm dia	each	81.00
17.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	each	22.00
17.3	Providing and fixing in position 25mm diameter mosquito proof coupling of approved municipal design.	each	30.00
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.	each	825.00
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 450mm dia.	each	888.00
17.32.2	Rectangular shape 453x357mm	each	628.00
17.32.3	Oval shape 450x350mm (outer dimensions)	each	759.00
17.32.4	Rectangular shape 1500x450 mm	each	1625.00
17.33	Providing and fixing 600x120x5mm glass shelf with edges round of 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.	each	279.00
17.34	Providing and fixing toilet paper holder :		
17.34.1	C.P. brass	each	187.00
17.34.2	Vitreous china	each	222.00
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.	metre	423.00
17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	573.00
17.35.2	75 mm diameter :		
17.35.2.1	Sand cast iron S&S pipe as per IS: 1729.	metre	361.00
17.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	505.00
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	each	31.00
17.36.2	100 mm dia pipe	each	36.00

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 10x10x10cm of 1:2:4 mix (1 cement :2 sand:4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :		
17.37.1	For 100 mm dia. Pipe	each	82.00
17.37.2	For 75 mm dia. Pipe	each	79.00
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		
17.38.1.1	Sand cast iron S&S as per IS - 1729	each	299.00
17.38.1.2	Sand cast iron S&S as per IS - 3989	each	315.00
17.38.2	75 mm dia		
17.38.2.1	Sand cast iron S&S as per IS - 1729	each	243.00
17.38.2.2	Sand cast iron S&S as per IS- 3989	each	283.00
17.39	Providing and fixing plain bend of required degree		
17.39.1	100 mm		
17.39.1.1	Sand cast iron S&S as per IS - 1729	each	260.00
17.39.1.2	Sand cast iron S&S as per IS - 3989	each	299.00
17.39.2	75 mm dia		
17.39.2.1	Sand cast iron S&S as per IS - 1729	each	201.00
17.39.2.2	Sand cast iron S&S as per IS- 3989	each	208.00
17.4	Providing and fixing heel rest sanitary bend		
17.40.1	100 mm		
17.40.1.1	Sand cast iron S&S as per IS - 1729	each	271.00
17.40.1.2	Sand cast iron S&S as per IS - 3989	each	325.00
17.40.2	75 mm dia		
17.40.2.1	Sand cast iron S&S as per IS - 1729	each	216.00
17.40.2.2	Sand cast iron S&S as per IS- 3989	each	282.00
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	100x100x100x100mm		
17.41.1.1	Sand cast iron S&S as per IS - 1729	each	495.00
17.41.1.2	Sand cast iron S&S as per IS - 3989	each	592.00
17.41.2	75x75x75x75 mm		
17.41.2.1	Sand cast iron S&S as per IS - 1729	each	443.00
17.41.2.2	Sand cast iron S&S as per IS- 3989	each	504.00
17.42	Providing and fixing double equal plain junction of required degree		
17.42.1	100x100x100x100mm		
17.42.1.1	Sand cast iron S&S as per IS - 1729	each	473.00
17.42.1.2	Sand cast iron S&S as per IS - 3989	each	473.00
17.42.2	75x75x75x75 mm		
17.42.2.1	Sand cast iron S&S as per IS - 1729	each	351.00
17.42.2.2	Sand cast iron S&S as per IS- 3989	each	355.00
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	100x100x100x100mm		
17.43.1.1	Sand cast iron S&S as per IS - 1729	each	408.00
17.43.1.2	Sand cast iron S&S as per IS - 3989	each	495.00
17.43.2	75x75x75x75 mm		
17.43.2.1	Sand cast iron S&S as per IS - 1729	each	309.00
17.43.2.2	Sand cast iron S&S as per IS- 3989	each	350.00
17.44	Providing & fixing single equal plain junction of required degree		
17.44.1	100x100x100x100mm		
17.44.1.1	Sand cast iron S&S as per IS - 1729	each	454.00
17.44.1.2	Sand cast iron S&S as per IS - 3989	each	426.00
17.44.2	75x75x75x75 mm		
17.44.2.1	Sand cast iron S&S as per IS - 1729	each	255.00
17.44.2.2	Sand cast iron S&S as per IS- 3989	each	294.00
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	each	582.00
17.45.1.2	Sand cast iron S&S as per IS - 3989	each	687.00
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	each	526.00
17.46.1.2	Sand cast iron S&S as per IS - 3989	each	511.00
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	100x100x75x75 mm		
17.47.1.1	Sand cast iron S&S as per IS - 1729	each	354.00
17.47.1.2	Sand cast iron S&S as per IS - 3989	each	522.00
17.48	Providing and fixing single unequal plain junction of required degree :		
17.48.1	100x100x75x75 mm		
17.48.1.1	Sand cast iron S&S as per IS - 1729	each	345.00
17.48.1.2	Sand cast iron S&S as per IS - 3989	each	445.00
17.49	Providing and fixing double equal plain invert branch of required degree:		
17.49.1	100x100x100x100mm		
17.49.1.1	Sand cast iron S&S as per IS - 1729	each	432.00
17.49.1.2	Sand cast iron S&S as per IS - 3989	each	473.00
17.49.2	75x75x75x75 mm		
17.49.2.1	Sand cast iron S&S as per IS - 1729	each	415.00
17.49.2.2	Sand cast iron S&S as per IS- 3989	each	449.00
17.5	Providing and fixing single equal plain invert branch of required degree:		
17.50.1	100x100x100x100mm		
17.50.1.1	Sand cast iron S&S as per IS - 1729	each	378.00
17.50.1.2	Sand cast iron S&S as per IS - 3989	each	432.00
17.50.2	75x75x75x75 mm		
17.50.2.1	Sand cast iron S&S as per IS - 1729	each	294.00
17.50.2.2	Sand cast iron S&S as per IS- 3989	each	294.00
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	each	445.00
17.51.1.2	Sand cast iron S&S as per IS - 3989	each	572.00
17.52	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	each	419.00
17.52.1.2	Sand cast iron S&S as per IS - 3989	each	532.00
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	each	199.00
17.53.1.2	With 100 mm dia. pipe	each	282.00
17.53.2	114 mm off sets		
17.53.2.1	With 75 mm dia. pipe	each	305.00
17.53.2.2	With 100 mm dia. pipe	each	345.00
17.53.3	152 mm off sets		
17.53.3.1	With 75 mm dia. pipe	each	298.00
17.53.3.2	With 100 mm dia. pipe	each	305.00
17.54	Providing & 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	each	323.00
17.54.2	150 mm off sets		
17.54.2.1	With 75 mm dia. pipe	each	300.00
17.54.2.2	With 100 mm dia. Pipe	each	369.00
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	each	445.00
17.55.1.2	Sand cast iron S&S as per IS - 3989	each	388.00

17.55.2	75 mm		
17.55.2.1	Sand cast iron S&S as per IS - 1729	each	350.00
17.55.2.2	Sand cast iron S&S as per IS- 3989	each	283.00
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	each	238.00
17.56.1.2	Sand cast iron S&S as per IS - 3989	each	292.00
17.56.2	75 mm		
17.56.2.1	Sand cast iron S&S as per IS - 1729	each	161.00
17.56.2.2	Sand cast iron S&S as per IS- 3989	each	231.00
17.57	Providing and fixing collar:		
17.57.1	100 mm		
17.57.1.1	Sand cast iron S&S as per IS - 1729	each	189.00
17.57.1.2	Sand cast iron S&S as per IS - 3989	each	252.00
17.57.2	75 mm		
17.57.2.1	Sand cast iron S&S as per IS - 1729	each	168.00
17.57.2.2	Sand cast iron S&S as per IS- 3989	each	201.00
17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:		
17.58.1	100 mm	each	152.00
17.58.2	75 mm	each	129.00
17.58.3	50 mm	each	104.00
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	each	59.00
17.59.2	75 mm	each	52.00
17.59.3	50 mm	each	39.00
17.6	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 - 1729	each	658.00
17.60.1.2	Sand cast iron S&S as per IS - 3989	each	534.00
17.60.2	100 mm inlet and 75 mm outlet		
17.60.2.1	Sand cast iron S&S as per IS - 3989	each	705.00
17.60.2.2	Sand Cast Iron S&S as per IS- 1729.	each	477.00
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 sand :6 graded stone aggregate 12.5mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 sand) :		
17.61.1	100 mm dia	metre	187.00
17.61.2	75 mm dia	metre	161.00
17.61.3	50 mm dia	metre	95.00
17.62	Painting sand cast iron/ centrifugally cast (spun) iron soil,waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		
17.62.1	100 mm diameter pipe	metre	26.00
17.62.2	75 mm diameter pipe	metre	21.00
17.63	Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with paint of any colour such as chocolate, grey or buff etc :		
17.63.1	100 mm diameter pipe	metre	13.00
17.63.2	75 mm diameter pipe	metre	9.00
17.64	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 with C.P. brass hinges and rubber buffers, 10litre low level flushing cistern with fitting and brackets,40mm flush bend 20mm 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		

17.64.1	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.	each	4727.00
17.65	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.		
17.65.1	Waste coupling 31mm of 79mm length and 62mm breadth weighing not less than 45gms.	each	89.00
17.65.2	Waste coupling 38mm of 83mm length and 77mm breadth, weighing not less than 60gms.	each	121.00
17.66	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		
17.66.1	Bottle trap 31mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms.	each	442.00
17.66.2	Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 263gms.	each	468.00
17.67	Providing and fixing PTMT liquid soap container 109mm wide,125mm high and 112mm 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	each	199.00
17.68	Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with a minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colour. Weighing not less than 88 gms	each	177.00
17.69	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.		
17.69.1	450MM long towel rail with total length of 495mm,78mm wide and effective height of 88mm, eighing not less than 170gms.	each	359.00
17.69.2	600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms	each	401.00
17.7	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36mm height of approved quality and colour. Weighing not less than 300 gms	each	452.00
17.71	Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes. Weighing not less than 60 gms.	each	178.00
17.72	Providing and fixing PTMT urinal cock of approved quality and colour.		
17.72.1	15mm nominal bore, 80mm long. 42mm high and 30mm wide with BSP female threads weighing not less than 48gms.	each	151.00
17.73	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 50x5mm flat of specified shape,projecting 75mm 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 30mm x1.6mm galvanised M.S.flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 5x6mm, one bolts on each side of the pipe.		
17.73.1	Total bracket length 580mm of approved shape and design (for single 100mm dia pipe).	each	164.00
17.73.2	Total bracket length 810mm of approved shape and design (for two 100mm dia pipes).	each	194.00
17.73.3	Total bracket length 1040mm of approved shape and design (for three 100mm dia pipes).	each	225.00

17.74	Providing and fixing on wall face unplasticised Rigid PVC Rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.for soil and wast pipes Single socketed pipes for working pressure of 4 kg./cm2		
17.74.1	75 mm diameter	metre	156.00
17.74.2	90 mm diameter	metre	208.00
17.74.3	110 mm diameter	metre	259.00
17.75	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC Rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS :5382 leaving 10 mm gap for thermal expansion.		
17.75.1	Coupler		
17. 75.1.1	75 mm diameter	each	183.00
17. 75.1.2	90 mm diameter	each	214.00
17. 75.1.3	110 mm diameter	each	245.00
17. 75.2	Single pushfit Coupler :		
17. 75.2.1	75 mm diameter	each	230.00
17. 75.2.2	90 mm diameter	each	265.00
17. 75.2.3	110 mm diameter	each	299.00
17. 75.3	Single tee with door		
17. 75.3.1	75x75x75 mm	each	308.00
17. 75.3.2	90x90x90 mm	each	383.00
17. 75.3.3	110x110x110 mm	each	459.00
17. 75.4	Single tee without door		
17. 75.4.1	75x75x75 mm	each	308.00
17. 75.4.2	90x90x90 mm	each	370.00
17. 75.4.3	110x110x110 mm	each	432.00
17. 75.5	Bend 87.5°		
17. 75.5.1	75 mm bend	each	163.00
17. 75.5.2	90 mm bend	each	210.00
17. 75.5.3	110 mm bend	each	259.00
17. 75.6	Shoe		
17. 75.6.1	75 mm Shoe	each	277.00
17. 75.6.2	90 mm shoe	each	381.00
17. 75.6.3	110 mm Shoe	each	485.00
	CHAPTER-XVIII **Water Supply**		
18.1	Providing and fixing polyethelene _ Aluminium - Polyethelene - (PE-AL-PE) Composite Pressure pipes conforming to IS -15450 UV stablized with carbon black having thermal stability for hot and cold water supply, capable to withstand temperature upto 80^0C including all special fittings of composite material (engineering plastic blend and brass inserts whever required) e.g.l elbows, tees, reducers, couplers & connectors etc. with clamps at 1.00 meter spacing. This includes testing of joints complete as per direction of the Engineer-in-Charge.		
18.1.1	1216 (16 mm OD) pipe	metre	169.00
18.1.2	1620 (20 mm OD) pipe	metre	202.00
18.1.3	2025 (25 mm OD) pipe	metre	256.00
18.1.4	2532 (32 mm OD) pipe	metre	343.00
18.1.5	3240 (40 mm OD) pipe	metre	450.00
18.1.6	4050 (50 mm OD) pipe	metre	584.00

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 80oC 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 & making good the wall etc.		
18.2.1	1216 (16mm OD) pipe	metre	259.00
18.2.2	1620 (20 mm OD) pipe	metre	300.00
18.2.3	2025 (25 mm OD) pipe	metre	368.00
18.2.4	2532 (32 mm OD) pipe	metre	475.00
18.3	Providing & fixing Polyethelene – Aluminium - Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS –15450 - 2004 U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80oC 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	metre	166.00
18.3.2	1620 (20 mm OD) pipe.	metre	197.00
18.3.3	2025 (25 mm OD) pipe.	metre	247.00
18.3.4	2532 (32 mm OD) pipe.	metre	327.00
18.3.5	3240 (40 mm OD) pipe.	metre	428.00
18.3.6	4050 (50 mm OD) pipe.	metre	561.00
18.4	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. Internal work – Exposed on wall		
18.4.1	PN - 16 Pipe, 16 mm OD	metre	82.00
18.4.2	PN - 16 Pipe, 20 mm OD	metre	110.00
18.4.3	PN - 16 Pipe, 25 mm OD	metre	155.00
18.4.4	PN - 16 Pipe, 32 mm OD	metre	236.00
18.4.5	PN - 16 Pipe, 40 mm OD	metre	361.00
18.4.6	PN - 16 Pipe, 50 mm OD	metre	503.00
18.5	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes 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.,		
18.5.1	PN - 16 Pipe, 16 mm OD	metre	141.00
18.5.2	PN - 16 Pipe, 20 mm OD	metre	176.00
18.5.3	PN - 16 Pipe, 25 mm OD	metre	232.00
18.5.4	PN - 16 Pipe, 32 mm OD	metre	332.00
18.6	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes UV stabilized &anti-microbial fusion welded,having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings including trenching ,refilling & testing of joints complete as per direction of Engineer in Charge. External Work		
18.6.1	PN - 16 Pipe, 16 mm OD (SDR – 7.4)	metre	78.00
18.6.2	PN - 16 Pipe, 20 mm OD (SDR – 7.4)	metre	105.00

18.6.3	PN - 16 Pipe, 25 mm OD (SDR – 7.4)	metre	148.00
18.6.4	PN - 16 Pipe, 32 mm OD (SDR – 7.4)	metre	223.00
18.6.5	PN - 16 Pipe, 40 mm OD (SDR – 7.4)	metre	339.00
18.6.6	PN - 16 Pipe, 50 mm OD (SDR – 7.4)	metre	480.00
18.6.7	PN - 16 Pipe, 63mm OD (SDR – 7.4)	metre	736.00
18.6.8	PN - 16 Pipe, 75 mm OD (SDR – 7.4)	metre	1040.00
18.6.9	PN - 16 Pipe, 90 mm OD (SDR – 7.4)	metre	1647.00
18.6.10	PN - 10 Pipe, 110 mm OD (SDR - 11)	metre	1724.00
18.6.11	PN - 10 Pipe, 160 mm OD (SDR - 11)	metre	3604.00
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.	metre	113.00
18.7.2	20 mm nominal outer dia .Pipes.	metre	133.00
18.7.3	25 mm nominal outer dia .Pipes.	metre	173.00
18.7.4	32 mm nominal outer dia .Pipes.	metre	225.00
18.7.5	40 mm nominal outer dia .Pipes.	metre	316.00
18.7.6	50 mm nominal outer dia .Pipes.	metre	482.00
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 Wall etc.		
18.8.1	15 mm nominal outer dia .Pipes.	metre	178.00
18.8.2	20 mm nominal outer dia .Pipes.	metre	202.00
19.8.3	25 mm nominal outer dia .Pipes.	metre	255.00
18.8.4	32 mm nominal outer dia .Pipes.	metre	319.00
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.	metre	107.00
18.9.2	20 mm nominal outer dia .Pipes.	metre	124.00
18.9.3	25 mm nominal outer dia .Pipes.	metre	167.00
18.9.4	32 mm nominal outer dia .Pipes.	metre	213.00
18.9.5	40 mm nominal outer dia .Pipes.	metre	293.00
18.9.6	50 mm nominal outer dia .Pipes.	metre	459.00
18.9.7	62.50 mm nominal inner dia Pipes.	metre	1401.00
18.9.8	75 mm nominal inner dia .Pipes.	metre	1830.00
18.9.9	100mm nominal inner dia .Pipes.	metre	2537.00
18.9.10	150 mm nominal inner dia .Pipes.	metre	4407.00
18.1	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work – Exposed on wall.		
18.10.1	15 mm dia. nominal bore	metre	122.00
18.10.2	20 mm dia. nominal bore	metre	154.00
18.10.3	25 mm dia. nominal bore	metre	207.00
18.10.4	32 mm dia. nominal bore	metre	260.00
18.10.5	40 mm dia. nominal bore	metre	304.00
18.10.6	50 mm dia. nominal bore	metre	394.00
18.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall		
18.11.1	15 mm dia nominal bore	metre	167.00
18.11.2	20 mm dia nominal bore	metre	196.00
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	metre	108.00
18.12.2	20 mm dia. nominal bore	metre	135.00
18.12.3	25 mm dia. nominal bore	metre	181.00
18.12.4	32 mm dia. nominal bore	metre	223.00
18.12.5	40 mm dia. nominal bore	metre	253.00
18.12.6	50 mm dia. nominal bore	metre	322.00
18.12.7	65 mm dia. nominal bore	metre	409.00
18.12.8	80 mm dia. nominal bore	metre	527.00
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	each	191.00
18.13.2	50 to 80 mm nominal bore	each	486.00
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 paidseparately). BRASS FITTINGS	each	140.00
18.15	Providing and fixing brass bib cock of approved quality :		
18.15.1	15 mm nominal bore 0.40kg	each	221.00
18.15.2	20 mm nominal bore 0.75kg	each	270.00
18.16	Providing and fixing brass stop cock of approved quality :		
18.16.1	15 mm nominal bore 0.40kg	each	221.00
18.16.2	20 mm nominal bore 0.75kg	each	270.00
18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
18.17.1	15 mm nominal bore	each	237.00
18.17.2	20 mm nominal bore	each	282.00
18.17.3	25 mm nominal bore	each	329.00
18.17.4	18.17.4 32 mm nominal bore.	each	412.00
18.17.5	40 mm nominal bore	each	459.00
18.17.6	50 mm nominal bore	each	665.00
18.17.7	65 mm nominal bore	each	957.00
18.17.8	80 mm nominal bore	each	1574.00
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	each	262.00
18.18.2	20 mm nominal bore	each	383.00
18.18.3	25 mm nominal bore	each	444.00
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	each	336.00
18.19.1.2	Vertical	each	366.00
18.19.2	32 mm nominal bore		
18.19.2.1	Horizontal	each	427.00
18.19.2.2	Vertical	each	534.00
18.19.3	40 mm nominal bore		
18.19.3.1	Horizontal	each	569.00
18.19.3.2	Vertical	each	696.00
18.19.4	50 mm nominal bore		
18.19.4.1	Horizontal	each	849.00
18.19.4.2	Vertical	each	974.00
18.19.5	65 mm nominal bore		
18.19.5.1	Horizontal	each	1474.00
18.19.5.2	Vertical	each	1688.00
18.19.6	80 mm nominal bore		
18.19.6.1	Horizontal	each	2084.00
18.19.6.2	Vertical	each	2750.00
18.20	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the mai.		
18.20.1	15 mm nominal bore	each	161.00
18.20.2	20 mm nominal bore	each	215.00
18.20.3	25 mm nominal bore	each	281.00

18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :		
18.21.1	30 cm length		
18.21.1.1	15 mm nominal bore	each	52.00
18.21.1.2	20 mm nominal bore	each	49.00
18.21.2	45 cm length		
18.21.2.1	15 mm nominal bore	each	52.00
18.21.2.2	20 mm nominal bore	each	64.00
18.22	Providing and fixing C.P. brass shower ro se with 15 or 20 mm inlet :		
18.22.1	100 mm diameter	each	518.00
18.22.2	150 mm diameter	each	581.00
18.23	Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe)	quintal	64.00
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).	quintal	115.00
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.	quintal	3327.00
18.25.2	Over 300 mm dia.	quintal	3588.00
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.	quintal	5891.00
18.26.2	Over 300 mm dia.	quintal	6495.00
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	metre	848.00
18.27.2	125 mm dia. pipe	metre	1037.00
18.27.3	150 mm dia. pipe	metre	1227.00
18.27.4	200 mm dia. pipe	metre	1707.00
18.27.5	250 mm dia. pipe	metre	2423.00
18.27.6	300 mm dia. pipe	metre	3220.00
18.27.7	350 mm dia. pipe	metre	3974.00
18.27.8	400 mm dia. pipe	metre	4868.00
18.27.9	450 mm dia. pipe	metre	5827.00
18.27.10	500 mm dia. pipe	metre	7092.00
18.27.11	600 mm dia. Pipe	metre	9371.00
18.28	Providing lead caulked joints to spun iron orC.I. pipes and specials including testing of joints but excluding the cost of pig lead :		
1828.1	100 mm diameter pipe	each	94.00
18.28.2	125 mm diameter pipe	each	138.00
18.28.3	150 mm diameter pipe	each	141.00
18.28.4	200 mm diameter pipe	each	187.00
18.28.5	250 mm diameter pipe	each	235.00
18.28.6	300 mm diameter pipe	each	283.00
18.28.7	350 mm diameter pipe	each	294.00
18.28.8	400 mm diameter pipe	each	382.00
18.28.9	450 mm diameter pipe	each	428.00
18.28.10	500 mm diameter pipe	each	453.00
18.28.11	600 mm diameter pipe	each	607.00
18.29	Supplying pig lead at site of work.	quintal	7753.00
18.3	Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :		
18.30.1	80 mm diameter pipe	each	76.00
18.30.2	100 mm diameter pipe	each	130.00
18.30.3	125 mm diameter pipe	each	131.00
18.30.4	150 mm diameter pipe	each	181.00
18.30.5	200 mm diameter pipe	each	187.00
18.30.6	250 mm diameter pipe	each	273.00
18.30.7	300 mm diameter pipe	each	283.00
18.30.8	350 mm diameter pipe	each	385.00
18.30.9	400 mm diameter pipe	each	649.00
18.30.10	450 mm diameter pipe	each	807.00

18.30.11	500 mm diameter pipe	each	895.00
18.30.12	600 mm diameter pipe	each	1026.00
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	each	2838.00
18.31.1.2	Class II	each	2933.00
18.31.2	125 mm diameter		
18.31.2.1	Class I	each	3490.00
18.31.2.2	Class II	each	3639.00
18.31.3	150 mm diameter		
18.31.3.1	Class I	each	4242.00
18.31.3.2	Class II	each	4474.00
18.31.4	200 mm diameter		
18.31.4.1	Class I	each	7742.00
18.31.4.2	Class II	each	8304.00
18.31.5	250 mm diameter		
18.31.5.1	Class I	each	11516.00
18.31.5.2	Class II	each	11777.00
18.31.6	300 mm diameter		
18.31.6.1	Class I	each	14112.00
18.31.6.2	Class II	each	14626.00
18.32	Constructing masonry Chamber 30x30x50 cm, inside with class 25 designation brick work in cement mortar 1:4 (1cement :4 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 sand : 4 graded stone aggregate 20 mm nominal size) 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 sand) 12mm thick finished with a floating coat of neat cement complete as per standard design		
18.32.1	With Modular bricks	each	690.00
18.33	Constructing masonry Chamber 60x60x75 with brick inside of crushing strength not less than 25kg/sqcm and water absorpation not more than 20% brick work in cement mortar 1:4 (1 cement : 4 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 sand : 4 graded stone aggregate 20mm nominal size) including 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 sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
18.33.1	With Modular bricks	each	4134.00
18.34	Constructing masonry Chamber 90x90x100 cm, inside with brick of crushing strength not less than 25kg/sqcm and water absorpation not more than 20% class designation brick work in cement mortar 1:4 (1 cement : 4 sand) 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone mortar 1:3 (1 cement : 3 sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
18.34.1	With Modular bricks	each	7070.00

18.35	Constructing masonry Chamber 120x120x100 cm, inside with class 25 designation brick work in cement mortar 1:4 (1 cement : 4 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 sand : 4 graded stone aggregate 20 mm nominal size) 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 sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
18.35.1	With Modular bricks	each	9808.00
18.36	Constructing masonry Chamber 60x60x75 cm, inside with 25 class designation brick work in cement mortar 1:4 (1 cement : 4 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 sand : 4 graded stone aggregate 20 mm nominal size) 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 sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
18.36.1	With Modular bricks	each	3897.00
18.37	Constructing masonry Chamber 60x45x50 cm, inside with 40 class designation brick work in cement mortar 1:4 (1cement : 4 sand) for water meter complete with C.I.double flap surface box 400x200x200 mm (inside) withlocking arrangement and RCC top slab 1:2:4 mix (1 cement :2 sand : 4 graded stone aggregate 20 mm nominal size)necessary excavation foundation concrete 1:5:10 (1cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 sand) 12mm thick finished with a floating coat of neat cement complete as per standard design :		
18.37.1	With Modular bricks	each	3871.00
18.38	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :		
18.38.1	15 mm diameter pipe.	metre	6.00
18.38.2	20 mm diameter pipe.	metre	6.00
18.38.3	25 mm diameter pipe.	metre	8.00
18.38.4	32 mm diameter pipe.	metre	10.00
18.38.5	40 mm diameter pipe.	metre	12.00
18.38.6	50 mm diameter pipe.	metre	14.00
18.39	Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :		
18.39.1	15 mm diameter pipe.	metre	3.00
18.39.2	20 mm diameter pipe.	metre	3.00
18.39.3	25 mm diameter pipe	metre	4.00
18.39.4	32 mm diameter pipe	metre	5.00
18.39.5	40 mm diameter pipe	metre	6.00
18.39.6	50 mm diameter pipe	metre	7.00
18.4	Painting G.I. pipes and fittings with two coats of anticorrosive bitumastic paint of approved quality :		
18.40.1	15 mm diameter pipe	metre	3.00
18.40.2	20 mm diameter pipe	metre	4.00
18.40.3	25 mm diameter pipe	metre	4.00
18.40.4	32 mm diameter pipe	metre	5.00
18.40.5	40 mm diameter pipe	metre	6.00
18.40.6	50 mm diameter pipe	metre	7.00
18.40.7	65 mm diameter pipe	metre	9.00
18.40.8	80 mm diameter pipe	metre	10.00
18.41	Providing and filling coarse sand all-round the G.I. pipes in external work.		
18.41.1	15 mm diameter pipe	metre	25.00
18.41.2	20 mm diameter pipe	metre	25.00

18.41.3	25 mm diameter pipe	metre	26.00
18.41.4	32 mm diameter pipe	metre	26.00
18.41.5	40 mm diameter pipe	metre	28.00
18.41.6	50 mm diameter pipe	metre	29.00
18.41.7	65 mm diameter pipe	metre	45.00
18.41.8	80 mm diameter pipe	metre	46.00
18.41.9	100 mm diameter pipe	metre	48.00
18.41.10	150 mm diameter pipe	metre	72.00
18.42	Boring with 100 mm diameter casing pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :		
18.42.1	Up to 6 metres depth.	metre	174.00
18.42.2	Beyond 6 m and up to 12 m depth.	metre	206.00
18.42.3	Beyond 12 m and up to 18 m depth.	metre	240.00
18.43	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass st rainer of approved quality.	metre	422.00
18.44	Providing & fixing to filter and lowering to proper levels 40mm G.I.pipe for tube well including cleaning &priming the tube well.	metre	240.00
18.45	Providing and placing in position hand pump of approved quality for 40mm diameter GI pipe complete with all accessories.	metre	664.00
18.46	Providing & 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	each	87.00
18.46.2	20 mm nominal bore	each	112.00
18.46.3	25 mm nominal bore	each	123.00
18.46.4	32 mm nominal	each	143.00
18.46.5	40 mm nominal bore	each	189.00
18.46.6	50mm nominal bore	each	271.00
18.46.7	65mm nominal bore	each	492.00
18.46.8	80 mm nominal bore	each	583.00
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.	each	171.00
18.47.2	20 mm nominal bore.	each	196.00
18.47.3	25 mm nominal bore.	each	208.00
18.47.4	32 mm nominal bore.	each	227.00
18.47.5	40 mm nominal bore.	each	273.00
18.47.6	50 mm nominal bore.	each	386.00
18.47.7	65 mm nominal bore.	each	607.00
18.47.8	80 mm nominal bore.	each	698.00
18.48	Providing and placing on terrace (at all floor levels) high dersign HDPE (polyethylene) water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	Ltr .	6.00
	C.P. BRASS FITTINGS		
18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931		
18.49.1	18.49.1 15 mm nominal bore.	each	360.00
18.5	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	18.50.1 15 mm nominal bore.	each	315.00
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 each 316.00	each	363.00

18.52	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
18.52.1	15 mm nominal bore.	each	360.00
18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 a) 15 mm nominal bore		
18.53.1	15 mm nominal bore.	each	400.00
18.54	Providing and fixing C.P. brass pillar cock approved quality and make conforming to IS:specification. 15 mm nominal bore 125 mm long foam flow.	each	576.00
18.55	Providing and fixing C.P. brass base and mixer of approved quality and make conforming to IS:specification.15 mm nominal bore.	each	1883.00
18.56	Providing and fixing C.P. brass wall mixer of approved quality and make conforming to IS:specification. 15 mm nominal bore.	each	2177.00
18.57	Providing and fixing C.P. brass sink mixer of approved quality and make conforming to IS:specification. 15 mm nominal bore.	each	1883.00
18.58	Providing and fixing C.P. brass grating of approved quality and make conforming to IS:specification. 100 mm dia.	each	43.00
18.59	Providing and fixing C.P. brass soap container 109 mm wide,125 high and 112 mm distance from wall of standard shape with bracket of the same material with all fittings etc. of approved quality and make like Jaguor or equivalent conforming to IS:specification.	each	608.00
	PTMT FITTINGS		
18.6	Providing and fixing PTMT bib cock of approved quality and colour.		
18.60.1	15mm nominal bore, 86mm long. Weighing not less than 88 gms.	each	139.00
18.60.2	15 mm nominal bore, 122mm long. Weighing not less than 99 gms.	each	191.00
18.60.3	5 mm nominal bore, 165mm long. Weighing not less than 110 gms.	each	217.00
18.60.4	15mm nominal bore, 90mm long. Weighing not less than 93 gms.	each	158.00
18.61	Providing and fixing PTMT stop cock of approved quality and colour.		
18.61.1	15 mm nominal bore, 86mm long. Weighing not less than 88 gms.	each	143.00
18.61.2	20mm nominal bore, 89mm long. Weighing not less than 88 gms.	each	171.00
18.61.3	Concealed stop cock, 15mm nominal bore, 108mm long. Weighing not less than 108 gms.	each	224.00
18.62	Providing and fixing PTMT pillar cock of approved quality and colour .		
18.62.1	15mm nominal bore, 107mm long. Weighing not less than 110 gms.	each	213.00
18.62.2	15mm nominal bore, 125mm long foam flow. Weighing not less than 120 gms.	each	307.00
18.63	Providing and fixing PTMT, push cock of approved quality and colour.		
18.63.1	15 mm nominal bore, 98mm long. Weighing not less than 75 gms.	each	131.00
18.63.2	15 mm nominal bore, 80mm long. Weighing not less than 46 gms.	each	110.00
18.64	Providing & fixing PTMT grating of approved quality and colour.		
18.64.1	Circular type.		
18.64.1.1	100 mm nominal dia.	each	46.00
18.64.1.2	125 mm nominal dia with 25 mm waste hole.	each	54.00
18.64.2	Rectangular type with openable circular lid.		
18.64.2.1	150 mm nominal size square 100 mm diameter of the inner hinged round grating.	each	125.00
	AIR VALVE & WATER METER (BULK TYPE)		
18.65	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) :		
18.65.1	50 mm dia	each	4158.00
18.65.2	80 mm dia	each	6069.00
18.65.3	100 mm dia	each	7888.00
18.66	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) :		
18.66.1	80 mm dia nominal bore	each	2815.00
18.66.2	100 mm dia nominal bore	each	4278.00
18.66.3	150 mm dia nominal bore	each	6051.00

18.66.4	200 mm dia nominal bore	each	6802.00
18.67	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :		
18.67.1	80 mm dia	each	3577.00
18.67.2	100 mm dia	each	5373.00
18.67.3	150 mm dia	each	6978.00
18.67.4	200 mm dia	each	9666.00
18.68	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.		
18.68.1	15 mm nominal bore, 105 mm long. Weighing not less than 138 gms.	each	191.00
18.68.2	20 mm nominal bore, 120 mm long. Weighing not less than 198 gms.	each	270.00
18.68.3	25 than 440 gms.mm nominal bore, 152mm long. Weighing not less	each	572.00
18.68.4	40mm nominal bore, 206mm long. Weighing not less than 690 gms.	each	1038.00
16.68.5	50mm nominal bore, 242mm long. Weighing not less than 1240 gms.	each	1539.00
18.69	Providing and fixing PTMT angle stop cock 15 mm nominal bore. Weighing not less than 85 gms.	each	171.00
18.7	Providing and fixing PTMT swivelling shower, 15mm nominal bore. Weighing not less than 40gms.	each	117.00
18.71	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.	each	153.00
18.72	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 :		
18.72.1	Up to 300 mm dia	quintal	4837.00
18.72.2	Above 300 mm dia	quintal	5449.00
18.73	Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382		
18.73.1	Up to 300 mm dia	quintal	7252.00
18.73.2	Above 300 mm dia	quintal	7575.00
18.74	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523		
18.74.1	Up to 600 mm dia	quintal	12678.00
18.74.2	Above 600 mm dia	quintal	19141.00
18.76	Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket :		
18.76.1	100 mm dia pipes	joint	45.00
18.76.2	150 mm dia pipes	joint	69.00
18.76.3	200 mm dia pipes	joint	113.00
18.76.4	250 mm dia pipes	joint	129.00
18.76.5	300 mm dia pipes	joint	176.00
18.76.6	350 mm dia pipes	joint	209.00
18.76.7	400 mm dia pipes	joint	391.00
18.76.8	450 mm dia pipes	joint	435.00
18.76.9	500 mm dia pipes	joint	452.00
18.76.10	600 mm dia pipes	joint	562.00
18.76.11	650 mm dia pipes	joint	851.00
18.76.12	700 mm dia pipes	joint	981.00
18.76.13	800 mm di a pipes	joint	1096.00
18.76.14	900 mm dia pipes	joint	1443.00
18.76.15	1000 mm dia pipes	joint	1753.00
18.77	Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :		
18.77.1	100 mm dia C.I. Double Flanged Pipe	metre	1324.00
18.77.2	150 mm dia C.I. Double Flanged Pipe	metre	2049.00
18.77.3	200 mm dia C.I. Double Flanged Pipe	metre	2837.00
18.77.4	250 mm dia C.I. Double Flanged Pipe	metre	3801.00
18.77.5	300 mm dia C.I. Double Flanged Pipe	metre	4831.00
18.77.6	350 mm dia C.I. Double Flanged Pipe	metre	6179.00
18.77.7	400 mm dia C.I. Double Flanged Pipe	metre	7981.00
18.77.8	450 mm dia C.I. Double Flanged Pipe	metre	10334.00

18.77.9	500 mm dia C.I. Double Flanged Pipe	metre	13473.00
18.77.10	600 mm dia C.I. Double Flanged Pipe	metre	17581.00
18.78	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :		
18.78.1	100 mm dia Ductile Iron Class K-7 pipes	metre	808.00
18.78.2	150 mm dia Ductile Iron Class K-7 pipes	metre	1179.00
18.78.3	200 mm dia Ductile Iron Class K-7 pipes	metre	1676.00
18.78.4	250 mm dia Ductile Iron Class K-7 pipes	metre	2269.00
18.78.5	300 mm dia Ductile Iron Class K-7 pipes	metre	3203.00
18.78.6	350 mm dia Ductile Iron Class K-7 pipes	metre	3696.00
18.78.7	400 mm dia Ductile Iron Class K-7 pipes	metre	4414.00
18.78.8	450 mm dia Ductile Iron Class K-7 pipes	metre	5233.00
18.78.9	500 mm dia Ductile Iron Class K-7 pipes	metre	6172.00
18.78.10	600 mm dia Ductile Iron Class K-7 pipes	metre	8143.00
18.78.11	700 mm dia Ductile Iron Class K-7 pipes	metre	10115.00
18.78.12	800 mm dia Ductile Iron Class K-7 pipes	metre	14079.00
18.78.13	900 mm dia Ductile Iron Class K-7 pipes	metre	17314.00
18.78.14	1000 mm dia Ductile Iron Class K-7 pipes	metre	20985.00
18.78.15	100 mm dia Ductile Iron Class K-9 pipes	metre	892.00
18.78.16	150 mm dia Ductile Iron Class K-9 pipes	metre	1326.00
18.78.17	200 mm dia Ductile Iron Class K-9 pipes	metre	1827.00
18.78.18	250 mm dia Ductile Iron Class K-9 pipes	metre	2364.00
18.78.19	300 mm dia Ductile Iron Class K-9 pipes	metre	3035.00
18.78.20	350 mm dia Ductile Iron Class K-9 pipes	metre	3567.00
18.78.21	400 mm dia Ductile Iron Class K-9 pipes	metre	5101.00
18.78.22	450 mm dia Ductile Iron Class K-9 pipes	metre	5665.00
18.78.23	500 mm dia Ductile Iron Class K-9 pipes	metre	7580.00
18.78.24	600 mm dia Ductile Iron Class K-9 pipes	metre	8516.00
18.78.25	700 mm dia Ductile Iron Class K-9 pipes	metre	11561.00
18.78.26	750 mm dia Ductile Iron Class K-9 pipes	metre	13184.00
18.78.27	800 mm dia Ductile Iron Class K-9 pipes	metre	13579.00
18.78.28	900 mm dia Ductile Iron Class K-9 pipes	metre	15836.00
18.78.29	1000 mm dia Ductile Iron Class K-9 pipes	metre	17826.00
18.79	Providing and laying Double Flanged (Screwed/ Welded)Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :		
1879.1	100 mm dia Ductile Iron Double Flanged	metre	2537.00
1879.2	150 mm dia Ductile Iron Double Flanged	metre	3513.00
1879.3	200 mm dia Ductile Iron Double Flanged	metre	4557.00
1879.4	250 mm dia Ductile Iron Double Flanged	metre	6052.00
1879.5	300 mm dia Ductile Iron Double Flanged	metre	7788.00
1879.6	350 mm dia Ductile Iron Double Flanged	metre	9699.00
1879.7	400 mm dia Ductile Iron Double Flanged	metre	11587.00
1879.8	450 mm dia Ductile Iron Double Flanged	metre	14008.00
1879.9	500 mm dia Ductile Iron Double Flanged	metre	16975.00
1879.1	600 mm dia Ductile Iron Double Flanged	metre	23028.00
1879.11	700 mm dia Ductile Iron Double Flanged	metre	28397.00
18.8	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour.		
18.80.1	15 mm nominal bore with 30cm length.	each	53.00
18.80.2	15 mm nominal bore with 45 cm length.	each	61.00
18.81	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.		
18.81.1	15mm nominal bore Weighing not lessthan 32gms.	each	45.00
18.81.2	20mm nominal bore. Weighing not less than 40gms.	each	53.00
18.81.3	25mm nominal bore. Weighing not less than 62 gms.	each	77.00
18.82	Cutting holes up to 30x30 cm in walls including making good the same:		
18.82.1	With Modular bricks	each	105.00
18.83	Cutting holes up to 15x15cm 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 sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.	each	94.00

18.84	Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	metre	43.00
18.85	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 sand 6 graded stone aggregate 20mm nominal size) including disposal of malba.	metre	81.00
18.86	Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the samewith fresh water, operation to berepeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.		
18.86.1	80 mm diameter C.I. pipe	100 m	334.00
18.86.2	100 mm diameter C.I. pipe	100 m	438.00
18.86.3	125 mm diameter C.I. pipe	100 m	551.00
18.86.4	150 mm diameter C.I. pipe	100 m	668.00
18.86.5	200 mm diameter C.I. pipe	100 m	905.00
18.86.6	250 mm diameter C.I. pipe	100 m	1159.00
18.86.7	300 mm diameter C.I. pipe	100 m	1323.00
18.86.8	350 mm diameter C.I. pipe	100 m	1498.00
18.86.9	400 mm diameter C.I. pipe	100 m	1692.00
18.86.10	450 mm diameter C.I. pipe	100 m	1893.00
18.86.11	500 mm diameter C.I. pipe	100 m	2110.00
18.86.12	600 mm diameter C.I. pipe	100 m	2571.00
18.87	Extra for every operation disinfecting the C.I. main by flushing with water containing bleaching powder at 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:		
18.87.1	80 mm diameter C.I. pipe	100 mtr	123.00
18.87.2	100 mm diameter C.I. pipe	100 mtr	150.00
18.87.3	125 mm diameter C.I. pipe	100 mtr	184.00
18.87.4	150 mm diameter C.I. pipe	100 mtr	216.00
18.87.5	200 mm diameter C.I. pipe	100 mtr	327.00
18.87.6	250 mm diameter C.I. pipe	100 mtr	386.00
18.87.7	300 mm diameter C.I. pipe	100 mtr	447.00
18.87.8	350 mm diameter C.I. pipe	100 mtr	534.00
18.87.9	400 mm diameter C.I. pipe	100 mtr	623.00
18.87.10	450 mm diameter C.I. pipe	100 mtr	719.00
18.87.11	500 mm diameter C.I. pipe	100 mtr	815.00
18.87.12	600 mm diameter C.I. pipe	100 mtr	1021.00
18.88	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:		
18.88.1	80 mm diameter C.I. pipe	metre	95.00
18.88.2	100 mm diameter C.I. pipe	metre	98.00
18.88.3	125 mm diameter C.I. pipe	metre	101.00
18.88.4	150 mm diameter C.I. pipe	metre	104.00
18.88.5	200 mm diameter C.I. pipe	metre	115.00
18.88.6	250 mm diameter C.I. pipe	metre	125.00
18.88.7	300 mm diameter C.I. pipe	metre	135.00
18.88.8	350 mm diameter C.I. pipe	metre	144.00
18.88.9	400 mm diameter C.I. pipe	metre	151.00
18.88.10	450 mm diameter C.I. pipe	metre	159.00
18.88.11	500 mm diameter C.I. pipe	metre	166.00
18.88.12	600 mm diameter C.I. pipe	metre	176.00
18.89	Labour for cutting C.I. pipe with steel saw.		
18.89.1	80 mm diameter C.I. pipe	Each cut	25.00
18.89.2	100 mm diameter C.I. pipe	Each cut	35.00
18.89.3	125 mm diameter C.I. pipe	Each cut	48.00
18.89.4	150 mm diameter C.I. pipe	Each cut	64.00
18.89.5	200 mm diameter C.I. pipe	Each cut	86.00
18.89.6	250 mm diameter C.I. pipe	Each cut	107.00
18.89.7	300 mm diameter C.I. pipe	Each cut	128.00

18.89.8	350 mm diameter C.I. pipe	Each cut	148.00
18.89.9	400 mm diameter C.I. pipe	Each cut	170.00
18.89.10	450 mm diameter C.I. pipe	Each cut	191.00
18.89.11	500 mm diameter C.I. pipe	Each cut	212.00
18.89.12	600 mm diameter C.I. pipe	Each cut	252.00
	CHAPTER-XIX **Drainage**		
19.1	Providing laying and jointing glazed stoneware pipes grade 'A' 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	metre	122.00
19.1.2	150 mm diameter	metre	175.00
19.1.3	200 mm diameter	metre	284.00
19.1.4	230 mm diameter	metre	311.00
19.1.5	250 mm diameter	metre	394.00
19.1.6	300 mm diameter	metre	541.00
19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 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	metre	381.00
19.2.2	150 mm diameter S.W. pipe	metre	466.00
19.2.3	200 mm diameter S.W. pipe	metre	543.00
19.2.4	230 mm diameter S.W. pipe	metre	595.00
19.2.5	250 mm diameter S.W. pipe	metre	628.00
19.2.6	300 mm diameter S.W. pipe	metre	689.00
19.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 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	metre	181.00
19.3.2	150 mm diameter S.W. pipe	metre	293.00
19.3.3	200 mm diameter S.W. pipe	metre	345.00
19.3.4	230 mm diameter S.W. pipe	metre	378.00
19.3.5	250 mm diameter S.W. pipe	metre	401.00
19.3.6	300 mm diameter S.W. pipe	metre	463.00
19.4	Providing and fixing square-mouth S.W. gully trap grade 'A'' 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 : With Modular Bricks class designation 40		
19.4.1	100x100 mm size P type	each	1075.00
19.4.2	150 x 100 mm size P type.	each	1106.00
19.4.3	180x150 mm size P type.	each	1193.00
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	metre	15.00
19.5.2	150 mm diameter	metre	17.00
19.5.3	200 mm diameter	metre	18.00
19.5.4	230 mm diameter	metre	18.00
19.5.5	250 mm diameter	metre	20.00
19.5.6	300 mm diameter	metre	21.00
19.5.7	350 mm diameter	metre	23.00
19.5.8	400 mm diameter	metre	25.00
19.5.9	450 mm diameter	metre	26.00
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	metre	200.00
19.6.2	150 mm dia. R.C.C. pipe	metre	233.00
19.6.3	250 mm dia. R.C.C. pipe	metre	297.00
19.6.4	300 mm dia. R.C.C. pipe	metre	390.00

19.6.5	450 mm dia. R.C.C. pipe	metre	575.00
19.6.6	500 mm dia. R.C.C. pipe	metre	673.00
19.6.7	600 mm dia. R.C.C. pipe	metre	1029.00
19.6.8	700 mm dia. R.C.C. pipe	metre	1151.00
19.6.9	800 mm dia. R.C.C. pipe	metre	1343.00
19.6.10	900 mm dia. R.C.C. pipe	metre	1626.00
19.6.11	1000 mm dia. R.C.C. pipe	metre	2002.00
19.6.12	1100 mm dia. R.C.C. pipe	metre	2408.00
19.6.13	1200 mm dia. R.C.C. pipe	metre	2540.00
19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal standard design : With modular bricks with class designation 40		
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) :	each	6192.00
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) :	each	13664.00
19.73	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) :	each	18025.00
19.8	Extra for depth for manholes. With Moudular bricks class designation 40		
19.8.1	Size 90x80 cm	metre	3052.00
19.8.1	Size 120x90 cm	metre	3657.00
19.9	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 sand : 6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 sand : 4 coat of neat cement all complete as per standard design : With Modular bricks class designation 40.		
19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement :2 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) :	each	5674.00
19.1	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91m to 1.67m With Moudular bricks class designation 40	metre	2634.00
19.11	Constructing brick masonry circular manhole 1.22m internal dia at bottom and 0.56m dia at top in cement mortar 1:4(1 cement :4 sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement :3 sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design : With Modular bricks class designation 40		

19.11.1	1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S.12592, total weight of cover and frame to be not less than 182kg. fixed in cement concrete 1:2:4 (1cement : 2 sand:4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :	each	10288.00
19.12	Extra depth for circular type manhole 1.22m internal dia (at bottom) beyond 1.68 m to 2.29 m : With Modular bricks class designation 40	metre	3399.00
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 (1cement :4sand) inside cement plaster 12mm thick with cement mortar 1:3 (1cement :3sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1cement:3 sand: 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1cement:2sand :4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design : With Moudlar bricks class designation 40.		
19.13.1	2.30m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm 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 (1cement:2 sand:4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)	each	21024.00
19.14	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m : With Modular bricks class designation 40	metre	7999.00
19.15	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :		
19.15.1	With 20x20 mm square bar	each	173.00
19.15.2	With 20 mm diameter round bar	each	144.00
19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263mm and width as 165mm 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 sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	each	209.00
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 sand : 6 graded stone aggregate 20 mm nominal size) :		
19.17.1	With 20x20 mm square bar	each	193.00
19.17.2	With 20 mm diameter round bar	each	164.00
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.	each	1158.00
19.18.2	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg.	each	2883.00
19.18.3	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg.	each	4937.00
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 600x450mm internal dimensions	each	1015.00

19.19.1.2	Square shape 450mm internal dimensions	each	861.00
19.19.1.3	Circular shape 450mm internal diameter	each	773.00
19.19.2	M D - 10		
19.19.2.1	Square shape 450mm internal dimension	each	949.00
19.19.2.2	Circular shape 500mm internal diameter	each	912.00
19.19.3	H D - 20		
19.19.3.1	Circular shape 560 mm internal diameter	each	1277.00
19.19.4	HD - 35		
19.19.4.1	Circular shape 560 mm internal dia.		1406.00
19.2	Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5kg.	each	236.00
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 sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 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 230 mm diameter	each	189.00
19.21.2	For pipes 250 to 300 mm diameter	each	236.00
19.21.3	For pipes 350 to 450 mm diameter	each	348.00
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 sand) plastered with cement mortar 1:3 (1 cement : 3 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	each	3425.00
19.22.2	150 mm dia. sand cast iron drop connection	each	5211.00
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	each	1156.00
19.23.2	For 150 mm dia. sand cast iron drop connection	each	1731.00
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	each	447.00
19.24.2	Rectangular manhole 120x90 cm and 90 cm deep	each	783.00
19.24.3	Rectangular arch type manhole 140x90cm and 2.45m deep	each	863.00
19.24.4	Circular manhole 122 cm diameter and 1.68 m deep	each	1136.00
19.25	Extra for depth of manholes dismantled:		
19.25.1	Rectangular manhole 90x80 cm and 45 cm deep	metre	357.00
19.25.2	Rectangular manhole 120x90 cm and 90 cm deep	metre	424.00
19.25.3	Rectangular arch type manhole 140x90 cm and 2.45m deep (up to 4.25 m depth).	metre	518.00
19.25.4	Circular manhole 122 cm diameter and 1.68 m deep (up to 2.29 m depth)	metre	601.00
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 600x450 mm of grade LD - 2.5	each	948.00
19.26.2	Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD - 10	each	1480.00
19.26.3	Rectangular manhole 120x90 cm with circular cover 560 mm dia of grade HD - 20	each	1378.00
19.26.4	Circular manhole 140 cm dia with circular cover 600 mm dia of grade EHD - 35	each	132.00

19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 40 in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :		
19.27.1	With Modular bricks	each	2585.00
19.28	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks of class designation 40 in cement mortar 1:4 (1 cement : 4 sand) with pre-cast R.C.C. vertical grating complete as per standard design :		
19.28.1	With Modular Bricks	each	2712.00
19.29	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks of class designation 40 in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		
19.29.1	With Modular bricks	each	4913.00
19.3	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 40 class designation bricks in cement mortar 1:4 (1 cement : 4 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 sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc.complete as per standard design : With Modular bricks class designation 40.		
19.30.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :	each	3618.00
19.30.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :	each	4130.00
19.30.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :	each	4679.00
19.31	Extra for depth beyond 45 cm of brick masonry chamber : With Modular bricks class designation 40.		
19.31.1	For 455x610 mm size	metre	2123.00
19.31.2	For 500x700 mm size	metre	2316.00
19.31.3	For 600x850 mm size	metre	2697.00
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 of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design. With Modular bricks class designation 40.	each	11430.00
19.33	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	each	1236.00
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	each	228.00
19.34.2	150 mm dia	each	324.00
19.35	Providing and laying below ground unplasticised PVC pipe to with stand working pressure of 4 kg/cm2 soild waste pipes confirming to IS:13592 and IS:4985 including jointing with seal ring confirming to IS :5282 leaving 10mm gap for thermal expansion all necessary fittings etc. complete.		
19.35.1	110 mm diameter OD	RM	259.00
19.35.2	160 mm diameter OD	RM	450.00
19.35.3	210 mm diameter OD	RM	867.00
19.35.4	260 mm diameter OD	RM	1084.00
19.35.5	310 mm diameter OD	RM	1331.00
19.36	Providing and laying cement concrete 1:5:10 (1 cement : 5 sand : 10 graded stone aggregate 40 mm nominal size) all-round PVC. pipes including bed concrete as per standard design:		

19.36.1	100 mm diameter PVC. pipe	metre	381.00
19.36.2	150 mm diameter PVC. pipe	metre	466.00
19.36.3	200 mm diameter PVC. pipe	metre	543.00
19.36.4	230 mm diameter PVC. pipe	metre	595.00
19.36.5	250 mm diameter PVC. pipe	metre	628.00
19.36.6	300 mm diameter PVC pipe	metre	689.00
19.37	Providing and laying cement concrete 1:5:10 (1 cement : 5 sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of PVC. pipes including bed concrete as per standard design :		
19.37.1	100 mm diameter PVC. pipe	metre	181.00
19.37.2	150 mm diameter PVC. pipe	metre	293.00
19.37.3	200 mm diameter PVC. pipe	metre	345.00
19.37.4	230 mm diameter PVC. pipe	metre	378.00
19.37.5	250 mm diameter PVC. pipe	metre	401.00
19.37.6	300 mm diameter PVC. pipe	metre	463.00
	CHAPTER-XX **Pile work**		
20.1	Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pipe cap M-35 in cement concrete, to carry safe working load not less than cost of shoe and the length of pile to be embeded in the pile cap etc.l all complete (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap) : Excluding cost of Steel. And rates are inclusive of cost of concrete.		
20.1.1	400 mm dia piles	metre	1670.00
20.1.2	450 mm dia piles	metre	2038.00
20.1.3	500 mm dia piles	metre	2461.00
20.1.4	550 mm dia piles	metre	2659.00
20.1.5	750 mm dia piles.	metre	4463.00
20.1.6	1000 mm dia piles.	metre	7298.00
20.1.7	1200 mm dia piles.	metre	9356.00
20.1.8	1500 mm dia piles.	metre	13072.00
20.2	Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in 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 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. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap). Excluding cost of Steel. And rates are inclusive of cost of concreate.		
20.2.1	300 mm dia pile	metre	1271.00
20.2.2	400 mm dia piles	metre	1547.00
20.2.3	450 mm dia piles	metre	2008.00
20.2.4	500 mm dia. piles	metre	2372.00
20.2.5	600 mm dia piles	metre	3112.00
20.2.6	750 mm dia piles.	metre	4468.00
20.2.7	1000 mm dia piles.	metre	7363.00
20.2.8	1200 mm dia piles.	metre	9494.00
20.2.9	1500 mm dia piles.	metre	13380.00
20.3	Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 35 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 embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) : Excluding cost of Steel. And rates are inclusive of cost of concreate		
20.3.1	300 mm dia piles	metre	1901.00
20.3.2	400 mm dia piles	metre	2246.00
20.3.3	450 mm dia piles	metre	2463.00
20.3.4	550 mm dia piles	metre	2740.00

20.4	Extra over item No.20.3 for providing additional bulb in under reamed piles, under specified dia meter (Only the quantity of extra bulbs are to be paid).		
20.4.1	300mm dia piles.	each	1199.00
20.4.2	400mm dia piles.	each	1359.00
20.4.3	450 mm dia piles.	each	1458.00
20.4.4	550 mm dia piles.	each	1624.00
20.6	Vertical load testing 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 & the direction of Engineer in-charge.		
20.6.1	Single pile upto 50 tonne capacity	per test	33394.00
20.6.1.1	Initial test.	per test	23375.00
20.6.1.2	Routine test		
20.6.2	Single pile above 50 tonne and upto 100 tonne capacity		
20.6.2.1	Initial test	per test	43411.00
20.6.2.2	Routine test.	per test	29386.00
20.6.3	Group of two or more piles upto 50 tonne capacity		
20.6.3.1	Initial test	per test	56769.00
20.6.3.2	Routine test	per test	38068.00
20.7	Cyclic vertical load testing of pile in accordance with IS Code of practice IS: 2911 (part IV) including preparation of pile head etc for.		
20.7.1	Single pile.	per test	23375.00
20.7.1.1	Upto 50 tonne capacity pile.	per test	29386.00
20.7.1.2	Above 50 tonne and upto 100 tonne capacity pile.		
20.7.2	Group of two piles.		
20.7.2.1	Upto 50 tonne capacity each.	per test	38068.00
20.8	Lateral load testing of single pile in accordance with IS Code ofpractice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :		
20.8.1	Upto 50 tonne capacity pile.	per test	24711.00
20.8.2	Above 50 tonne and upto 100 tonne capacity pile.	per test	33394.00
20.9	Boring, providing and installing bored cast-in-situ reinforced cement concrete single under reamed pile of specified diameter and length below the pile cap M20 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring. The length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap). Excluding cost of Steel. And rates are inclusive of cost of concreate		
20.9.1	200 mm diameter.	metre	322.00
20.9.2	250 mm diameter.	metre	391.00
20.9.3	300 mm diameter.	metre	582.00
20.9	Extra for providing additional blub for item no.20.9		
20.10.1	200 mm diameter.	each	114.00
20.10.2	250 mm diameter.	each	263.00
20.10.3	300 mm diamet.	each	515.00

CHAPTER-XXI
Aluminium Work

21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up staqndard tubular sections/appropriate Z sections and other sections of approved make conforming to IS:733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free straight, mitred and jointed mechanically wherever required icluding 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 and paneling 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)	kg	256.00
21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	266.00
21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	283.00
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 PVC / neoprene gasket required (Fittings shall be paid for separately).		
21.1.2.1	Anodised aluminium (anodised transparent or dyed torequired shade according to IS: 1868,Minimum anodic coating of grade AC 15)	kg	271.00
21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	293.00
21.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	300.00
21.2	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors 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.		
21.2.1	With stainless steel cover plate	each	1990.00
21.2.2	With brass cover plate	each	2191.00
21.3	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 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).	kg	345.00
21.4	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 60mm long and expansion hold fasteners 12.5 mm dia. 40mm long complete as per direction of Engineer -in-charge.	each	83.00
21.5	Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving screws, over expansion joints on vertical surfaces/ceilings with full threaded, cadmium plated steel screws 4mm dia. stem, 30mm long and aluminium washers 2mm thick, 15mm 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.		
21.5.1	Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS:1868, Minimum anodic coating of grade AC15)	kg	419.00
21.5.2	Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)	kg	437.00
21.6	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.		
21.6.1	Upto 5mm depth and 5 mm width	metre	71.00
21.7	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.		
21.7.1	For fixed portion	kg	10.00
21.7.2	For shutters of doors, windows & ventilators.	kg	10.00

21.8	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-incharge complete.	sqm	3452.00
21.9	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.		
21.9.1	205 X 19 mm	each	227.00
21.9.2	255 X 19 mm	each	240.00
21.9.3	355 X 19 mm	each	304.00
21.9.4	510 X 19 mm	each	564.00
21.9.5	710 X 19 mm	each	1035.00
21.1	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.		
21.10.1	Anodized (AC 15) aluminium tubular handle bar	each	373.00
21.10.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar.	each	400.00
21.10.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	each	412.00
21.11	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	each	414.00
21.12	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 a with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with rawl plugs and stainless steel screws etc.	kg	294.00
21.13	Providing fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.		
21.13.1	Anodized (AC 15) aluminium	each	43.00
21.13.2	Powder coated minimum thickness 50 micron aluminium.	each	49.00
21.13.3	Polyester powder coated minimum thickness 50 micron aluminium	each	52.00
21.14	Providing fixing aluminium round shape handle of outer dia 100mm with SS screws etc. complete as per direction of Engineer-in-charge		
21.14.1	Anodized (AC 15) aluminium	each	47.00
21.14.2	Powder coated minimum thickness 50 micron aluminium.	each	52.00
21.14.3	Polyester powder coated minimum thickness 50 micron aluminium	each	59.00
	CHAPTER-XXII **Water Proofing work**		
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) Ist layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 sand) mixed 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 compount. ii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @8 cudm/sqm thoroughly embedded in the 2nd layer. (with five years service gurantee).		
22.1.1	Using rough kota stone.	sqm	762.00

22.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in ecommended proportions with a gap of 20mm (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 sand) 20mm thick with neat cement punning mixed with water roofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge : (with five years service gurantee).		
22.2.1	Using rough Kota stone	sqm	904.00
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 recommended proportions including rounding off junction of vertical and horizontal surface.ii) IInd course of 20mm cement plaster 1:3 ent:3sand) 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.) (with five years service gurantee).	sqm	348.00
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 : (with five years service gurantee).		
22.4.1	Serrated with central bulb (225mm wide, 8-11mm thick).	metre	458.00
22.4.2	Dumb bell with central bulb (180mm wide, 8mm thick).	metre	454.00
22.4.3	Kickers (320mm wide, 5mm thick).	metre	454.00
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 ofslurry of cement @ 0.488 kg/sqm mixed with water proofing cementcompound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4hours. 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 h ours 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. (with five years service gurantee).	sqm	168.00
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 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 30cm on parapet wall and tucked into groove in parapet all around. (with five years service gurantee).	sqm	319.00

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 300mm height including cleaning the surface before treatment.b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 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 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 2.75kg/ 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 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth type II grade - I tissue reinforced 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 3mm 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 :(with five years service gurantee).		
22.7.1	With average thickness of 150mm and minimum thickness at khurra as 75 mm.	sqm	856.00
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 forming 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 6mm and down size or pea-sized gravel spread at 6 cubic diameter per square metre including preparation of surface but excluding grading complete with : (with five years service gurantee).		
22.8.1	Bitumen felt (hessian base) type 3 grade I conforming to IS :1322.	sqm	213.00
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 onforming to IS :1322 (Hessian based self finished bitumen felt)conforming to IS :1322 and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading,complete. (with five years service gurantee).	sqm	329.00
22.1	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 6mm and down size or pea sized gravel spread at 6.00 cu.dm per sqm including preparation of surface, excluding grading, compete. (with five years service gurantee).	sqm	36.00

22.11	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blow 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 6mm and down size or pea sized gravel spread at 6.00 cubic dm per sqm including preparation of surface but excluding grading,complete. (with five years service gurantee).	sqm	357.00
22.12	Supplying and applying bituminous solution primer on roof and or wall surface at 0.24 litres per sqm.	sqm	18.00
22.13	Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm down size or pea sized gravel :		
22.13.1	At 6 cudm per sqm.	sqm	10.00
22.14	Grading roof for water proofing treatment with		
22.14.1	Cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size)	cum	3994.00
22.14.2	Cement mortar 1:3 (1 cement : 3 sand)	cum	6450.00
22.14.3	Cement mortar 1:4 (1cement : 4 sand)	cum	5589.00
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 @0.40Kg 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 1.5mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class de signation 100 grouted with cement mortar 1:3 (1cement:3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately. (with five years service gurantee).	sqm	320.00
22.16	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof sisting 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 itumen of grade 85/25 conforming to IS : 702,3rd layer of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE filsandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 100 routed with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately. (with five years service gurantee).	sqm	254.00

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 @0.40Kg 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 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 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 which shall be paid for separately. (with five years service gurantee).	sqm	429.00
22.18	Providing and fixing APP (Atactic Polypropylene Polymer)modified prefabricated five layer 2mm thick water proofing membrance, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @0.40 ltr/sq. mtr. by the same membrance anufacture of density at 25°C, 0.87 - 0.89 kg/ ltr and viscocity 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/ 5cm. 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. (with five years service gurantee).		
22.18.1	2mm (for corrugated roof sheets	sqm	294.00
22.19	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane anufactured of density at 25°C, 0.87 - 0.89 kg/ltr and viscocity 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/5cm. Tear strength in longitudinal and transverse direction as 60/80N. oftening 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 applicatorof the manufacturer of membrane: (with 5 yrs. service gurantee).	sqm	334.00

22.20	Providing & laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane,black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @0.40 ltr/sqm. by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ltr and viscocity 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 omplete. 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: (with 5 yrs. service gurantee).		
22.20.1	3 mm thick	sqm	388.00
22.21	Extra for covering top of membrane with Geotextile, 120gsm non woven, 100% polyester of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation [for Item No. 22.18 to 22.20].	sqm	55.00

The above addendum shall be applicable with effect from the date of issue.

ENGINEER-IN-CHIEF
M.P. P.W.D. BHOPAL

Endt. No. 9/CommonSOR/Building/2010 1171 **Bhopal, Dated** 11 /09/2012

Copy is forwarded to :-

1. P.A. to Hon'ble Minister, M.P. P.W.D. Bhopal
2. The Principal Secretary to Govt. of M.P. P.W.D. Bhopal
3. The Principal Secretary to Govt. of M.P. Housing & Environment, Bhopal.
4. The Secretary to Hon'ble Lokayukta, M.P. Bhopal
5. The Chief Technical Examiner, M.P. Bhopal.
6. The Accountant General, M.P. Gwalior/Bhopal.
7. The Secretary to Govt. of M.P. P.W.D. Bhopal.
8. The Commissioner, Bhopal
9. The Chief Engineer, M.P. P.W.D. .....
10. The Project Director, PMU, O/o E-in-C,, M.P. P.W.D. Bhopal.
11. The Chief Engineer, M.P.R.D.C., M.P. Bhopal
12. The Chief Engineer, Rural Engineer Services, M.P. Bhopal
13. The Collector, Bhopal
14. The Superintending Engineer, M.P. P.W.D. Capital Project Circle, CPA Bhopal.
15. The Superintending Engineer, M.P. P.W.D. NH & Bridge Circle .....
16. The Divisional Project Engineer, M.P. P.W.D. PIU .....
17. The Executive Engineer, M.P. P.W.D. Division .....

ENGINEER-IN-CHIEF
M.P. P.W.D. BHOPAL