

**SHRI RAM COLLEGE OF
COMMERCE**

BILL OF QUANTITIES (B.O.Q.)

FOR

**MAINTENANCE RELATED
CIVIL / ELECTRICAL REPAIR &
RENOVATION JOBS**

		<u>SECTION-I, CIVIL WORK :</u>				
<u>S.</u>	<u>DSR NO.</u>	<u>DESCRIPTION OF ITEM/DSR SUB.</u>	<u>QTY.</u>	<u>RATE</u>	<u>PER</u>	<u>AMOUNT</u>
<u>N</u>		<u>NO.</u>				
<u>O.</u>						
	A-	<u>SCHEDULE ITEMS</u>				
1	1.1	Carriage of material by mechanical transport including loading, unloading and stacking.				
	1.1.5	Sand, stone aggregated below 40 mm nominal size	300		Cum.	
		<u>EARTH WORK :</u>				
2	2.8	Earth work in excavation in foundation trenches or drains (not exceeding 1.5m. in width or 10Sq.m. on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m. including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m.				
	2.8.1	All kinds of soil.	56.75		Cum.	
3	2.25	Filling available excavated earth (Excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20Cm. in depth, consolidating each deposited layer by ramming and watering, lead upto 50m. and lift upto 1.5m.	56.75		Cum.	
		<u>PLAIN CEMENT CONCRETE WORK :</u>				
4	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring & shuttering all work upto				
	4.1.8	1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40mm nominal size).	7		Cum.	
5	4.11	P/L damp proof course 50mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	11.5		Sqm.	
6	4.12	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50 kg cement	3		Per 50 kg cement	

7	4.13	Applying a coat of residual petroleum bitumen of penetration 80/100 Of approved quality using 1.7 Kg. per sqm. On damp proof course after cleaning the surface with brush and finally with a piece of cloth slightly soaked in kerosene oil.	11.5		Sqm.	
		<u>REINFORCED CEMENT CONCRETE WORK :</u>				
8	5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring,shuttering,finishing and reinforcement-all work up to plinthlevel:				
	5.1.3	1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm. nominal size).	4.46		Cum.	
9	5.3	Reinforced cement concrete work in beams,suspended floors,roof,having slope up to15° landings,balconies,shelves,chajjas,lintela,bands,plain window sills,staircases and spiral stair cases up to floor five level excluding the cost of centring and shuttering finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand :4 graded stone aggregate 20 mm. nominal size).	3.56			
10	5.9	Centring and shuttering including strutting , propping etc. and removal of form work for :				
	5.9.4	d) Shelves (cast-in-situ).	63		Sqm.	
	5.9.16	Edges of slabs and breaks in floors and walls				
	5.9.16.1	under 20 cm wide	70		Rm.	
	5.9.20	Weather shade, Chajjas, corbels etc. including edges.	22.75			
11	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
	5.22.6	Thermo-Mechanically Treated baRs.	997		Kg.	
		<u>MASONRY WORK :</u>				
12	6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in :				
	6.1.2	Cement mortar 1:6 (1 cement :6 coarse sand).	24.65		Cum.	

13	6.4	Brick work with F.P.S. bricks of class designation 75 in Superstructure above plinth level up to floor V level in all shapes and size				
	6.4.2	Cement mortar 1:6 (1 cement :6 coarse	36.7		Cum.	
14	6.13	Half Brick Masonry with F.P.S. bricks of class designation 75 in Superstructure above plinth level up to floor V level in :				
	6.13.2	Cement mortar 1:4 (1 cement: 4 coarse sand).	105.75		Sqm.	
15	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (With F.P.S.	105.75		Sqm.	
		FLOORING & DADO WORK :				
16	8.2	P/F 18 mm thick gang saw cut mirror polished pre molded and pre polished kitchen platforms, counters, facias, vanity counters, window sills, and similar locations of required size of approved shades colour & texture laid over '20mm base cement mortar 1:4 (1 cement :4 coarse sand) with joints treated with whitecement mixed with matching pigment, epoxy touchups including rubbing, cutting, molding and polishing to edge to give high gloss finish etc. complete at all levels.				
	8.2.2	Granite of any colour and shade				
	8.2.2.2	Area of slab over 0.50 sqm	63		Sqm.	
17	8.3	Extra for providing edge moulding to 18 mm thick marble stone counteRs. Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by engineer-in-charge.				
	8.3.2	Granite work	70		Rm.	
18	8.5	Extra for providing opening of required size and shape for washbasins, kitchen sink in kitchen platform vanity counters and similar location in marble/granite/stone work including necessary holes for pillars taps etc. including rubbing and polishing of cut edge etc. complete	6		Each	
19	8.6	Mirror polishing on marble work /granite work /stone work where ever required to give high gloss finish complete	3114		Sqm.	

20	11.23	Marble stone flooring with 18mm thick marble stone (sample of marble shall be approved by engineer-in-charge)over 20mm(average) thick base of cement mortar 1:4(1 cement : 4 coarse sand) laid jointed with grey cement slurry including rubbing and polishing complete with:				
	11.23.1	Makrana white second quality.	18		Sqm.	
21	11.26	Kota stone slab flooring over 20mm (average) thick base of cement mortar 1:4 (1 cement: 4 coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing & polishing complete				
	11.26.1	25mm thick.	2030		Sqm.	
22	11.27	Kota stone slabs 25mm thick in risers of steps, skirting dado and pillars, laid on 12mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs,including rubbing and polishing complete.	310		Sqm.	
23	11.31	Extra for pre finished nosing in treads of stepe of kota stone/sand stone slab.	450		Rm.	
24	11.32	Extra for kota stone/sand stone in treads and risers using single lenth up to 1.05 meter.	310		Sqm.	
25	11.41	P/L polished vitrified floor tiles in different size(the thickness to be specified by the manufacturer) with water absorption of less than 0.08% and confirming to IS:15622 of approved make in all colours and shades, laid on 20mm thick cement mortar1:4 (1 cement:4 coarse sand) grouting the joints				
	11.41.2	Size of tile 600mmx600mm	190		Sqm.	
26	11.36	Providing and Fixing 1st. quality ceramic glazed walls tiles conforming to IS: 15622(thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy,bottle green black of any size as approved by Engineer in charge in skirting, riser of steps and dados over 12mm thick bed of cement mortar 1:3 (1cement:3 coarse sand) and jointing with grey cement slurry @ 3.3kg/sqm including pointing in white cement mixed with pigment of matching shade complete	148		Sqm.	
		<u>FINISHING & CLADDING WORK :</u>				

27	13.1	12 mm thick cement plaster of mix				
	13.1.2	Cement mortar 1:6 (1 cement : 6fine sand).	148		Sqm.	
28	13.2	15 mm thick cement plaster on rough side of single or half brick wall of mix :				
	13.2.2	Cement mortar 1:6 (1 cement : 6 fine sand).	130		Sqm.	
29	13.41	Distempering with oil bond washable distemper of approved brand and manufacture to give an even shade.				
	13.41.1	New work(Two or more coats) over and including priming coats with cement primer .	205		sqm.	
30	13.43	Applying one coat of cement primer of approved brand and manufacturer on wall				
	13.43.1	Cement primer.	60		Sqm.	
31	13.44	Finishing walls with water proofing cement paint of required shade:				
	13.44.1	new work(two or more coats appling @3.28 kg./10sqm.)	60		Sqm	
32	13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade.				
	13.62.1	Two or mor coats on new work over an under coat oa suitable shade with ordnary paint of approved brand and manufacture.	90		Sqm.	
33	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	4		Each	
	14.2.2	Windows & cupboard chowkhats & shutter	8		Each	
34	14.43	Removing the dry or oil bond distemper , water proofing cement paint and the like by scrapping and sand papering and perparing the surface smooth including necessary repairs to scratches etc. complete	8125		Sqm.	
35	14.45	Distempering with oil bond washable distemper of approved brand and manufacture to give an even shade.				
	14.45.1	Old work (one or more coats)	7300		Sqm.	

36	14.51	Painting (one or more coats) on rain water, soil waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work:				
	14.51.1	75 mm diameter pipes	10		Rm.	
	14.51.2	100 mm diameter pipes	10		Rm.	
37	14.54	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade.				
	14.54.1	one or more coats on old work	12.5		Sqm.	
38	14.65	Finishing walls with water proofing cement paint of required shade:				
	14.65.1	Old work (one or more coats applied @ 2.2 kg/10sqm. Over priming coat of primer applied @ 0.8 litres/10sqm. Complete including cost of priming coast)	825		Sqm.	
39	14.67	Finishing walls with premium acrylic smooth exterior paint with silicone additives of required shade				
		DOOR/WINDOW:				
41	9.51	Providing and fixing fly proof galvanised M.S. wire gauze to windows and clerestory windows using galvanised M.S. wire gage with average width of aperture 1.4mm in both directions with wire of dia 0.63 mm.				
	9.51.1	With 2nd class teak wood beading 62x19mm	5.4		Sqm	
42	9.103	Providing and fixing bright finished brass 100mm 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 approved quality)	8		Each	

43	21.1	P/F aluminium work for door & windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z section and other section of approved make confirming to IS : 733 and IS : 1285, fixed with rowel 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 section shall be smooth, rust free, straight, mitred & jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling C.P. brass/stainless steel screws all complete as per Architectural drawings and the directions of Engineer-in-charge (Glazing and panelling shall be paid for separately).				
	21.1.1	For fixed portion				
	21.1.1.3	Polyester Powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	363		Kg.	
	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(fittings shall be paid for				
	21.1.2.3	Polyester Powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	70		Kg.	
44	21.3	P/F glazing in aluminium door window ventilators shutters and partitions etc. with PVC/Neoprene gasket etc. complete as per the architectural drawings and direction of Engineer in charge(cost of aluminium snap,beadings shall be paid in basic item.)				
	21.3.2	With Float glass panes of 5.5mm thickness	37.52		Sqm	
45	21.4	Providing & fixing double action hydraulic floor spring of approved brand and manufacture IS: 6315 marked, Hardwyn make (model 3000) or equivalent for doors including the cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece MS sheet outer box with slide plate etc. complete as per the direction of Engineer-in-Charge.				
	21.4.1	a) With stainless steel cover plate.	8		Each	

46	21.8	Filling the gap in between aluminium erame & 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.				
	21.8.1	Up to 5mm depth and 5mm width	22		Rm	
47	21.14	Providing and fixing anodised aluminium (Anodised aluminium(anodised transparent or dyed to required shade according to IS 1868 .Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular section of approved make conforming to IS:733 and IS: 1285 fixed with rawl plugs and stainless steel screws etc.	4		Kg.	
48	21.16	Providing and fixing aluminium round shape handle of outer dia 100mm with SS screws etc. complete as per direction of engineer-in-charge.				
	21.16.3	Polyester Powder coated aluminium (minimum thickness of polyester polwder coating 50 micron)	32		Each	
		STEEL WORK :				
49	10.2	Structure steel work riveted, bolted or welded in built up sections, trusses and framed work.including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	450		Kg.	
50	10.3	Providing and fixing in position collepsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size with tope and bottem rail of T-iron 40x40x6mm with 40mm dia , steelpulleyes complete with bolts , nuts, locking arrangement, stoppers, handles ,including applying a priming coat of	24		Sqm.	
51	10.25	Steel work welded in built-up sections/framed work including cutting, hoisting,fixing in position & applying a priming coat of approved steel primer using structural steel				
	10.25.2	In gratings, frames, guard bars, ladders, railings, brackets, gates and similar works.	5486		Kg.	
		MISCELLANEOUS WORK :				

52	12.5	Supply & instalation of precoated galvanised iron profile sheets (size shape and pitch of corrugation as approved by engineer-in-charge) 0.5mm +/- 5% total coated thickness (TCT)thick Zinc coating 120 gsm 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 od 25 microns minimum to avoid scratches while transportation and should be supplied in single lenth up to 12 m. or as desired by engineer-in -charge. the sheet shall be fixed using self drilling/self tapping screws of size (5.5 x55mm)with EPDM seal or with polymer coated J or L hooks. bolts and nuts 8mm dimeter with bitumen and G.I. limpet washers or with G.I. limpet washers filling with white lead complete up to any pitch in horizontal / vertical or curved surface excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	27		Sqm.	
53	14.1	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under including cutting the patch in proper shape,raking out joints and preparing the surface of the walls complete including disposal of rubbish to the dumping ground within 50 metres lead:				
	14.1.2	with cement mortar 1:4(1cement : 4 coarse sand)	120		Sqm.	
54	15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 meters lead as per direction of engineer-in-charge.				
	15.2.1	1:3:6 or richer mix	69.28		Cum.	
55	15.3	Desmolation R.C.C. work manually/by mechainical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	5.46		Cum.	
56	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.	3.6		Sqm.	
57	15.7	Desmolation brick work manually/by mechainical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead				

	15.7.4	In cement mortar	57.4		Cum.	
58	15.13	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 meter lead.				
	15.13.1	Of area 3 sqm. And below	12		Each	
59	15.25	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead .	300		Sqm.	
60	15.38	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 meter lead.	6.19		Sqm.	
62	16.42	Cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm. nominal size). In pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.	100		Cum.	
		TOTAL OF SCHEDULE ITEMS C/O TO SUMMARY =				
		B- <u>NON-SCHEDULE ITEMS</u>				
61	NSI-1	Extra for stone flooring, jointe fill with white cement slurry mixed with pigment to mach the shade of the stone	2995		Sqm.	
62	NSI-2	Providing and fixing coping of 40mm thick polished Kota stone slab, coping 300 to 500 width, with both side half round edge moulding over wall projected both side, fix with 1:3 cement mortar (1 cement : 3coarse stone dust) as per design and instruction. jointed fill with white cement slurry mixed with pigment to match the shade of the stone.	85		Sqm.	
63	NSI-3	Providing and Fixing over walls polished vitrified tiles in different size(the thickness to be specified by the manufacturer) with water absorption of less than 0.08% and confirming to IS:15622 of approved make in all colours and shades, approved by Engineer-in-charge, (basic rate Rs100/sqft) in dados over 12mm thick bed of cement mortar 1:3 (1 cement:3 coarse sand) and jointing with grey cement slurry @ 3.3kg/sqm including pointing in white cement mixed with pigment	1357.5		Sqm.	

64	NSI-4	Providing and applying silicon paint over external surface of exposed brick work to give the an even shade all surface.Including robbing,grinding and repair of joints etc. as per engineer-in-charge direction complete at floors and levels.	5800		Sqm.	
65	NSI-5	Providing and fixing 18 mm. Thick Polished Granite stone(basic rate Rs 120/sqft) machine cut for floor border and skirting.of required size and approved shade, laid over 20mm. Thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement mixed with matching pigment , epoxy touch ups, including Edge moulding curing etc. complete as per instruction at all levels and floors.	50		Sqm.	
66	NSI-6	Providing and fixing Black karappa stone in floor bordar with machine cut .of required size and approved sample, laid over 20mm. Thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement mixed with matching pigment , epoxy touch ups,complete as per instruction at all levels and floor	572.25		Sqm.	
67	NSI-7	Providing and Applying melamine polish work on old doors and windows as per approved shade and instruction complete,including Removing the existing paint and the like by scrapping and sand papering and perparing the surface smooth, necessary repairs for plish work as per engineer-in-charge.	70		Sqm.	
68	NSI-8	Desmolation IPS and terrazo floor and skirting work manually/by mechanical means,floor dismantle up to required depth for new stone flooring. including disposal of unserviceable material any lead as per direction of Engineer-in-charge.	2995		Sqm.	
69	NSI-9	Dismantling of existing plaster on walls for fixing vitrified tiles,including disposal of unserviceable material outside the plot at a suitable place. as/per engineer-in-charge instruction.	1357.5		Sqm.	
70	NSI10	Dismantling of existing tiles on walls, including disposal of unserviceable material outside the plot at a suitable place. as/per engineer-in-charge instruction.	295		Sqm.	

71	NSI-11	P and F Tag board of required size and shape with 1/2" th. soft board, 1/4"comm. ply, upholstery (cost of fabric @ Rs.210/- per R.mt.) and 1" x 1.25" rubber / teak wood moulding fixed to wall as per design, duly polished with melamine finish including labour and materials.	11.52		Sqm.	
72	NSI-12	Providing and cladding with Delhi Gary stone (125x125x115 or as per existing size) rough on the exposed surface, with 20 mm base 1:4 cement mortar (1cement: 4 coarse sand) Including pointing with cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment to mach the stone shade.	137.5		Sqm.	
73	NSI-13	Providing and fixing 150x100 size box on ceiling ,with required soft wood frame work with 19mm thick comm. board and fixed on it along with teak vineer of aproved shade and colour,to be fixed on all side as per instructions and drg.duly polished with melamine finish including labour and material complete.	80		Rm.	
74	NSI-14	Recess of existing surface coduits in wall or RCC as per site conditions,including the cutting of wall or RCC and making good the same with 1:4 cement mortar complete as per directions of engineer0in-charge.	526		Rm.	
	NSI-15	Providing and fixing 18 mm. Thick polished Granite stone(basic rate Rs 120/sqft) machine cut for flooring and skirting.of required size and approved shade, laid over 20mm. Thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement mixed with matching pigment , epoxy touch ups, including curing etc. complete as per instruction at all levels and floors.	65		Sqm.	
		TOTAL OF NON-SCHEDULE ITEMS C/O TO SUMMARY				
		<u>SECTION-II, PLUMBING WORK :</u>				
		Sanitary Installation				

1	17.10	Providing and fixing stainless steel A ISI 304(18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40mm including painting of fittings and brackets, cutting and making good the walls wherever required:				
	17.10.2	Kitchen sink without drain board				
	17.10.2.1	610x510mm bowl depth 200mm	6		Each	
2	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				
	17.28.1.2	40mm dia	6		Each	
3	17.35	Providing and fixing soil, waste and vent pipes:				
	17.35.1	100 mm dia.				
	17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS:3989	45		Rm.	
4	17.37	Providing and fixing M.S. holder-bat clamps of approved design to sand cast iron/cost iron(spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including cost of cutting holes and making good the walls etc.				
	17.37.1	100mm dia pipe	3		Each	
5	17.39	Providing and fixing plan bend of required degree.				
	17.39.1	100mm				
	17.39.1.2	Sand cast iron S&S as per IS-3989	8		Each	
6	17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
	17.43.1	100x100x100				
	17.43.1.2	Sand cast iron S&S as per IS-3989	4		Each	
7	17.56	Providing and fixing terminal guard:				
	17.56.1	100mm				
	17.56.1.2	Sand cast iron S&S as per IS-3989	2		Each	
8	17.57	Providing and fixing collar:				
	17.57.1	100mm				
	17.57.1.2	Sand cast iron S&S as per IS-3989	5		Each	
9	17.58	Providing lead caulked joints to sand cast iron/Centrifugally cast (spun) iron pipes and fittings of diameter:				
	17.58.1	100mm	10		Each	

10	17.60	Providing and fixing trap of self cleansing 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	100mm inlet and 100mm outlet				
	17.60.1.1	Sand cast iron S&S pipe as per IS:3989.	6		Each	
		Water Supply				
11	18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the wall etc.				
		Internal work-Exposed on wall				
	18.10.1	15mm dia. Nominal bore	10		Rm.	
	18.10.2	20mm dia. Nominal bore	10		Rm.	
12	18.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall				
	18.11.1	15mm dia. Nominal bore	20		Rm.	
13	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.cutting and making good the wall etc.				
		External work				
	18.12.3	25mm dia. Nominal bore	10		Rm.	
	18.12.5	40mm dia. Nominal bore	8		Rm.	
14	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	12		Each	
15	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved Quality (screwed end)				
	18.17.1	25mm dia. Nominal bore	2		Each	
	18.17.3	40mm dia. Nominal bore	2		Each	
16	18.18	Providing and fixing ball valve(brass)of approved quality, high or low pressure, with plastic floats complete:				
	18.18.1	15mm dia. Nominal bore	4		Each	
17	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions:				
	18.21.2	45 cm length				
	18.21.2.1	15mm dia. Nominal bore	8		Each	
18	18.40	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality:				
	18.40.3	25mm dia. Nominal bore	10		Rm.	
	18.40.5	40mm dia. Nominal bore	6		Rm.	

19	18.46	Providing and fixing G.I. union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (new work)				
	18.46.1	15mm dia. Nominal bore	4		Each	
	18.46.2	20mm dia. Nominal bore	4		Each	
	18.46.3	25mm dia. Nominal bore	2		Each	
	18.46.5	40mm dia. Nominal bore	2		Each	
20	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931				
	18.49.1	15mm dia. Nominal bore	8		Each	
21	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standrad and weighing not less than 690 gms.				
	18.51.1	15mm dia. Nominal bore	4		Each	
22	18.52	Providing and fixing C.P. brass stop cock (concealed) of standrad design and of approved make conforming to IS:8931				
	18.52.1	15mm dia. Nominal bore	4		Each	
23	18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser of approved quality conforming to IS:8931				
	18.53.1	15mm dia. Nominal bore	4		Each	
24	18.77	Cutting hole upto 15x15 cm in R.C.C. floora and roofs for passing drain pipe etc.with cement concrete 1:2:4 (1 cement : 2 coarse sand :4 graded stone aggregate 20 mm. nominal size)including finishing complete so as to make it leak proof.	4		Each	
25	18.79	Making hole up to 20x20 cm and embedding pipes up to 150 diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 20 mm. nominal size)including disposal of	4		Rm.	
		TOTAL OF SCHEDULE ITEMS C/O TO SUMMARY =				
		<u>SECTION-III, ELECTRICAL WORK :</u>				
		Detailed Boq. for Internal Electrical Works for Common Areas of				
	Section-1	Point Wiring				

1		Wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5sq.mm FR PVC insulated copper conductor single core cable etc as required.-			
	1.10.2	Group B	285		Point
2	1.11	Wiring for twin control light point with 1.5 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required.	6		Point
3	1.12	Wiring for light / power plug with 2 X 4 sq.mm. FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit along with 1 No 4 sq. mm FR PVC Insulated copper conductor single core cable for loop earthing as required.	650		Meter
4	1.13	Wiring for light / power plug with 4 X 4 sq. mm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit along with 2 Nos 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	100		Meter
5		Wiring for circuit / submain / socket outlet wiring alongwith earth wiring with the following sizes of FR PVC insulated copper conductor, single core cable in surface / recessed PVC conduit as required			
a	1.7.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	1000		Metre
6		Supplying and drawing following pair. 0.5 sq. mm FR PVC insulated copper conductor, unarmoured telephone cable in the existing surface/ recessed steel/ PVC conduit as required.			
a	1.18.3	4 Pair	300		Metre
7	1.19	Supplying and drawing co- axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	100		Metre

8	MR	Supplying and drawing co- axial TV cable RG-11 grade, 1.63 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	100		Metre	
9		Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
a	1.24.6	Telephone socket outlet	10		Each	
b	1.24.7	TV antenna socket outlet	10		Each	
10	1.26	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	20		Each	
11	1.27	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.				
a	1.27.1	1 or 2 Module (75mmX75mm)	20		Each	
12	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection, painting etc. as required	16		Each	
13	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5./6 amps modular socket outlet and 15/16 amps modular switch, connection, painting	34		Each	
14	1.25	Supplying and fixing of stepped type electronic type fan regulator on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	40		Each	
Total for Section-1 carried over to Summary of Electrical work						
<u>Section-2 Distribution Boards</u>						
MCB DISTRIBUTION BOARDS						

15		Supplying and fixing following way, three pole and neutral, prewired, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor upon to terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phos- phatized and powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)			
a	2.42.5	4 way (4 + 12), Double door	6		Each
16	1002	S/F of 6 A to 32 Amp.SP MCB(10KA)	1233		Each
17	2.53	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	10		Each
18		Supplying and fixing following rating, four pole, 415 volts, MCB in the existing MCB DB complete with connections, testing and commissioning etc.as required.			
	MR	63 amps	6		Each
19		Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.			
b	394	63 amps	6		Each
20	2.62	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet with 2 pole and earth, metal enclosed plug top along with 20 amps 'C'series, SP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	4		Each
21	2.63	Supplying and fixing 20 amps, 240 volts, TPN industrial type socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 amps 'C' series, TP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	2		Each

22	MR	Supply, installation , testing & commissioning of cubicle type totally enclosed free standing type, moisture, dust & vermin proof Panel Boards of the following capacities , made from 2 mm thick CRCA sheet steel duly powder coated (by seven tank process) in approved colour, complete with Energy Analyzer, CTs of required ratings ,LED indication lights, interconnections / control wiring for metering system with FRLS copper conductor wires, HRC fuses with base, busbars, removable gland plates on top & bottom and following incommmer with earth fault module & outgoing feeders as per specifications :				
		Incomer:	2		Set	
		250A, 4Pole MCCB-25kA with Energy Analyzer				
		Busbar:				
		300A ,415 V three Phase 4 wire (4 pole)colour coded non-adhesive PVC insulated electrolytic 'Al' conductor bus bars				
		Outgoings:				
		63A, 4 Pole MCCB, 25kA 5Nos				
		Total for Section-2 carried over to Summary of Electrical work				

Section-3		Earthing			
23	701	Supply and burying of 40mm dia x 4.5 meter long G.I. pipe vertically for earthing having 12mm dia. Holes spaced 75mm apart drilled up to 2 meter from the bottom complete with earthing lead of No.6 to 8 SWG GI wire in G.I. pipe up to apron (and from apron to switch board the cost of G.I. wire and pipe will be extra) upto switch board, 30cm square C.I. box with hinged cover masonry enclosure, funnel at top, alternate layers of charcoal/coke and salt at least 150mm thick all around etc. as per directions of Engineer-in-charge complete in all respects as per drawing	4		Set
24	3.11	Supplying and laying 25 mm X 5 mm G.I.. strip at 0.50 metre below ground as strip earth electrode, including soldering etc. as required.	40		Metre
25	3.18	Providing and fixing 25 mm X 5 mm G.I.. strip on surface or in recess for connection etc. as required	100		Metre
Total for Section-3 carried over to Summary of Totals					
Section-4		Cables & Cable Terminations			
26		Supply & laying of aluminium conductor PVC insulated armoured served sheathed cables 1100 Volts grade at a depth of 750mm below ground level over a cushion of 75mm.thick sand around and protected with burnt bricks on sides and on top. On surface the cable run shall be fixed on M.S.clamps etc.of suitable size or as directed by the Engineer-Incharge, complete in all respected. The armouring of the cable shall be properly connected with the earth conductor by clamps etc.			
a	MR	16sq. mm 4 core	150		Mtr.
27	4.1	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.			
a	4.1.33	4 X 16 sq.mm.	12		Each

28		Providing and fixing in position the following RCC Hume Pipe for road crossing including RCC collars and waterproof sealing of pipes at joints and two ends after laying of cables with sikalatex mortar, all other accessories as required, complete in all respect. Cost of hume pipe to include cost of road cutting and excavation upto 1m depth and backfilling with compaction.			
a	19.6.2	150 mm.	20		Mtrs.
Total for Section-4 carried over to Summary of Electrical work					
<u>Section-5 Miscellaneous & Safety Equipment</u>					
29	MR	Supply and fixing of shock treatment chart (prescribed under I.E. rules) duly framed with glass and supported from back with hard board of soft board with supply of all material labour T&P for proper completion of work.	2		Sets
30	MR	Supply and laying of 1800mm x 900mm x 12mm thick chequered rubber matting of tested quality.	4		Mtrs.
31	MR	Supply and fixing danger board fabricated from 10 gauge M.S. Sheet as per I.E. Rules.	6		Each
32	MR	Supply and fixing of first aid box complete with necessary accessories as per IS-2217 and as approved by Indian Red Cross Society.	2		Sets
33	MR	Supply and fixing of 9 ltr chemical foam type fire extinguisher	2		Nos.
34	1131	Supply and fixing of fire extinguisher, dry chemical type 5.00 kg capacity (ISI mark) complete with initial charge and wall bracket along with supply of all materials and labour for proper completion of work.	2		Nos.
35	MR	Supply and fixing of 4.5 kg CO2 type fire extinguisher	2		Nos.
36	MR	Supplying and fixing in position the following sizes of powder coated MS housing for telephone tag block with hinged & lockable door including supply & fixing of tag block made out from self extinguishing polystyrene material, corrosion resistant, highly resistant to shock, sturdy and maintenance free KRONE type telephone tag block complete as required			
a		10 Pair	2		Nos.

37	MR	Supplying,laying, termination,testing & commissioning of following 0.6 mm PVC insulated, PVC sheathed and taped tinned copper, armoured telephone cable on tray / surface as required.			
a		10 Pair	100		Metre
Total for Section-5 carried over to Summary of Electrical work					
Section-6 Light Fixtures & Fans					
38	MR	Supply and fixing of ceiling fans of approved makes of following sizes, capacitor type complete with 30cm down rod, canopies, handling shackel blades, suitable for use on 220 /240 volt, 50Hz single phase AC supply conforming to IS 374 / 1979 class I (without regulator) As per Crompton- HS1200-WOR or Approved Equiv. - 1200mm size	34		Each
39	MR	Supplying, installation, testing & commissioning of surface mounted 2x18 W compact Fluorescent light fitting complete with lamp electronic ballast, holders etc. As per Philips cat. No.FCS350 2 TLD18W IC MI or Approved Equivalent	177		Nos
40	MR	Supplying, installation, testing & commissioning of Heavy Duty industrial type Exhaust Fan conforming to IS: 2312-1967 with upto date ammendment (900 RPM) Havells- Single Phase Model-300mm or Approved Equivalent	10		Each
41	MR	Supplying, installation, testing & commissioning of 1 x 14 W Mirror light fitting complete with lamps,electronic ballast, holders etc. As per Philips cat. No. THC 207 1xTL5-14 W or approved equivalent	4		Nos
42	MR	Supplying, installation, testing & commissioning of 2x36 W Industrial FTL light fitting complete with 36 W lumilux lamps, electronic ballast, holders etc. As per Philips cat. No. TMS 021 2xTLD 36W EBT or Approved Equivalent	24		Nos
43	MR	Supplying, installation, testing & commissioning of surface mounting 2x36 W (Cat-2) FTL light fitting complete with 36 W lumilux lamps, electronic ballast, holders etc. As per Philips cat. No. TMC 501/236HF(EBW) or Approved Equivalent	30		Each
Total for Section-6 carried over to Summary of Electrical work					

		TOTAL OF SECTION III (ELECTRICAL) ITEMS C/O TO SUMMARY =				
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