

**THE ABSTRACT OF BILL OF QUANTITIES IN THE PRICE BID SHALL BE INVARIABLY FILLED. THOSE WHO BIDDERS DO NOT FILL WILL BE NON-RESPONSIVE AND WILL BE DISQUALIFIED FROM EVALUATION AND WILL BE TREATED AS TECHNICALLY NOT QUALIFIED.**

**ALL ROWS SHALL BE FILLED, THIS IS MANDATORY  
(IF NIL OR NA, THAT MAY ALSO BE SHOWN)**

**BILL OF QUANTITIES**

**ABSTRACT**

<b>Civil &amp; Electrical work</b>		
<b>SI No</b>	<b>Name of work</b>	<b>Amount in Rs</b>
1	GNM 2nd Floor Civil - Brick work and plastering	
2	GNM 2nd Floor Finishing works	
3	GNM New Toilet Block Civil Finishing works	
4	GNM Toilet Block -Plumbing	
5	GNM Civil - Painting Works	
6	GNM Civil - Finishing works (False ceiling, tiling, doors)	
7	GNM Electrical Ground floor LT	
8	GNM Electrical First floor LT	
9	GNM Electrical Second Floor LT	
10	GNM Water Proofing	
11	GNM Gate, Canopy and Road works	

12	GNM common facility works	
13	GNM -Electrical - HT	
14	GNM -Air-conditioning works	
	<b>Service tax component to be paid by the bidder</b>	
	<b>Service tax component to be directly paid by the HITES in case the bidder is a Proprietary firm</b>	
	<b>GRAND TOTAL</b>	

GNM 2nd Floor Civil - Brick work and plastering						
SI no	DSR item ref no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
		<b>I. Brick Work</b>				
1	Derived 6.4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5 in superstructure above plinth level up to floor V level in all shapes and sizes in : 6.4.1 Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	555.00		
		<b>II. Plastering</b>				
2	13.8.2	Providing and applying 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	sqm	1510.00		
3	13.7.2	Providing and applying 12 mm cement plaster finished with a floating coat of neat cement of mix: 1:4 (1 cement : 4 fine sand)	sqm	2340.00		
4	13.16.1	Providing and applying 6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand)	sqm	1720.00		

5	5.30	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	m	380.00		
		<b>Total Amount in Words &amp; in figures</b>				

GNM 2nd Floor Finishing works						
SI no	DSR item ref no	Item Description	Unit	Quantit y	Rate in words& Figures (In Rs.)	Amount in Rs.
		<b>I. Doors and Windows</b>				
1	PSR 9.1.1 B	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position - Burma Teak wood	cum	1.00		
2	PSR 9.5.1 .1B	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. - Burma Teak wood - 35mm thick shutter	sqm	50.00		

3	PSR 9.14	Extra for providing ISI marked stainless steel built hinges instead of black enamelled M.S. butt hinges with necessary Screws. (Shutter area to be measured)	sqm	50.00		
4	13.6 8.1	French spirit polishing: Two or more coats on new works including a coat of wood filler	sqm	100.00		
5	9.53	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand: 6 graded stone aggregate 20mm nominal size).	each	80.00		
6	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	each	40.00		
7	9.97. 1	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 : 300x10 mm	each	80.00		

8	9.92.1	Providing and fixing chromium plated brass handles with necessary screws etc. complete: 125 mm	each	40.00		
9	9.14.3	Providing and Fixing factory made uPVC door frame, made of uPVC extruded sections , of size 65 mm x 55 mm with wall thickness 2.0 mm ( $\pm 0.2$ mm) , corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm ( $\pm 0.2$ mm), including providing & fixing 3 nos of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number & size of anchor dash fastners, all complete as per manufacturer's specification and direction of Engineer-in-charge.	m	70.00		

10	9.14 2.2	<p>35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm (<math>\pm 0.2</math> mm) thick, having styles &amp; rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles &amp; rails to be mitered cut &amp; joint with the help of PVC solvent cement, self driven self tapping screws &amp; M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner.</p> <p>Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles &amp; rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge. Decorative finish (wood grained finish)</p>	sqm	30.00		
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11	21.1.1.2	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling to be paid for separately): Powder coated aluminium (minimum thickness of powder coating 50 micron) (HINDALCO/ JINDAL)	kg	1200.00		
12	21.1.2.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber/ neoprene gasket required (All fittings included) Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	800.00		



13	21.3.2	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge.(Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.5 mm thickness	sqm	150.00		
14	21.16.2	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer in-charge. Powder coated minimum thickness 50 micron aluminium	each	40.00		
15	9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	each	20.00		
16	9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete	each	40.00		
17	9.92.1	Providing and fixing chromium plated brass handles with necessary screws etc. complete: 125 mm	each	20.00		

18	21.8.1	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. Upto 5mm depth and 5 mm width	m	320.00		
		<b>II . Steel Work with painting</b>				
19	9.48.2	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to openings/ wooden frames with rawl plugs screws etc	kg	2595.00		
20	13.52.1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	sqm	75.00		

21	10.2 8	Providing and fixing stainless steel (Grade 316) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	kg	1415.0 0		
		<b>Total Amount in Words &amp; in figures</b>				

GNM New Toilet Block Civil Finishing works						
Sl n o	DSR item ref no	Item Description	Unit	Quantit y	Rate in words& Figures (In Rs.)	Amount in Rs.
		<b>I. Brick Work</b>				
1	6.1.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5 in foundation and plinth in: 6.1.1 Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	15.00		
2	6.4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5 in superstructure above plinth level up to floor V level in all shapes and sizes in : 6.4.1 Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	100.00		
		<b>II. Plaster</b>				
3	13.8.2	External Plaster: Providing and applying 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	sqm	360.00		
4	13.7.2	Internal plaster : Providing and applying 12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	sqm	230.00		
5	13.16.1	Ceiling Plaster: Providing and applying 6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand)	sqm	235.00		

		<b>III. Painting</b>				
6	13.47.1	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade : 13.47.1 New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	sqm	360.00		
7	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete	sqm	360.00		
8	13.43.1	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	sqm	360.00		
9	13.83.2	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. two coats	sqm	360.00		
10	13.52.1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	sqm	50.00		
11	13.37.1	White washing with lime to give an even shade : 13.37.1 New work (three or more coats)	sqm	270.00		

		<b>IV. Flooring/ Granite Works</b>				
12	PSR 11.36C	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacture of approved make in all colours, shades of size 300 x 600 mm in skirting, risers of steps and dados over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm. Including pointing in white cement mixed with pigment of matching shade complete. - size 300x600mm	sqm	285.00		
13	11.40	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigments etc., complete	sqm	205.00		
14	8.2.2.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade.	sqm	15.00		

		Area of slab over 0.50 sqm				
15	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	each	15.00		
16	8.10.2	Providing and fixing stone slab with 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 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.	sqm	2.00		
		<b>V. Doors and windows</b>				
17	PSR 9.1.1B	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position - Burma Teak wood	cum	0.50		
18	PSR 9.5.1.1 B	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. - Burma Teak wood - 35mm thick shutter	sqm	15.00		

19	PSR 9.14	Extra for providing ISI marked stainless steel built hinges instead of black enamelled M.S. butt hinges with necessary Screws. (Shutter area to be measured)	sqm	15.00		
20	13.68.1	French spirit polishing: Two or more coats on new works including a coat of wood filler	sqm	35.00		
21	9.53	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand: 6 graded stone aggregate 20mm nominal size).	each	30.00		
22	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	each	10.00		
23	9.97.1	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 : 300x10 mm	each	15.00		



24	9.92.1	Providing and fixing chromium plated brass handles with necessary screws etc. complete: 125 mm	each	10.00		
25	9.143	Providing and Fixing factory made uPVC door frame, made of uPVC extruded sections , of size 65 mm x 55 mm with wall thickness 2.0 mm ( $\pm 0.2$ mm), corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm ( $\pm 0.2$ mm), including providing & fixing 3 nos of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number & size of anchor dash fastners, all complete as per manufacturer's specification and direction of Engineer-in-charge.	m	85.00		

26	9.142.2	<p>35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm (<math>\pm 0.2</math> mm) thick, having styles &amp; rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles &amp; rails to be mitered cut &amp; joint with the help of PVC solvent cement, self driven self tapping screws &amp; M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner. Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles &amp; rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge. Decorative finish (wood grained finish</p>	sqm	35.00		
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27	21.1.1.2	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling to be paid for separately): Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	630.00		
28	21.1.2.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber/ neoprene gasket required (with all fittings) Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	315.00		
29	21.3.2	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge.(Cost of aluminium snap beading shall be paid	sqm	65.00		

		in basic item): With float glass panes of minimum 5.5 mm thickness				
30	21.16.2	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in-charge Powder coated minimum thickness 50 micron aluminium	each	35.00		
31	9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete	each	25.00		
32	21.8.1	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. Upto 5mm depth and 5 mm width	m	190.00		
		<b>VI. Steel Work</b>				
33	9.48.2	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to openings/ wooden frames with rawl plugs screws etc	kg	1260.00		

34	10.28	Providing and fixing stainless steel (Grade 316) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	kg	145.00		
		<b>Total Amount in Words &amp; in figures</b>				

GNM Toilet Block -Plumbing						
Sl no	DSR item ref no	Item Description	Unit	Quantity	Rate in words& Figures (In Rs.)	Amount in Rs.
1	M.R	Providing and fixing white vitreous china <b>Floor Mounted type water closet</b> (European type W.C.pan) with seat and lid, 3/6 litre low level white vitreous Dual Flushing cistern and C.P flush bend with fitting and 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., WC pan with ISI marked white solid plastic seat and lid (Lowest retail price not less than 10,000/each. Materials to be selected by the Engineer in charge)	Each	27		
2	LMR	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 : One urinal basin with 5 litre white P.V.C. automatic flushing cistern. (Lowest retail price of urinals not less than Rs. 4200/each and automatic flushing cistern not less than Rs. 1200/each. Materials to be selected by the Engineer in charge)	Each	15		

3	LMR	Providing and fixing wash basin/ counter wash basin with CI/ MS brackets, 15mm CP brass <b>Pillar taps</b> , 32mm CP brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required.: White Vitreous China Wash basin size 630 x 450mm with a single 15mm C.P brass pillar tap. (Lowest retail price of basin not less than Rs. 3000/each and Pillar tap not less than Rs. 2000/each. Materials to be selected by the Engineer in charge)	Each	21		
4	LMR	Providing and fixing <b>C.P. brass long body bib</b> cock (Sink cock) of approved quality conforming to IS standards and weighing not less than 690 gms. 15 mm nominal bore (Lowest retail price not less than 1800/each. Materials to be selected by the Engineer in charge)	Each	30		
5	18.5 3.1	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: 15mm nominal bore	Each	96		
6	17.2 8.1. 1	Providing and fixing <b>PVC Waste pipe</b> for sink or wash basin including PVC waste fittings complete.: Semi rigid pipe 32mm dia	Each	24		
7	18.2 1.2. 1	Providing and fixing uplasticised PVC connection pipe with brass unions : 45 cm length 15 mm nominal bore	Each	99		

8	18.6 5	Providing and fixing SS soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.	Each	51		
9	17.3 4.1	Providing and fixing <b>Toilet paper holder</b> . etc.,:C.P Brass	Each	45		
10	17.3 1	Providing and fixing 600 x 450mm <b>bevelled edge mirror</b> of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Each	15		
11	17.7 3.2	Providing and fixing SS/ PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	Nos.	42		
12	MR	Providing & fixing of CP <b>Health faucet. Hand operated spray unit (instand type)</b> . (Lowest retail price not less than 1200/each. Materials to be selected by the Engineer in charge)	Set	27		



13	18.7	Providing and fixing <b>Chlorinated Polyvinyl Chloride (CPVC)</b> pipes, having thermal stability for Hot and Cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in caharge.				
		<b>Internal Work - Exposed on wall</b>				
a)	18.7 .4	32 mm nominal outer dia.Pipes	Mtr.	25.00		
b)	18.7 .5	40 mm nominal outer dia.Pipes	Mtr.	25.00		
c)	18.7 .6	50 mm nominal outer dia.Pipes	Mtr.	125.00		
14	18.8	Providing and fixing <b>Chlorinated Polyvinyl Chloride (CPVC)</b> pipes, having thermal stability for Hot and Cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes and 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 caharge.				

		<b>Concealed work including cutting chases and making good the wall etc.</b>				
a)	18.8 .1	15 mm nominal outer dia.Pipes	Mtr.	230.00		
b)	18.8 .2	20 mm nominal outer dia.Pipes	Mtr.	100.00		
c)	18.8 .3	25 mm nominal outer dia.Pipes	Mtr.	40.00		
d)	18.8 .4	32 mm nominal outer dia.Pipes	Mtr.	150.00		
15	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. <b>External work</b>				
a)	18.9 .3	25 mm nominal outer dia .Pipes.	Mtr.	55.00		

b)	18.9 .4	32 mm nominal outer dia .Pipes.	Mtr.	55.00		
c)	18.9 .5	40 mm nominal outer dia .Pipes.	Mtr.	35.00		
d)	18.9 .6	50 mm nominal outer dia .Pipes.	Mtr.	35.00		
16	18.1 8	Providing and fixing <b>Ball Valve (brass)</b> of approved quality, High or low pressure, with plastic floats complete.				
a)	18.1 8.2	20mm dia nominal bore	Nos.	2		
b)	18.1 8.3	25mm dia nominal bore	Nos.	2		
17	LMR	Providing, Fixing, Testing & Commissioning of <b>full way brass valve</b> of brass body with threaded/ flanged joints complete with nuts, bolts, gaskets, washers etc.				

(a)	LMR	15mm dia	Each	2		
(b)	LMR	20mm dia	Each	2		
18	18.1 7	Providing and fixing <b>Gun metal gate valve</b> with C.I. wheel of approved quality (screwed end).				
a)	18.1 7.1	25 mm dia nominal bore	Nos.	6		
b)	18.1 7.2	32 mm dia nominal bore	Nos.	6		
c)	18.1 7.3	40 mm dia nominal bore	Nos.	2		
d)	18.1 7.4	50 mm dia nominal bore	Nos.	2		

19	18.7 7	<b>Cutting holes</b> upto 15 x 15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including finishing complete.	each	80		
20	12.4 1.2	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. 110 mm diameter	mtr.	330		
21	12.4 2	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.				
a)	12.4 2.1. 2	110 mm Coupler	each	70		
b)	12.4 2.3. 2	110x110x110 mm Single tee with door	each	22		

c)	12.4 2.5. 2	110 mm bend	each	88		
d)	12.4 2.6. 2	110 mm Shoe	each	22		
22	12.4 3.2	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 coarse sand) and making good the wall etc. complete. 110 mm	Each	330		
23	MR	Providing and fixing to the Inlet mouth of rain water pipe S.S grating 110mm diameter and weighing not less than 440 grams.	Nos	22		
24	M.R.	Providing and fixing <b>PVC</b> soil, waste and vent pipe to IS : 13592 of SWR quality, including all fittings, like EG: Bends, Tees, Elbows, Collars, junction, inspection doors, cowls, offsets, access pipes, jointing with rubber ring/ solvent cement by application of leak proof adhesive like FRP paste including cutting holes in walls and floors and making good, clipping to walls and slabs, trenching, refilling etc. complete Make: Supreme, Finolex, Astral				
a)	MR	50mm dia PVC pipe (6kg / sq.cm)	Mtr.	75.00		

b)	M.R.	63mm dia PVC pipe (6kg / sq.cm)	Mtr.	95.00		
c)	M.R.	75mm dia SWR pipe Cl. A	Mtr.	140.00		
d)	MR	90mm dia SWR pipe Cl. A	Mtr.	40.00		
e)	M.R.	110mm dia SWR pipe Cl. A	Mtr.	260.00		
f)	M.R.	160mm dia SWR pipe Cl. A	Mtr.	100.00		
25	M.R.	Providing and fixing <b>PVC floor trap</b> self cleansing design with or without vent arm complete including cutting and making good the walls and floors.				
a)	MR	110mm dia inlet 110mm dia outlet	Nos	54		

26	M.R	Providing and fixing SS <b>grating</b> of 6mm thick with rim including setting in floor with white cement mortar and making good the floor				
a)		125mm dia	Nos.	54		
27	19.7	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
a)	19.7 .1.1	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) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Nos.	6		



b)	19.7 .3.1	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) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Nos.	2		
28	19.8	Extra for depth for manholes				
a)	19.8 .1.1	Size 90x80 cm: With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	m	2		
b)	19.8 .2.1	Size 120x90 cm: with common burnt clay F.P.S. (non modular) bricks of class designation 7.5	m	4		
29	19.4	Providing and fixing square – mouth <b>PVC. Gully trap</b> grade “A” complete with CI grating brick masonry chamber with water tight tight CI cover with frame of 300 x 300mm 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				
a)	19.4 .2.1	150 x 100mm size P type with common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4		
30	LMR	Supplying and fixing Wash Basin with one pair mounting brackets, EWC & Cistern complete with fittings & seat cover, hinged rail, grab rails and one no of faucet for WB with Rack Bolt, Flexible Tube for pillar Tap & Waste Coupling Designed for people with special needs (Handicapped/ Physically disabled People) P trap, Angle valve, including fittings and brackets, cutting and making good the walls wherever required, including cost & conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer in charge. (Materials should be selected by Engineer in charge). (Make Hindware No. 70002)	Each	3		

31	18.4 8	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	Ltrs	20000		
		<b>Total Amount in Words &amp; in figures</b>				

<b>- Civil - Painting Works</b>						
<b>Sl no</b>	<b>DSR item ref no</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate in words &amp; Figures (In Rs.)</b>	<b>Amount in Rs.</b>
1	13.8 0	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete	sqm	7425		
2	13.4 3.1	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	sqm	7425		
3	13.8 3.2	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying	sqm	7425		

		additional coats wherever required to achieve even shade and colour. Two coats				
4	13.4 7.1	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade: New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	sqm	2275		
		<b>Total Amount in Words &amp; in figures</b>				

Civil - False Ceiling, Tiling & Doors						
Sl no	DSR item ref no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
		<b>I. False ceiling</b>				
1A	12.53	<p>Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture spintone/ cosmos/ Hexa or equivalent of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main 'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to form grid of size 600x600 mm, resting on periphery walls/ partitions on a Perimeter wall angle pre-coated steel of size (24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25 mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calicum silicate ceiling tiles of approved texture (Spintone/ Cosmos/ hexa) in the grid,</p>				

		<p>including, cutting/ making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all Tsections shall be pre-painted with polyster baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge. Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/ opening (cut outs) having area less than 0.30 sqm. The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection &gt; 85%, noncombustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity &lt;0.043 w/m 0 KC</p>	sqm	3645.00		
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1B	12.4 5.2	<p>Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts &amp; bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval,</p>				
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		including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's 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 drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with 12.5 mm thick tapered edge gypsum fire resistant board conforming to IS: 2095- Part I	sqm	455.00		
		<b>II. Tiling/ Granite Works</b>				
2	8.2. 2.1	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Area of slab upto 0.50 sqm	sqm	275.00		

3	8.2. 2.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade. Area of slab over 0.50 sqm	sqm	65.00		
4	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	each	45.00		
5	8.12	Providing and laying flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineerin-Charge: a. Flamed finish granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	sqm	185.00		



6	11.4 1.2	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption 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 coarse sand), including grouting the joints with white cement and matching pigments etc., complete. Size of Tile 600x600 mm	sqm	2500.00		
7	11.4 6.2	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete.	sqm	165.00		
8	PSR 11.3 6C	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacture of approved make in all colours, shades of size 300 x 600 mm in skirting, risers of steps and dados over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm. Including pointing in white cement mixed with pigment of matching shade complete. - size 300x600mm	sqm	130.00		

9	11.40	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigments etc., complete	sqm	155.00		
10	8.10.2	Providing and fixing stone slab with 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 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.	sqm	5.00		
		<b>III. Doors</b>				
11	PSR 9.5.1.1B	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. - Burma Teak wood - 35mm thick shutter	sqm	145.00		
12	PSR 9.14	Extra for providing ISI marked stainless steel butt hinges instead of black enamelled M.S. butt hinges with necessary Screws. (Shutter area to be measured)	sqm	185.00		

13	13.6 8.1	French spirit polishing : Two or more coats on new works including a coat of wood filler	sqm	285.00		
14	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	each	95.00		
15	9.97 .1	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 : 300x10 mm	each	185.00		
16	9.92 .1	Providing and fixing chromium plated brass handles with necessary screws etc. complete: 125 mm	each	95.00		
17	9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	each	50.00		
		<b>Total Amount in Words &amp; in figures</b>				

### Electrical LT works Ground Floor

Sl no	DS R item ref no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
		<b>A. LT Wiring</b>				
1.1	1.10.3	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Each	227		
1.2	1.11	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Each	6		
1.3		Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface medium class PVC conduit as required.				
1.3.1	1.14.1	2 x 1.5 sq.mm + 1 x 1.5 sq.mm earth wire	m	840		

1.3 .2	1.14 .2	2 x 2.5 sq.mm + 1 x 2.5 sq mm earth wire	m	1680		
1.3 .3	1.14 .3	2 x 4.0 sq.mm + 1 x 4.0 sq mm earth wire	m	1020		
1.3 .4	1.14 .4	2 x 6.0 sq. mm + 1 x 6.0 sq. mm earth wire	m	160		
1.4	1.15 .3	Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable and 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable as earth wire in existing surface/recessed PVC conduit including dismantling as required.	m	42		
1.5	1.17	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in existing surface/ recessed steel/ PVC as required				
1.5 .1	1.17 .3	3 x 1.5 sq.mm	m	220		

1.5 .2	1.17 .12	3 x 2.5 sq.mm	m	460		
1.5 .3	1.17 .21	3 x 4.0 sq.mm	m	280		
1.5 .4	1.17 .30	3 x 6.0 sq.mm	m	40		
1.6	1.18 .2	Supplying and drawing 2 pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.	m	760		
1.7	1.19	Supplying and drawing co-axial TV cable RG-6 grade 0.7mm 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.	m	100		
1.8		Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				

1.8 .1	1.21 .1	20 mm	m	850		
1.8 .2	1.21 .2	25 mm	m	920		
1.8 .3	1.21 .3	32 mm	m	100		
1.9	1.22 .12	Supplying and fixing metal box of 200 x 250 x 100 mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.	Each	15		
1.1 0		Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
1.1 0.1	1.24 .1	5/6A switch	Each	40		

1.1 0.2	1.24 .2	2way 5/6A switch	Each	6		
1.1 0.3	1.24 .3	15/16A switch	Each	12		
1.1 0.4	1.24 .4	3 pin 5/6A socket outlet	Each	45		
1.1 0.5	1.24 .5	6 pin 15/16A socket outlet	Each	10		
1.1 0.6	1.24 .6	Telephone socket outlet	Each	20		
1.1 0.7	1.24 .7	TV antenna socket outlet	Each	2		
1.1 1	1.25	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	60		



1.1 2	1.26	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	80		
1.1 3		Supplying and fixing following size / modules, GI box alongwith modular base & cover plate for modular switches in recess / surface etc as required.				
1.1 3.1	1.27 .1	1 or 2 module	Each	35		
1.1 3.2	1.27 .2	3 module	Each	10		
1.1 3.3	1.27 .3	4 module	Each	12		
1.1 3.4	1.27 .4	6 module	Each	8		

1.1 3.5	1.27 .5	8 module	Each	4		
1.1 3.6	1.27 .6	12 module	Each	6		
1.1 4	1.28	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc as required				
1.1 4.1	1.28 .1	1 or 2 module	Each	20		
1.1 4.2	1.28 .2	3 module	Each	10		
1.1 4.3	1.28 .3	4 module	Each	16		

1.1 4.4	1.28 .4	6 module	Each	8		
1.1 4.5	1.28 .5	8 module	Each	8		
1.1 4.6	1.28 .6	12 module	Each	4		
1.1 5	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 etc. as required.	Each	85		
1.1 6	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 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	52		

1.1 7	1.33	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	80		
1.1 8	1.41	Installation, testing and commissioning of prewired, fluorescent fittings/ compact fluorescent fitting/ LED of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connections with 1.5 sq.mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	75		
1.1 9	1.44	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	45		
1.2 0	1.48	Supplying and fixing extra conduit down rod of 20 cm length GI pipe 15 mm dia, heavy guage including painting etc as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored).	Each	90		
1.2 1		Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				

1.2 1.1	1.50 .1	Upto 450 mm sweep	Each	18		
1.2 2	1.53	Supplying and drawing of UTP 4 pair CAT 6 LAN cable in the existing surface / recessed steel / PVC conduit as required.	m	1050		
		<b>B. MCBs, DBs and Cable Trays</b>				
2.1		Providing and fixing Following rating and breaking capacity and pole MCCB existng cubicle panel board including drilling holes in cubicle panel, making connections etc as required.				
	2.2. 1	100 Amp ,16 KA,TP MCCB	Each	4		
2.2		Supplying and fixing following way single pole and neutral, sheet steel, MCB distribution board, 240 volts on surface/ recess complete with tinned copper busbar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/ RCCB/ Isolator).				

2.2 .1	2.3. 7	8 way double door	Each	2		
2.3		Supplying and fixing following way horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts on surface/ recess complete with tinned copper busbar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/RCCB/ Isolator).				
2.3 .1	2.4. 4	4 way double door	Each	1		
2.3 .2	2.4. 5	6 way double door	Each	4		
2.3 .3	2.4. 6	8 way double door	Each	4		

2.4		Supplying and fixing following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar, for mounting MCBs, (but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required).				
2.4 .1	2.5. 4	4 way double door	Each	5		
2.5		Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.5 .1	2.10 .1	Single pole	Each	192		
2.5 .2	2.10 .4	Triple pole	Each	16		

2.5 .3	2.10 .5	Triple pole and neutral	Each	6		
2.6	2.11	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	48		
2.7		Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.7 .1	2.12 .1	40 amps	Each	2		
2.8		Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.8 .1	2.13 .1	40 amps	Each	5		



2.8 .2	2.13 .2	63 amps	Each	4		
2.9		Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.9 .1	2.14 .1	25 amps	Each	1		
2.9 .2	2.14 .2	40 amps	Each	1		
2.1		Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.1 0.1	2.15 .1	25 amps	Each	2		

2.1 0.2	2.15 .2	40 amps	Each	4		
2.1 0.3	2.15 .3	63 amps	Each	4		
2.1 1	2.16	Supply and fixing DP sheet steel enclosure on surface recess along with 16/25/32/ amps 240V "C" curve DP MCB complete with connections, testing and commissioing etc as required.	Each	2		
2.1 2	2.17	Supply and fixing TP sheet steel enclosure on surface recess along with 16/25/32/ amps 415V "C" curve TP MCB complete with connections, testing and commissioing etc as required.	Each	4		
2.1 3	2.18	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, 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.	Each	18		
2.1 4	4.1	Supply and installing following size of perforated GI cable trays with perforations not more than 17.5% in convenient sections, joined with connectors, GI suspenders including nuts and bolts, bends, tees etc as required				

a	4.1. 4	300mm x 50 mm depth x 1.6mm thickness	m	125		
b	4.1. 3	200mm x 50 mm depth x 1.6mm thickness	m	60		
c	4.1. 2	150mm x 50 mm depth x 1.6mm thickness	m	110		
		<b>C. Earthing</b>				
3.1	5.2	Earthing with GI earth pipe 3.0 m long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke as required.	Each	2		
3.2	5.4	Earthing with GI earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke as required.	Each	2		

3.3	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke as required.	Each	2		
3.4	5.7	Supplying and laying 6 SWG GI wire at 0.5m below ground level for conductor earth electrode, including connection / termination with GI thimble etc as required.	m	110		
3.5	5.8	Supply and laying 25mm x 5mm copper strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced 50mm).	m	30		
3.6	5.9	Supply and laying 25mm x 5mm GI strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	m	45		
3.7	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	m	60		

3.8	5.16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	m	120		
3.9	5.17	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing as required.	m	180		
		<b>D. MV Cable laying and Termination</b>				
4.1		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
4.1 .1	7.7. 1	Upto 35 sq. mm (clamped with 1mm thick saddle)	m	260		
4.1 .2	7.7. 2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	20		
4.2		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				

4.2 .1	7.8. 1	Upto 35 sq. mm (clamped with 1mm thick saddle)	m	180		
4.2 .2	7.8. 2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	40		
4.3		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
4.3 .1	9.1. 22	3.5 x 50 sqmm	Each	8		
4.3 .2	9.1. 20	3.5 x 25 sqmm	Each	10		
4.3 .3	9.1. 33	4 x 16 sqmm	Each	6		

4.3 .4	9.1. 32	4 x 10 sqmm	Each	6		
4.3 .5	9.1. 32	4 x 6 sqmm	Each	6		
		<b>E. LT Cables</b>				
5		Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				
5.1 .1		3.5 x 50 sqmm cable	m	60		
5.1 .2		3.5 x 25 sqmm cable	m	135		
5.1 .3		4 x 16 sqmm cable	m	70		

5.1 .4		4 x 10 sqmm cable	m	70		
5.1 .5		4 x 6 sqmm cable	m	165		
		<b>F. Light Fixtures and Fans</b>				
6.1		Supply of 20W LED Batten surface mounting luminare with Decorative box type fitting with high efficiency PMMA diffuser including all necessary accessories complete. (Crompton DMLN1LT8-16/LTT8-20/ LTT8-20 /Philips -BN150W LED 20S-6500-PSE OD GR /Wipro - LL20-221-XXX-60-XX ).	Nos	67		
6.2		Supply and installation of compact Recess mounted 36W LED luminaire with High translucent diffuser gives soft glare free light & complete with electronic driver including all required mounting accessories complete. (Crompton LCTLR36-FO- CDL / Philips -Full glow RC 380B LED-35-6500-PSE OD WH / Wipro -CRCO 10R036HP57)	No	92		



6.3		Supply of 20 W LED tube light Surface mounting industrial type corrosion resistant IP65 luminaire with polycarbonate body, polycarbonate cover, SS toggles etc including all necessary accessories complete. (Crompton LPFC111LT8-16/ Philips/ Wipro)	Nos	8		
6.4		Supply of 1x11W surface mounted luminaire with diffuser and decorative end cap complete with all electrical accessories like electronic ballast, lamp holder, 11W CFL lamp etc. complete with all mounting accessories etc as required. (Wipro WRP 21111/ Crompton/ Philips)	Each	12		
6.5		Supplying and fixing ISI marked PVC angle batten with 15 W LED lamp including all connections as required.	Nos	15		
6.6		Supply of ceiling fan 1200mm sweep, double ball bearing, approved colour and quality with original down rod,suspension shackle,canopy etc with out regulator complete with all accessories as required. (Usha Technix Decorative (5 star rating) / Crompton High Breeze plus (5 star) / Orient Energy star)	Each	45		

6.7		Supply & installation of 400mm sweep,Wall fan powder coated guard suitable for single phase 230 volt, 50Hz AC supply complete with motor, capacitor and all accessories as required complete. (Make: Usha Max Air white or equivalent)	Each	26		
6.8		Supply of ventillating fan 250 mm sweep of approved colour, for single phase 230 volt, 50Hz AC supply complete with motor, capacitor, auto close and open grill cover and all accessories as required complete.	Each	18		
		<b>G. Telephone and Data system</b>				
7.1		Supply and Installation of 20 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		
7.2		Supply and Installation of 10 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		

7.3		Supply & fixing modular type computer outlet (RJ-45) with modular base and cover plate, GI box complete with all accessories, connection etc. complete as required.	Each	42		
7.4		Supply and installation of 9 U wall mounted Network Rack made of steel, powder coated, front glass cover with PDU's, cable manager and cooling fans including all required accessories.	nos	1		
		<b>H. Miscellaneous</b>				
8.1		Supplying and fixing 40A/ 63A TP MCB, 415 Volts, "C" series, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc as required.	Each	20		
8.2		Supplying and fixing FP weather proof cabinets with IP 65 rating on surface/ recess along with 16/25/32amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	6		

8.3		Supplying and fixing following ways surface/ recess mounting vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted. Inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs with 100 amps TP 16kA MCCB as incomer interconnection between incomer MCCB and busbar (but without MCBs/MCCB) as required. (Note vertical type MCB TPDB is normally used where 3 phase outlets are required).				
8.3 .1		4 way	Each	4		
8.3 .2		6 way	Each	3		
8.4		Providing and fixing 10 SWG copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable etc as required.	m	220		

8.5		Wiring for two light point with 1.5sq.mm FRLS PVC insulated copper conductor singlecore cable in surface/ recessed PVC conduct, one modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FRLS PVC insulated copper conductor single core cable etc as required	Point	30		
8.6		Wiring for three light point with 1.5sq.mm FRLS PVC insulated copper conductor singlecore cable in surface/ recessed PVC conduct, One modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FRLS PVC insulated copper conductor single core cable etc as required	Point	18		
-	-					
		<b>Total Amount in Words &amp; in figures</b>				

Electrical LT works 1st Floor						
SI no	DSR item ref no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
		<b>A. LT Wiring</b>				
1.1	1.10.3	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Each	208		
1.2	1.11	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Each	4		
1.3		Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface medium class PVC conduit as required.				

1.3. 1	1.14 .1	2 x 1.5 sq.mm + 1 x 1.5 sq.mm earth wire	m	840		
1.3. 2	1.14 .2	2 x 2.5 sq.mm + 1 x 2.5 sq mm earth wire	m	1760		
1.3. 3	1.14 .3	2 x 4.0 sq.mm + 1 x 4.0 sq mm earth wire	m	1450		
1.3. 4	1.14 .4	2 x 6.0 sq. mm + 1 x 6.0 sq. mm earth wire	m	180		
1.4	1.15 .3	Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable and 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable as earth wire in existing surface/recessed PVC conduit including dismantling as required.	m	42		

1.5	1.17	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in existing surface/ recessed steel/ PVC as required				
1.5.1	1.17.3	3 x 1.5 sq.mm	m	220		
1.5.2	1.17.12	3 x 2.5 sq.mm	m	460		
1.5.3	1.17.21	3 x 4.0 sq.mm	m	280		
1.5.4	1.17.30	3 x 6.0 sq.mm	m	40		
1.6	1.18.2	Supplying and drawing 2 pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.	m	580		



1.7	1.19	Supplying and drawing co-axial TV cable RG-6 grade 0.7mm 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.	m	80		
1.8		Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
1.8.1	1.21.1	20 mm	m	850		
1.8.2	1.21.2	25 mm	m	920		
1.8.3	1.21.3	32 mm	m	100		
1.9	1.22.12	Supplying and fixing metal box of 200 x 250 x 100 mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.	Each	12		

1.1 0		Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
1.1 0.1	1.24 .1	5/6A switch	Each	30		
1.1 0.2	1.24 .2	2way 5/6A switch	Each	6		
1.1 0.3	1.24 .3	15/16A switch	Each	12		
1.1 0.4	1.24 .4	3 pin 5/6A socket outlet	Each	45		
1.1 0.5	1.24 .5	6 pin 15/16A socket outlet	Each	10		

1.1 0.6	1.24 .6	Telephone socket outlet	Each	15		
1.1 0.7	1.24 .7	TV antenna socket outlet	Each	1		
1.1 1	1.25	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	42		
1.1 2	1.26	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	70		
1.1 3		Supplying and fixing following size / modules, GI box alongwith modular base & cover plate for modular switches in recess / surface etc as required.				
1.1 3.1	1.27 .1	1 or 2 module	Each	35		

1.1 3.2	1.27 .2	3 module	Each	10		
1.1 3.3	1.27 .3	4 module	Each	12		
1.1 3.4	1.27 .4	6 module	Each	8		
1.1 3.5	1.27 .5	8 module	Each	4		
1.1 3.6	1.27 .6	12 module	Each	6		
1.1 4	1.28	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc as required				
1.1 4.1	1.28 .1	1 or 2 module	Each	20		

1.1 4.2	1.28 .2	3 module	Each	10		
1.1 4.3	1.28 .3	4 module	Each	16		
1.1 4.4	1.28 .4	6 module	Each	8		
1.1 4.5	1.28 .5	8 module	Each	8		
1.1 4.6	1.28 .6	12 module	Each	4		
1.1 5	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 etc. as required.	Each	52		

1.1 6	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 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	30		
1.1 7	1.33	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	42		
1.1 8	1.41	Installation, testing and commissioning of prewired, fluorescent fittings / compact fluorescent fitting / LED of all types, complete with all accessories and tube etc. directly on ceiling /wall, including connections with 1.5 sq.mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	55		
1.1 9	1.44	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	42		
1.2 0	1.48	Supplying and fixing extra conduit down rod of 20 cm length GI pipe 15 mm dia, heavy guage including painting etc as required.( Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored).	Each	84		

1.2 1		Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
1.2 1.1	1.50 .1	Upto 450 mm sweep	Each	15		
1.2 2	1.53	Supplying and drawing of UTP 4 pair CAT 6 LAN cable in the existing surface / recessed steel / PVC conduit as required.	m	1140		
		<b>B. MCBs, DBs and Cable Trays</b>				
2.1		Providing and fixing Following rating and breaking capacity and pole MCCB exisitng cubicle panel board including drilling holes in cubicle panel, making connections etc as required.				
2.1. 1	2.2. 1	100 Amp ,16 KA,TP MCCB	Each	2		
2.1. 2	2.2. 2	125 Amp ,16 KA,TP MCCB	Each	2		

2.2		Supplying and fixing following way single pole and neutral, sheet steel, MCB distribution board, 240 volts on surface/ recess complete with tinned copper busbar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/ RCCB/ Isolator).				
2.2.1	2.3.7	8 way double door	Each	1		
2.3		Supplying and fixing following way horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts on surface/ recess complete with tinned copper busbar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/ RCCB/ Isolator).				
2.3.1	2.4.4	4 way double door	Each	1		
2.3.2	2.4.5	6 way double door	Each	3		



2.3. 3	2.4. 6	8 way double door	Each	5		
2.4		Supplying and fixing following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar, for mounting MCBs, (but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required).				
2.4. 1	2.5. 4	4 way double door	Each	4		
2.5		Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.5. 1	2.10 .1	Single pole	Each	182		

2.5. 2	2.10 .4	Triple pole	Each	12		
2.5. 3	2.10 .5	Triple pole and neutral	Each	6		
2.6	2.11	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	45		
2.7		Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.7. 1	2.12 .1	40 amps	Each	1		
2.8		Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				

2.8. 1	2.13 .1	40 amps	Each	4		
2.8. 2	2.13 .2	63 amps	Each	5		
2.9		Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.9. 1	2.14 .1	25 amps	Each	1		
2.9. 2	2.14 .2	40 amps	Each	1		

2.1		Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.1 0.1	2.15 .1	25 amps	Each	2		
2.1 0.2	2.15 .2	40 amps	Each	2		
2.1 0.3	2.15 .3	63 amps	Each	5		
2.1 1	2.16	Supply and fixing DP sheet steel enclosure on surface recess along with 16/25/32/ amps 240V "C" curve DP MCB complete with connections, testing and commissioing etc as required.	Each	1		

2.1 2	2.17	Supply and fixing TP sheet steel enclosure on surface recess along with 16/25/32/ amps 415V "C" curve TP MCB complete with connections, testing and commissioing etc as required.	Each	2		
2.1 3	2.18	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, 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.	Each	12		
2.1 4	4.1	Supply and installing following size of perforated GI cable trays with perforations not more than 17.5% in convenient sections, joined with connectors, GI suspenders including nuts and bolts, bends, tees etc as required				
	4.1. 4	300mm x 50 mm depth x 1.6mm thickness	m	110		
	4.1. 3	200mm x 50 mm depth x 1.6mm thickness	m	40		

	4.1. 2	150mm x 50 mm depth x 1.6mm thickness	m	180		
		<b>C. Earthing</b>				
3.1	5.2	Earthing with GI earth pipe 3.0 m long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke as required.	Each	1		
3.2	5.4	Earthing with GI earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke as required.	Each	1		
3.3	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke as required.	Each	1		
3.4	5.7	Supplying and laying 6 SWG GI wire at 0.5m below ground level for conductor earth electrode, including connection / termination with GI thimble etc as required.	m	80		

3.5	5.8	Supply and laying 25mm x 5mm copper strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced 50mm).	m	30		
3.6	5.9	Supply and laying 25mm x 5mm GI strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	m	45		
3.7	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	m	90		
3.8	5.16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	m	120		
3.9	5.17	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing as required.	m	180		

		<b>D. MV Cable laying and Termination</b>				
4.1		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
4.1.1	7.7.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	m	230		
4.1.2	7.7.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	30		
4.2		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
4.2.1	7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	m	110		
4.2.2	7.8.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	60		



4.3		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
4.3.1	9.1.23	3.5 x 70 sqmm	Each	4		
4.3.2	9.1.22	3.5 x 50 sqmm	Each	4		
4.3.3	9.1.20	3.5 x 25 sqmm	Each	8		
4.3.4	9.1.33	4 x 16 sqmm	Each	4		
4.3.5	9.1.32	4 x 10 sqmm	Each	6		

4.3. 6	9.1. 32	4 x 6 sqmm	Each	6		
		<b>E. LT Cables</b>				
5		Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				
5.1. 1		3.5 x 70 sqmm cable	m	30		
5.1. 2		3.5 x 50 sqmm cable	m	60		
5.1. 3		3.5 x 25 sqmm cable	m	125		
5.1. 4		4 x 16 sqmm cable	m	70		

5.1. 5		4 x 10 sqmm cable	m	60		
5.1. 6		4 x 6 sqmm cable	m	85		
		<b>F. Light Fixtures and Fans</b>				
6.1		Supply of 20W LED Batten surface mounting luminare with Decorative box type fitting with high efficiency PMMA diffuser including all necessary accessories complete. (Crompton DMLN1LT8-16/LTT8-20/ LTT8-20 /Philips -BN150W LED 20S-6500-PSE OD GR /Wipro - LL20-221-XXX-60-XX ).	Nos	35		
6.2		Supply and installation of compact Recess mounted 36W LED luminaire with High translucent diffuser gives soft glare free light & complete with electronic driver including all required mounting accessories complete. (Crompton LCTLR36-FO- CDL / Philips - Full glow RC 380B LED-35-6500-PSE OD WH / Wipro -CRCO 10R036HP57)	No	120		
6.3		Supply of 20 W LED tube light Surface mounting industrial type corrosion resistant IP65 luminaire with polycarbonate body, polycarbonate cover, SS toggles etc including all necessary accessories complete. (Crompton LPFC111LT8-16/ Philips/Wipro)	Nos	10		

6.4		Supply of 1x11W surface mounted luminaire with diffuser and decorative end cap complete with all electrical accessories like electronic ballast, lamp holder, 11W CFL lamp etc. complete with all mounting accessories etc as required. (Wipro WRP 21111 /Crompton/Philips)	Each	10		
6.5		Supplying and fixing ISI marked PVC angle battern with 15 W LED lamp including all connections as required.	Nos	12		
6.6		Supply of ceiling fan 1200mm sweep, double ball bearing, approved colour and quality with original down rod,suspension shackle,canopy etc with out regulator complete with all accessories as required. (Usha Technix Decorative (5 star rating) / Crompton High Breeze plus (5 star) / Orient Energy star)	Each	42		
6.7		Supply & installation of 400mm sweep,Wall fan powder coated guard suitable for single phase 230 volt, 50Hz AC supply complete with motor, capacitor and all accessories as required complete. (Make : Usha Max Air white or equivalent)	Each	30		
6.8		Supply of ventillating fan 250 mm sweep of approved colour, for single phase 230 volt, 50Hz AC supply complete with motor, capacitor, auto close and open grill cover and all accessories as required complete.	Each	15		

		<b>G. Telephone and Data system</b>				
7.1		Supply and Installation of 20 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		
7.2		Supply and Installation of 10 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		
7.3		Supply & fixing modular type computer outlet (RJ-45) with modular base and cover plate, GI box complete with all accessories, connection etc. complete as required.	Each	40		
7.4		Supply and installation of 9 U wall mounted Network Rack made of steel, powder coated, front glass cover with PDU's, cable manager and cooling fans including all required accessories.	nos	1		
		<b>H. Miscellaneous</b>				
8.1		Supplying and fixing 40A / 63A TP MCB, 415 Volts, "C" series, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc as required.	Each	16		

8.2		Supplying and fixing FP weather proof cabinets with IP 65 rating on surface/ recess along with 16/25/32amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	5		
8.3		Supplying and fixing following ways surface / recess mounting vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted. Inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs with 100/125 amps TP 16kA MCCB as incomer interconnection between incomer MCCB and busbar (but without MCBs/MCCB) as required. (Note vertical type MCB TPDB is normally used where 3 phase outlets are required).				
8.3.1		4 way	Each	3		
8.3.2		6 way	Each	1		
8.4		Providing and fixing 10 SWG copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring / cable etc as required.	m	130		

8.5		Wiring for two light point with 1.5sq.mm FRLS PVC insulated copper conductor singlecore cable in surface/ recessed PVC conduct, one modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FRLS PVC insulated copper conductor single core cable etc as required	Point	25		
8.6		Wiring for three light point with 1.5sq.mm FRLS PVC insulated copper conductor singlecore cable in surface/ recessed PVC conduct, One modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FRLS PVC insulated copper conductor single core cable etc as required	Point	15		
-	-					
		<b>Total Amount in Words &amp; in figures</b>				

Electrical LT works 2nd Floor						
Sl no	DS R ite m re f no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
		<b>A. LT Wiring</b>				
1.1	1. 10 .3	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Each	162		
1.2	1. 11	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Each	6		
1.3		Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface medium class PVC conduit as required.				
1.3.1	1. 14 .1	2 x 1.5 sq.mm + 1 x 1.5 sq.mm earth wire	m	820		



1.3.2	1. 14 .2	2 x 2.5 sq.mm + 1 x 2.5 sq mm earth wire	m	1670		
1.3.3	1. 14 .3	2 x 4.0 sq.mm + 1 x 4.0 sq mm earth wire	m	790		
1.3.4	1. 14 .4	2 x 6.0 sq. mm + 1 x 6.0 sq. mm earth wire	m	160		
1	1. 18 .2	Supplying and drawing 2 pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.	m	800		
1.5	1. 19	Supplying and drawing co-axial TV cable RG-6 grade 0.7mm 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.	m	100		

1.6		Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
1.6.1	1. 21 .1	20 mm	m	850		
1.6.2	1. 21 .2	25 mm	m	920		
1.6.3	1. 21 .3	32 mm	m	100		
1.7	1. 22 .1 2	Supplying and fixing metal box of 200 x 250 x 100 mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.	Each	8		
1.8		Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				

1.8.1	1. 24 .6	Telephone socket outlet	Each	22		
1.8.2	1. 24 .7	TV antenna socket outlet	Each	2		
1.9	1. 25	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	5		
1.1	1. 26	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	80		
1.11		Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess/ surface etc as required.				
1.11.1	1. 27 .1	1 or 2 module	Each	25		

1.12	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 etc. as required.	Each	115		
1.13	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 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	32		
1.14	1. 33	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	35		
1.15	1. 41	Installation, testing and commissioning of prewired, fluorescent fittings / compact fluorescent fitting / LED of all types, complete with all accessories and tube etc. directly on ceiling /wall, including connections with 1.5 sq.mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	35		
1.16	1. 44	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	5		

1.17	1.48	Supplying and fixing extra conduit down rod of 20 cm length GI pipe 15 mm dia, heavy guage including painting etc as required.( Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored).	Each	26		
1.18		Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
1.18.1	1.50.1	Upto 450 mm sweep	Each	12		
1.19	1.53	Supplying and drawing of UTP 4 pair CAT 6 LAN cable in the existing surface / recessed steel / PVC conduit as required.	m	800		
		<b>B. MCBs, DBs and Cable Trays</b>				
2.1		Providing and fixing Following rating and breaking capacity and pole MCCB exisitng cubicle panel board including drilling holes in cubicle panel, making connections etc as required.				

	2. 2. 1	100 Amp, 16 KA, TP MCCB	Each	6		
2.2		Supplying and fixing following way single pole and neutral, sheet steel, MCB distribution board, 240 volts on surface/ recess complete with tinned copper busbar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/ RCCB/ Isolator).				
2.2.1	2. 3. 6	8 way double door	Each	2		
2.3		Supplying and fixing following way horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts on surface/ recess complete with tinned copper busbar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc as required (But without MCB/ RCCB/ Isolator).				
2.3.1	2. 4. 4	4 way double door	Each	1		

2.3.2	2. 4. 5	6 way double door	Each	3		
2.3.3	2. 4. 6	8 way double door	Each	3		
2.4		Supplying and fixing following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar, for mounting MCBs,(but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required).				
2.4.1	2. 5. 4	4 way double door	Each	2		
2.5		Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				

2.5.1	2. 10 .1	Single pole	Each	142		
2.5.2	2. 10 .4	Triple pole	Each	12		
2.5.3	2. 10 .5	Triple pole and neutral	Each	5		
2.6	2. 11	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	48		
2.7		Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.7.1	2. 12 .1	40 amps	Each	2		



2.8		Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.8.1	2. 13 .1	40 amps	Each	3		
2.8.2	2. 13 .2	63 amps	Each	8		
2.9		Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.9.1	2. 14 .1	25 amps	Each	1		
2.9.2	2. 14 .2	40 amps	Each	1		

2.1		Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.10.1	2.15.1	25 amps	Each	1		
2.10.2	2.15.2	40 amps	Each	3		
2.10.3	2.15.3	63 amps	Each	4		
2.11	2.16	Supply and fixing DP sheet steel enclosure on surface recess along with 16/25/32/ amps 240V "C" curve DP MCB complete with connections, testing and commissioing etc as required.	Each	4		

2.12	2. 17	Supply and fixing TP sheet steel enclosure on surface recess along with 16/25/32/ amps 415V "C" curve TP MCB complete with connections, testing and commissioning etc as required.	Each	4		
2.13	2. 18	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" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	Each	16		
2.14	4. 1. 4	Supply and installing 300mm x 50 mm depth x 1.6mm thick perforated GI cable trays with perforations not more than 17.5% in convenient sections, joined with connectors, GI suspenders including nuts and bolts, bends, tees etc as required	m	110		
		<b>C. Earthing</b>				
3.1	5. 2	Earthing with GI earth pipe 3.0 m long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke as required.	Each	4		

3.2	5.4	Earthing with GI earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke as required.	Each	2		
3.3	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke as required.	Each	2		
3.4	5.7	Supplying and laying 6 SWG GI wire at 0.5m below ground level for conductor earth electrode, including connection/ termination with GI thimble etc as required.	m	90		
3.5	5.8	Supply and laying 25mm x 5mm copper strip at 0.5m below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced 50mm).	m	25		
3.6	5.9	Supply and laying 25mm x 5mm GI strip at 0.5m below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	m	35		

3.7	5. 14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	m	45		
3.8	5. 16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	m	120		
3.9	5. 17	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing as required.	m	220		
		<b>D. MV Cable laying and Termination</b>				
4.1		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
4.1.1	7. 7. 1	Upto 35 sq. mm (clamped with 1mm thick saddle)	m	340		

4.1.2	7. 7. 2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	85		
4.2		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
4.2.1	7. 8. 1	Upto 35 sq. mm (clamped with 1mm thick saddle)	m	195		
4.2.2	7. 8. 2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	75		
4.3		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				

4.3.1	9. 1. 22	3.5 x 50 sqmm	Each	8		
4.3.2	9. 1. 20	3.5 x 25 sqmm	Each	4		
4.3.3	9. 1. 33	4 x 16 sqmm	Each	6		
4.3.4	9. 1. 32	4 x 10 sqmm	Each	14		
4.3.5	9. 1. 32	4 x 6 sqmm	Each	8		
		<b>E. LT Cables</b>				
5		Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				

5.1.1		3.5 x 50 sqmm cable	m	160		
5.1.2		3.5 x 25 sqmm cable	m	45		
5.1.3		4 x 16 sqmm cable	m	110		
5.1.4		4 x 10 sqmm cable	m	355		
5.1.5		4 x 6 sqmm cable	m	195		
		<b>F. Light Fixtures and Fans</b>				
6.1		Supply of 20W LED Batten surface mounting luminaires with Decorative box type fitting with high efficiency PMMA diffuser including all necessary accessories complete. (Crompton DMLN1LT8-16/ LTT8-20/ LTT8-20/ Philips -BN150W LED 20S-6500-PSE OD GR/ Wipro - LL20-221-XXX-60-XX).	Nos	35		



6.2		Supply and installation of compact Recess mounted 36W LED luminaire with High translucent diffuser gives soft glare free light & complete with electronic driver including all required mounting accessories complete. (Crompton LCTLR36-FO- CDL/ Philips - Full glow RC 380B LED-35-6500-PSE OD WH/ Wipro -CRCO 10R036HP57)	No	140		
6.3		Supply of 20 W LED tube light Surface mounting industrial type corrosion resistant IP65 luminaire with polycarbonate body, polycarbonate cover, SS toggles etc including all necessary accessories complete. (Crompton LPFC111LT8-16/ Philips/ Wipro)	Nos	10		
6.4		Supply of 1x11W surface mounted luminaire with diffuser and decorative end cap complete with all electrical accessories like electronic ballast, lamp holder, 11W CFL lamp etc. complete with all mounting accessories etc as required. (Wipro WRP 21111 /Crompton/Philips)	Each	10		
6.5		Supplying and fixing ISI marked PVC angle battren with 15 W LED lamp including all connections as required.	Nos	15		
6.6		Supply of ceiling fan 1200mm sweep, double ball bearing, approved colour and quality with original down rod, suspension shackle, canopy etc with out regulator complete with all accessories as required. (Usha Technix Decorative (5 star rating)/ Crompton High Breeze plus (5 star)/ Orient Energy star)	Each	5		

6.7		Supply & installation of 400mm sweep,Wall fan powder coated guard suitable for single phase 230 volt, 50Hz AC supply complete with motor, capacitor and all accessories as required complete. (Make : Usha Max Air white or equivalent)	Each	56		
6.8		Supply of ventillating fan 250 mm sweep of approved colour, for single phase 230 volt, 50Hz AC supply complete with motor, capacitor, auto close and open grill cover and all accessories as required complete.	Each	12		
		<b>G. Telephone and Data system</b>				
7.1		Supply and Installation of 20 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		
7.2		Supply and Installation of 10 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		
7.3		Supply & fixing modular type computer outlet (RJ-45) with modular base and cover plate, GI box complete with all accessories, connection etc. complete as required.	Each	30		
7.4		Supply and installation of 9 U wall mounted Network Rack made of steel, powder coated, front glass cover with PDU's, cable manager and cooling fans including all required accessories.	nos	1		

		<b>H. Miscellaneous</b>				
8.1		Supplying and fixing 40A/ 63A TP MCB, 415 Volts, "C" series, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc as required.	Each	6		
8.2		Supplying and fixing FP weather proof cabinets with IP 65 rating on surface/ recess along with 16/25/32amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	10		
8.3		Supplying and fixing following ways surface/ recess mounting vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted. Inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs with 100 amps TP 16kA MCCB as incomer interconnection between incomer MCCB and busbar (but without MCBs/ MCCB) as required. (Note vertical type MCB TPDB is normally used where 3 phase outlets are required).				
8.3.1		4 way	Each	4		

8.3.2		6 way	Each	3		
8.4		Providing and fixing 10 SWG copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring / cable etc as required.	m	180		
8.5		Wiring for two light point with 1.5sq.mm FRLS PVC insulated copper conductor singlecore cable in surface/ recessed PVC conduct, one modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FRLS PVC insulated copper conductor single core cable etc as required	Point	25		
8.6		Wiring for three light point with 1.5sq.mm FRLS PVC insulated copper conductor singlecore cable in surface/ recessed PVC conduct, One modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FRLS PVC insulated copper conductor single core cable etc as required	Point	18		
-	-					
		<b>Total Amount in Words &amp; in figures</b>				

- Civil works - Water Proofing Works						
Sl no	DS R ite m ref no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
1	MR	<p>Providing and applying terrace water proofing (BASF) (1) Coving: Providing and laying an angular fillet of 75mm X 75mm at the junction of floor slab and wall using MasterEmaco S 348.</p> <p>(2) surface treatment: Cleaning, wire brushing and making surface free from dirt, loose particles laitance etc. Supplying and Sealing all visible cracks with Elastyseal Acrylic Sealant. Supplying and Applying one self priming coat of Masterseal 551 diluted with water in the ratio 1:1 and thereafter followed with 2 coats of Masterseal 551 an elastomeric, cementitious water proof coating. To broad cast fine sand during application of final coat of Masterseal 551 and allow curing for 3 days. (3) Protective screed: Providing and laying protective screed over chemical treatment using CM 1:4 to minimum 15mm thickness duly admixed with MasterPel 707. All the dosages must be as per manufacturer's specifications and thereby the approval of engineer incharge. Rate includes all materials, lead and lift, labour, tools and tackles, curing etc</p>	sqm	1345.00		

2	12.55	Providing and fixing Heat Resistant Terrace Tiles (300 mm x 300 mm x 20 mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner.	sqm	1345.00		
3	MR	Providing and appying Treatment for expansion joint (Horizontal/ Vertical) (BASF) (a) Substrate preparation Cleaning and wire brushing the expansion joint, racking out the existing sealant, backing material if any from the joints. Preparing the damages edges with bonding coat of Master Brace 1414 and Master Emaco S348, fibre reinforced structural repair mortar and curing the same of 72 hours. (b) Treatment : Clean the surface by making the surface free from oil,grease, loose particles etc, filling the joint with backup material like expanded polyethylene foam/sheet and backer rod and leaving the gap of 25mm from the top. Sealing the joint of 25 mm W x 15 mm D over Backer Rod using Polyurethane Sealant MasterFlex 472 leaving a loop of 25mm gap at the top for MasterSeal 930/or equivalent and allowing it to air cure for 72 hrs. Applying MasterBrace 2200 or equivalent after mixing component A and B to make it a homogenous mix, over both sides of the joints Upto 30 mm each				

		side with The thickness of 1 – 2 mm using trowel or tooth comb. Placing and fixing the MasterSeal 930 of 100 mm in width and 2 mm thick as per schematic drawing over MasterBrace 2200 within the open time and pressing it hard so that the adhesive is squeezed out from both sides.				
		Applying MasterBrace 2200 over the edges MasterSeal 930 again in the same Way. All the dosages must be as per manufacturer's specifications and thereby the approval of engineer incharge. Rate includes all materials, lead and lift, labour, tools and tackles, curing etc	m	210.00		
4	MR	Providing and applying the BASF MasterEmaco SBR 2 material as per manufacturer's specification on the sunken areas of toilet. (1) Coving: Providing and laying an angular fillet of 75mm X 75mm at the junction of floor slab and wall using MasterEmaco S 348. The rate includes preparation of surface (surface treatment: Cleaning, wire brushing and making surface free from dirt, loose particles laitance etc. Supplying and Sealing all visible cracks with Elastyseal Acrylic Sealant), treatment, sealing of all joints, corners, junctions of pipes and masonry, curing etc. The waterproofing coating shall be protected with a protective mortar. Protective mortar shall be done with liquid integral water proofing compound. The coated surface should be protected with 1:3 CM (minimum 15mm thick) admixed with lignosulphonate polymer MasterPel 777 of BASF make, water proofing cum plasticizing liquid integral	sqm	190.00		

		waterproofer at a dosage of 100 ml per 50 kg of cement and shall comply with IS: 2645-2003. complete in all respects to the satisfaction of the engineer in charge. All the dosages must be as per manufacturer's specifications and there by the approval of engineer in charge. Rate includes all materials, lead and lift, labour, tools and tackles, curing etc				
5	4.2 .5	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor,etc., up to floor five level, excluding the cost of centering, shuttering and finishing: 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	160.00		
		<b>Total Amount in Words &amp; in figures</b>				



Construction of Security Cabin, Gate, Canopy, Road Works for GNM Building						
Sl no	DSR ite m ref no	Item Description	Unit	Quantity	Rate in words& Figures (In Rs.)	Amount in Rs.
		<b>I. Earth Work</b>				
1	2.6. 1	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. 2.6.1 All kinds of soil	cum	55.00		
2	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	25.00		
		<b>II. PCC</b>				
3	4.1. 3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	13.00		

4	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth	sqm	30.00		
		<b>III. RR Masonry</b>				
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	10.00		
		<b>IV. RCC</b>				
6	5.33.1	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site 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. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately). 5.33.1 All works upto plinth level	cum	30.00		

7	5.33 .2	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site 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. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately). All works above plinth level upto floor V level	cum	20.00		
8	5.34 .1	Extra for providing richer mixes at all floor levels. Note:- Excess/ less cement over the specified cement content used is payable/ recoverable separately. Providing M-30 grade concrete instead of M-25 grade BMC/ RMC. (Note: Cement content considered in M-30 is @ 340 kg/ cum)	cum	50.00		
9	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quin tal	25		

		<b>V. Shuttering</b>				
10	5.9.6	Centering and shuttering including strutting, propping etc. and removal of form for: Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	40		
11	5.9.3	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform	sqm	35.00		
12	5.9.5	Centering and shuttering including strutting, propping etc. and removal of form for: Lintels, beams, plinth beams, girders, bressumers and cantilever	sqm	45		
13	5.9.19	Centering and shuttering including strutting, propping etc. and removal of form for: Weather shade, Chajjas, corbels etc., including edges	sqm	15		
		<b>VI. Reinforcement</b>				
14	5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete all levels Thermo-Mechanically Treated bars	kg	6000.00		

		<b>VII. Anti Termite Treatment</b>				
15	2.35 .3.1	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 Coarse sand) to match the existing floor: With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration	sqm	35.00		
		<b>VIII. Brick Work</b>				
16	6.4. 1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5 in superstructure above plinth level up to floor V level in all shapes and sizes in : 6.4.1 Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	70.00		
		<b>IX. Plastering</b>				
17	13.8 .2	15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix : 1:4 (1 cement : 4 fine sand)	sqm	120.00		
18	13.7 .2	Providing and applying 12 mm cement plaster finished with a floating coat of neat cement of mix: 1:4 (1 cement : 4 fine sand)	sqm	120.00		

19	13.1 6.1	Providing and applying 6 mm cement plaster of mix: 1:3 (1 cement : 3 fine sand)	sqm	35.00		
		<b>X. Doors and Windows</b>				
20	PSR 9.1. 1B	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position - Burma Teak wood	cum	0.50		
21	PSR 9.5. 1.1B	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. - Burma Teak wood - 35mm thick shutter	sqm	5.00		
22	PSR 9.14	Extra for providing ISI marked stainless steel built hinges instead of black enamelled M.S. butt hinges with necessary Screws. (Shutter area to be measured)	sqm	10.00		
23	13.6 8.1	French spirit polishing: Two or more coats on new works including a coat of wood filler	sqm	5.00		

24	9.53	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand: 6 graded stone aggregate 20mm nominal size).	each	10.00		
25	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	each	5.00		
26	9.97 .1	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 : 300x10 mm	each	5.00		
27	9.92 .1	Providing and fixing chromium plated brass handles with necessary screws etc. complete: 125 mm	each	5.00		

28	21.1 .1.2	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling to be paid for separately) : Powder coated aluminium (minimum thickness of powder coating 50 micron) (HINDALCO/ JINDAL)	kg	190.00		
29	21.1 .2.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber/ neoprene gasket required (all fittings included) Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	130.00		



30	21.3 .2	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.5 mm thickness	sqm	20.00		
31	21.1 6.2	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineerin-charge Powder coated minimum thickness 50 micron aluminium	each	15.00		
32	9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete	each	5.00		
33	21.8 .1	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. Upto 5mm depth and 5 mm width (DOW CORNING)	m	45.00		

		<b>XI. Painting</b>				
34	13.8 0	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete	sqm	155.00		
35	13.4 3.1	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	sqm	155.00		
36	13.8 3.2	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. Two coats	sqm	155.00		
37	13.4 7.1	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade : 13.47.1 New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	sqm	120.00		

38	13.5 2.1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	sqm	100.00		
		<b>XII. Flooring/ Granite Works</b>				
39	11.2 6.1	Kota 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 coarse sand) : 25 mm thick	sqm	35.00		
40	11.2 7	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (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	sqm	10.00		
41	8.2. 2.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss	sqm	15.00		

		finish etc. complete at all levels. Granite of any colour and shade. Area of slab over 0.50 sqm				
		<b>XIII. Road Works</b>				
42	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres	sqm	2695.00		
43	16.7 8.1	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	cum	640.00		
44	16.6 8	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	sqm	2695.00		

45	16.6 9	Providing and laying at or near ground level factory made kerb stone of M25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	cum	35.00		
		<b>XIV. Structural Steel Work</b>				
46	10.1 6.3	Steel work in built up tubular ( round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete 10.16.3 Electric resistance or induction butt welded tubes	kg	8190.00		

47	12.5 0	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa 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 during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto 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.	sqm	635		
48	12.5 1.1.	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa 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 complete : Ridges plain (500 - 600mm)	m	80		

49	12.5 1.6	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa 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 complete : Gutter .(600 mm over all girth)	m	160		
		<b>XV. ACP</b>				
50	26.7	Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building, for all heights and all levels etc. including: a) Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. b) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.				

		<p>c) The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material &amp; labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium item.s The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.</p>	sqm	200.00		
		<b>Total Amount in Words &amp; in figures</b>				



## GNM Common Facility Works

### Civil works

SI no	DSR item ref no	Item Description	Unit	Quantity	Rate in words & Figures (In Rs.)	Amount in Rs.
		<b>I. Earth Works</b>				
1	2.6.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. 2.6.1 All kinds of soil	cum	115.00		
2	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	135.00		
		<b>II. PCC</b>				
3	4.1.3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	55.00		

4	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth	sqm	100.00		
		<b>III. RR Masonry</b>				
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	90.00		
		<b>IV. RCC</b>				
6	5.33.2	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site 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. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately). All works above plinth level upto floor V level	cum	55.00		

7	5.34.1	Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable /recoverable separately. Providing M-30 grade concrete instead of M-25 grade BMC / RMC. (Note : Cement content considered in M-30 is @ 340 kg/cum)	cum	55.00		
8	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quin tal	25		
		<b>V. Shuttering</b>				
9	5.9.3	Centering and shuttering including strutting, propping etc. and removal of form for : Suspended floors, roofs, landings, balconies and access platform	sqm	30.00		
10	5.9.5	Centering and shuttering including strutting, propping etc. and removal of form for : Lintels, beams, plinth beams, girders, bressumers and cantilever	sqm	55		
11	5.9.19	Centering and shuttering including strutting, propping etc. and removal of form for : Weather shade, Chajjas, corbels etc., including edges	sqm	25		

12	5.9.6	Centering and shuttering including strutting, propping etc. and removal of form for : Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	85		
		<b>VI. Reinforcement</b>				
13	5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete <b>all level</b> . Thermo-Mechanically Treated bars	kg	6930.00		
		<b>VII. Anti termite treatment</b>				
14	2.35.3 .1	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 Coarse sand) to match the existing floor : With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	sqm	210.00		
		<b>VIII. Brick Work</b>				
15	6.4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5 in superstructure above plinth level up to floor V level in all shapes and sizes in : 6.4.1 Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	100.00		

		<b>IX. Plastering</b>				
16	13.8.2	15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	sqm	415.00		
17	13.7.2	Providing and applying 12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	sqm	385.00		
18	13.16.1	Providing and applying 6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand)	sqm	30.00		
		<b>X. Structural Steel Works</b>				
19	10.16.3	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete 10.16.3 Electric resistance or induction butt welded tubes	kg	5015.00		

20	12.50	<p>Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa 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 during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto 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.</p>	sqm	270		
21	12.51.1.	<p>Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa 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 complete : Ridges plain (500 - 600mm) (TATABLUESCOPE/ LLOYD)</p>	m	45		

22	12.51.6	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa 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 complete : Gutter .(600 mm over all girth)	m	90		
		<b>XI. Doors and Windows</b>				
23	PSR 9.1.1B	Providing wood work in frames of doors, windows,clerestory windows and other frames, wrought framed and fixed in position - Burma Teak wood	cum	0.30		
24	PSR 9.5.1.1B	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. - Burma Teak wood - 35mm thick shutter	sqm	15.00		
25	PSR 9.14	Extra for providing ISI marked stainless steel buitt hinges instead of black enamelled M.S. butt hinges with necessary Screws. (Shutter area to be measured)	sqm	25.00		

26	13.68.1	French spirit polishing : Two or more coats on new works including a coat of wood filler	sqm	25.00		
27	9.53	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand: 6 graded stone aggregate 20mm nominal size).	each	25.00		
28	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	each	15.00		
29	9.97.1	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 : 300x10 mm	each	25.00		



30	9.92.1	Providing and fixing chromium plated brass handles with necessary screws etc. complete: 125 mm	each	15.00		
31	9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	each	10.00		
32	21.1.1.2	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling to be paid for separately) : Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	475.00		

33	21.1.2 .2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (all fittings included) Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	315.00		
34	21.3.2	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge.(Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.5 mm thickness	sqm	35.00		
35	21.16. 2	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in-charge Powder coated minimum thickness 50 micron aluminium	each	35.00		
36	9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete	each	15.00		

37	21.8.1	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. Upto 5mm depth and 5 mm width	m	95.00		
38 A	10.6.1	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 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 part 1 and M.S. top cover of required thickness for rolling shutters. 10.6.1 80x1.25 mm M.S. laths with 1.25 mm thick top cover	sqm	30.00		
38 B	10.9	Extra for providing grided 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	10		

39	10.7	Providing and fixing ball bearing for rolling shutters.	each	10.00		
40	21.4.1	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge. 21.4.1 With stainless steel cover plate minimum 1.25 mm thickness	each	3.00		
41	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (including door lock of approved make and type)	sqm	5.00		

		<b>XII. Painting</b>				
42	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete	sqm	440.00		
43	13.43. 1	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	sqm	440.00		
44	13.83. 2	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. Two coats	sqm	440.00		
45	13.47. 1	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade : 13.47.1 New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	sqm	440.00		
46	13.52. 1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	sqm	75.00		

		<b>XIII. Flooring/ Granite Works</b>				
47	11.26. 1	Kota 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 coarse sand) : 25 mm thick	sqm	210.00		
48	11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (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	sqm	30.00		
49	8.2.2. 2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade. Area of slab over 0.50 sqm	sqm	10.00		

50	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	each	5.00		
		<b>Total Amount in Words &amp; in figures</b>				

Electrical HT works						
SI no	DSR item ref no	Item Description	Unit	Quantity	Rate in words& Figures (In Rs.)	Amount in Rs.
1		Supply, fabrication, erection, testing & commissioning of 11 KV <b>DP structure</b> using required size of ISMB for poles and required size cross channel with ISMC for supporting structure for 11kV components, 11 KV pin, disc and stay insulators, supports, jumpers/ interconnecting conductors with 0'SWG Cu, 25x3mm braided copper earthing for non current moving part like handle of AB switch etc. The item includes erection of DP structure on suitable concrete foundation and painting with one coat of metal primer after fabrication and two coats of aluminium enamel paint after erection complete and consists of the following. The cost of the civil foundation shall be measured along with civil items. The design of the foundation shall be got approved from Engineer-in-charge before execution.				
		11KV,400A single brake,TP, gang operated AB switch with operating handle & locking mechanism - 1 set				
		11 KV Lighting Arrestors - 1 set				
		11 KV Drop out fuses - 1 set				
		The consumers DP structure shall be braced with state electricity board DP structure if required & interconnection shall be done with 0 SWG Cu wire.				



		The DP structure shall be with all necessary accessories for connecting 11kV cable as per particular specification & drawing. The 11kV DP structure shall be done as per the requirement of statutory authority.	Job	2		
2		Supply, installation, testing & commissioning of 11kV outdoor type CT/PT unit with CT rating suitable as per Puducherry Electricity Department , class 0.5, 15VA CT & 11kV/110V class 0.5 100VA PT to be mounted on to the DP structure. The item also include supply & installation of TOD meter in a suitable weather proof sheet steel enclosure (14SWG) in 600mm plinth including Test terminal block, control fuses & 10C 2.5sqmm armoured copper cable between CT/PT unit & TOD meter. The work shall be as per state electricity board norms. The cost of the civil foundation shall be measured along with civil items. The design of the foundation shall be got approved from Engineer-in-charge before execution.	Job	1		

3		<p>Supply, fabricating &amp; erection of 1.8 mtr high chain link fencing (50mm cross link) over 600 mm high brick masonry, using 4 mm thick GI chain link with a framework of 50x50x6 mm MS angle between vertical posts of ISMC 75x50mm at 2400 mm interval, which are fixed to the concrete footing (1:2:4) of size 450x450x200 mm (above GL) with adequate footing depth, between the brick / block masonry. Brick / block masonry (345 mm thick) and 200 mm from ground level for foundation &amp; plinth in cement mortar (1:6). The brick masonry is to be pointed using cement mortar 1:3 to have a flush finish. Earth strip shall be connected to the fencing for its earthing. The MS framework for chain link fencing is finished using zinc chromate primer &amp; 2 coats of synthetic enamel paint. 1.5 mtr wide gate shall be provided with suitable locking arrangements. The rate shall be inclusive of all materials, labour, lead, lift, etc including excavation works and fabrication and assembly works including all nuts, bolts &amp; other miscellaneous items, etc. complete</p>	m	30		
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4		<p>Supply, erection, testing and commissioning of <b>400 kVA indoor type unitised substation (USS)</b>, 11 kV / 433 V, 3 phase, Vector DYn-11, Copper wound, resin cast transformer with off circuit tap changer from +5 % to -10 % in steps of 2.5 %. The HV side shall be connected to HTSFU and LV cable box suitable for connecting 3 runs 3.5C x 300sqmm XLPE Aluminium cable. The transformer shall be provided with O/C and E/F protection on HV side, winding temperature indicator and all other standard fittings and accessories conforming to IS 11171/85 and IS2026/1975. The low set earth fault relay with neutral CT 120/5A, class 5P10, 10VA shall be provided.</p>				
		<p>All the equipments shall be mounted on a common galvanised GI base with fabricated enclosure painted with outdoor type rust proof paint / powder coated. The wall of the enclosure shall be detachable type with louvers for natural cooling The busbars inside the cubicle shall be sleeved using heat shrinkable sleeves.</p>				
		<p>The HV side of the USS shall be provided with 11kV, 18.4kA, 630A, load break switch with earth switch. The HT HRC fuse, seal off bushing, 230V shunt trip coil, space heater with thermostat, 400A Copper busbar with support insulator shall be provided.</p>				

		Space for the TOD meter with sealing facility as per Puducherry Electricity Department shall be provided. (Make: Kriloskar / Megawin / Intrans / Crompton Greaves)	Eac h	1		
5		Supply and installation of suitable CT ratio /5A, 15VA, class 0.5 as per Puducherry Electricity Department. 11kV/ 110V, 100VA, class 0.5 fixed type PT, TOD meter in the space provided in USS.	Job	1		
6		Supply, Installation, Testing and Commissioning of <b>400 kVA</b> , silent type, water cooled, radiator type, four stroke, electric start D.G Set with acoustic enclosure and standard control panel for hoysing necessary engine controls. The engine shall be capable of taking 10% overload for one hour after 12 hours of continuous operation. The DG shall be suitable for AMF operation. The alternator shall be brushless, self excited, self regulated, SPD enclosure, class F/H insulation, suitable for continuous operation at 1500 rpm, generating 415 V +/- 5% at 0.8 p.f, 50Hz, 0.85 load factor, 3 phase, 4 wire system generally conforming to BS: 2613 & IS: 4722. The neutral of the DG set shall be provided with low set earth fault relay using 120/5A 5P10 10VA CT in the neutral earthing conductor . The DG set shall be provided with Engine control panel for mouting Engine control unit, control switches etc.				

		The control panel shall be provided with all engine protection equipments, indications etc The DG set shall be suitable for AMF operation with DG set and include all necessary control cabling from DG set to AMF panel and Main LT panel for AMF and load sharing operation.				
		Both Engine and Alternator shall be mounted on common channel iron base frame, and with standard accessories such as antivibration pad, lead acid batteries (as specified by engine manufacturer) and engine driven battery charger along with leads, battery stand, fuel piping from fuel tank to Engine, electronic governor, Residential silencer, suitable size cable termination box etc as required. Rate shall be inclusive of all lift, lead charges etc. The work should be as per Electrical Inspectorate / Pollution control board norms.	Each	1		
7		Supply & installation of exhaust gas piping of suitable diameter for 400 kVA DG set as per manufacturer's standard welded black MS, B class pipe conforming to IS:3589 cut to required lengths and installed with necessary bends, supports and clamps, anti-vibration mountings, insulation of exhaust system with mineral wool / Rockwool, 50mm thick wire mesh & aluminum cladding etc as required.	Rm	20		

8		Supply, Installation, Testing & Commissioning of cubicle type <b>Main MV panel</b> board, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
		<b>Incomer</b>				
		1 no. 630A, 35kA, TP+NL MCCB having isolation duty with microprocessor based release for adjustable O/L, SC & E/F protection.				
		<b>Busbar</b>				
		1 Set of 630 Amp TPN busbars of high conductivity electrolytic quality Aluminium conductor.				
		<b>Instruments</b>				
		1 No 3 phase Digital Multi function meter to read V, A, F, kWh with Acc class 1.				
		1 Set of phase indicating lamps, LED type, RYB.				
		1 Set of 2A 10kA C curve SP control MCB				
		1 Set of 630/5A, Class 1.0, 10VA, Cast Resin CT for metering.				
		1 Set of 630/5A, Class 1.0, 10VA, Cast Resin CT for APFC relay.				
		3 nos Digital Type Ammeter (0-600A), Acc class 1				
		<b>Outgoing</b>				
		1 nos. 315A, 35kA, TP+NL MCCB with thermal magnetic release for adjustable O/L & SC protection.				

		2 no. 250A, 35kA, TP+NL MCCB with thermal magnetic release for adjustable O/L & SC protection.				
		3 nos. 200A, 35kA, TP+NL MCCB with thermal magnetic release for adjustable O/L & SC protection.	Eac h	1		
9		Supply, Installation, Testing & Commissioning of cubicle type AMF panel board, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
		<b>Incomer</b>				
		2 nos. 630 A, 35kA, FP MCCB having isolation duty with E/F release, adjustable thermal magnetic release for O/L & SC protection.				
		2 nos. 630 A, FP, AC3 duty Power Contactor.				
		Electrical & mechanical interlock between the incomers.				
		<b>Busbar</b>				
		1 Set of 630 Amp TPN busbars of high conductivity electrolytic quality Aluminium alloy.				
		<b>Instruments</b>				
		2 No 3 phase Digital Multi function meter to read V, A, F, kWh with Acc class 1.				

		2 Set of phase indicating lamps, LED type, RYB				
		1 Set of indicating lamps for Main On, DG On, Load on DG etc.				
		2 Set of 2A 10kA C curve SP control MCB				
		2 Set of 630/5A, Class 1.0, 10VA, Cast Resin CT for metering.				
		1 set Low set earth fault relay connected with the neutral CT of DG set.				
		1 set microprocessor based AMF control relay with all protective features for the starting and stopping of the DG set automatically.				
		1 set Auto / manual, test, off selector switch.				
		1 set SMPS based battery charger with inbuilt auto/manual current & float/boost facility adjustment with DC Volt meter & Ammeter(separate)				
		Required Danger boards, signages, lettering etc.				
		The panel shall be with all required accessories & control wiring for AMF operation.				
		<b>Outgoing</b>				
		1 nos.630 A, 35kA, FP MCCB having isolation duty with E/F release, adjustable thermal magnetic release for O/L & SC protection.	Eac h	1		



10		Supply, Installation, Testing & Commissioning of <b>100kVAR APFC panel</b> , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
		<b>Incomer</b>				
		1 no. 200A, 25kA, TP+NL MCCB with thermal magnetic release for adjustable O/L & SC protection.				
		<b>Busbar</b>				
		1 Set of 200 Amp TPN busbars of high conductivity electrolytic quality Aluminium conductor.				
		<b>Instruments</b>				
		1 No 3 phase Digital Multi function meter to read V, A, F with Acc class 1.				
		1 Set of phase indicating lamps, LED type, RYB.				
		1 Set of 2A 10kA C curve SP control MCB				
		1 Set of 200/5A, Class 1.0, 10VA, Cast Resin CT for metering.				
		1 no. 6 stage microprocessor based APFC relay				
		6 set On, Off push button				
		6 set On, Off LED type indication lamp				
		1 set Auto / manual selector switch.				
		<b>Outgoing</b>				
		2 No 63A, TPN, C curve MCB.				
		2 No 40A, TPN, C curve MCB.				

		2 Nos 32A, TPN, C curve MCB.				
		2 Nos. 25 kVAR MPP heavy duty capacitor with capacitor duty contactor.				
		2 Nos. 15 kVAR MPP heavy duty capacitor with capacitor duty contactor.				
		1 Nos. 10 kVAR MPP heavy duty capacitor with capacitor duty contactor.				
		1 No. 10 kVAR MPP heavy duty capacitor directly connected.				
		The panel shall be provided with required ventillating louvers and panel mounted cooling fan for the capacitor bank chamber with thermostat and control switch.	Eac h	1		
11		Supply, Installation, Testing & Commissioning of Sub panel-1(1st floor), cubicle type, made out of min 2mm thick CRCA sheet (load bearing), totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket / PU etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
		<b>Incomer</b>				
		315A TPN 25kA MCCB with thermal magnetic release with adjustable OL, SC protection - 1 nos.				
		<b>Busbar</b>				

		1 Set of 315 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
		<b>Instruments</b>				
		2A, C curve SP MCB - 3 nos.				
		RYB indication lamp, LED type - 3 nos.				
		1 No 3 phase Digital Multi function meter to read V, A, F, kW, kWh, Acc class 1.				
		315/5A 5VA class 1 resin cast CT - 1 set				
		<b>Outgoing.</b>				
		125A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 2 nos.				
		100A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 3 nos.				
		63A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 2 nos.	Eac h	1		
12		Supply, Installation, Testing & Commissioning of Sub panel- 2(Ground floor), cubicle type, made out of min 2mm thick CRCA sheet (load bearing), totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene / PU gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				

		<b>Incomer</b>				
		250A TPN 25kA MCCB with thermal magnetic release with adjustable OL, SC protection - 1 nos.				
		<b>Busbar</b>				
		1 Set of 250 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
		<b>Instruments</b>				
		2A, C curve SP MCB - 3 nos.				
		RYB indication lamp, LED type - 3 nos.				
		1 No 3 phase Digital Multi function meter to read V, A, F, kW, kWh, Acc class 1.				
		250/5A 5VA class 1 resin cast CT - 1 set				
		<b>Outgoing.</b>				
		100A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 4 nos.				
		63A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 2 nos.	Eac h	1		
13		Supply, Installation, Testing & Commissioning of Sub panel-3(2nd floor), cubicle type, made out of min 2mm thick CRCA sheet (load bearing), totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket / PU etc. The panel shall				

		include supply & installation of following switchgears, metering instruments and accessories as per specification.				
		<b>Incomer</b>				
		200A TPN 25kA MCCB with thermal magnetic release with adjustable OL, SC protection - 1 nos.				
		<b>Busbar</b>				
		1 Set of 200 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
		<b>Instruments</b>				
		2A, C curve SP MCB - 3 Nos				
		RYB indication lamp, LED type - 3 Nos				
		1 Nos 3 phase Digital Multi function meter to read V, A, F				
		200/5A 10VA class 1 resin cast CT - 1 set				
		<b>Outgoing.</b>				
		100A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 3 nos.				
		63A, TPN, 16kA MCCB, thermal magnetic having adjustable O/L, SC protection - 3 nos.	Eac h	1		
14		Supply of 11kV, 3Cx150sqmm (E) grade XLPE insulated PVC sheathed compact circular armoured aluminium conductor HT power cable, insulation screened with extruded semi conducting compound in combination with copper tape suitable for 11kV earthed system confirming to relevant standard.	m	60		

15		Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				
15.1		3.5 x 300 sqmm cable	m	300		
15.2		3.5 x 240 sqmm cable	m	50		
15.3		3.5 x 185 sqmm cable	m	30		
15.4		3.5 C x 150 sq.mm	m	70		
15.5		3.5 x 120 sqmm cable	m	30		

15. 6		3.5 C x 95 sq.mm	m	65		
16		Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.	m	14		
17		Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969.	m	8		
18		Supply, fabrication and fixing 3 nos MS Fire buckets on suitable fabricated MS angle iron stand with hook, painting with red paint & filled with dry sand as required with all required accessories.	Set	1		
19		Supply and providing 15" long rubber hand gloves 15kV.	Pair	2		

20		Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.	Each	2		
21		Supply and providing Electrical main single line Diagram duly framed and placed in a conspicuous location for clear vision.	Each	1		
22		Preparation of electrical drawing, submission of drawings to Electrical inspectorate/ EB and obtaining approval, arranging inspection for entire installation and other utilities, obtaining road cutting permission obtaining sanction orders for the energisation of the installation complete. Including all incidental expenses except the fees payable to the statutory authorities in the name of client.	Job	1		
		<b>Cable Tray</b>				
23.1	4.1	Supply and installing following size of perforated GI cable trays with perforations not more than 17.5% in convenient sections, jointed with connectors, suspended from the ceiling with GI suspenders / fixed to walls with suitable GI clamps, including bolts and nuts, bends, reducers, Tees, cross members etc as required.				



23.1.1	4.1.3	200 mm width x 50 mm depth x 1.6 mm thickness	m	120		
23.1.2	4.1.4	300 mm width x 50 mm depth x 1.6 mm thickness	m	110		
		<b>Earthing</b>				
24.1	5.4	Earthing with GI earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Eac h	6		
24.2	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Set	6		
24.3	5.7	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	m	290		

24.4	5.8	Supply and laying 25mm x 5mm copper strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced 50mm).	m	160		
24.5	5.9	Supply and laying 25mm x 5mm GI strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	m	290		
24.6	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	m	90		
24.7	5.15	Providing and fixing 25 mm X 5 mm GI strip on surface or in recess for connections etc. as required.	m	70		
24.8	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring / cable as required.	m	260		

24. 9	5.19	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring / cable as required.	m	130		
		<b>MV Cable laying and Termination</b>				
25. 1		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
25. 1.1	7.1.3	Above 95 sq. mm and upto 185 sq. mm	m	30		
25. 1.2	7.1.4	Above 185 sq. mm and upto 400 sq. mm	m	90		
25. 2	7.2	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering but excluding and refilling the trench etc as required.				

25. 2.1	7.2.3	Above 95 sq. mm and upto 185 sq. mm	m	10		
25. 2.2	7.2.4	Above 185 sq. mm and upto 400 sq. mm	m	180		
25. 3		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
25. 3.1	7.5.3	Above 95 sq. mm and upto 185 sq. mm	m	15		
25. 3.2	7.5.4	Above 185 sq. mm and upto 400 sq. mm	m	30		
25. 4		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				

25.4.1	7.6.3	Above 95 sq. mm and upto 185 sq. mm	m	25		
25.4.2	7.6.4	Above 185 sq. mm and upto 400 sq. mm	m	60		
25.5	7.7	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
25.5.1	7.7.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	50		
25.6.2	7.7.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	m	65		
25.6.3	7.7.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	m	70		

25.7		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
25.7.1	7.8.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	50		
25.7.2	7.8.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	m	100		
25.7.3	7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	m	135		
25.8	7.9	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size ) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Eac h	10		

		<b>HV Cable laying and Termination</b>				
26. 1		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
26. 1.1	8.1.2	Above 120 sq. mm and upto 400 sq. mm	m	50		
26. 2		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing masonry open duct as required.				
26. 2.1	8.4.2	Above 120 sq. mm and upto 400 sq. mm	m	20		
26. 3		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				

26. 3.1	8.3.2	Above 120 sq. mm and upto 400 sq. mm	m	15		
		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
26. 4.1	9.1.30	3.5 C x 300 sq.mm	Nos	8		
26. 4.2	9.1.29	3.5 C x 240 sq.mm	Nos	6		
26. 4.3	9.1.27	3.5 C x 185 sq.mm	Nos	4		
26. 4.4	9.1.26	3.5 C x 150 sq.mm	Nos	4		



26.4.5	9.1.25	3.5 C x 120 sq.mm	Nos	6		
26.4.6	9.1.24	3.5 C x 95 sq.mm	Nos	4		
27.1	10.4.2	Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, 150sqmm XLPE aluminium conductor cable of 11 KV grade as required :	Each	2		
27.2	10.5.3	Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for 3 core, 150sqmm XLPE aluminium conductor cable of 11 KV grade as required :	Each	1		
28.1	14.13.3	Providing, laying and fixing of 100mm dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required	m	35		
28.2		Providing, laying and fixing of following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.				

28. 2.1	14.14. 2	150 mm dia	m	55		
28. 2.2	14.14. 4	300 mm dia	m	70		
		<b>Total Amount in Words &amp; in figures</b>				

AIR CONDITIONING WORKS - RENOVATION OF GNM COLLEGE						
Sl no	DSR item ref no	Item Description	Unit	Quantity	Rate in words& Figures (In Rs.)	Amount in Rs.
<b>PART A</b>		<b>MACHINERY</b>				
1		Supply, installation, testing and commissioning (SITC) of 8.0 TR capacity aircooled Outdoor condensing unit with scroll compressor as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and safety devices like thermal protector, pressure relief valve, over load relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.	Nos	9.00		
2		Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 8.0 TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition	Rmt	72.00		

3		<p>SITC of DX type double skinned air handling units, ceiling suspended/floor mounting type 8.0 TR, 3200 cfm capacity complete with suitable DIDW blower (as per approved make), blower section, with suitable external static pressure, built in pre filter(EU4), fine filter(EU7) ) and controls connected to condensing units, insulated SS drain pan, 6 row cooling coil, electric motor, belt drive package with TEFC motor class 'B' insulation, suitable for 3 phase, 415 V, 50Hz supply, suitable AHU panel &amp; cabling, AHU temp &amp; speed control panel , ARI certified, with 0.8mm double skinned 40mm thick PUF panel, belt guards, suitable supports for suspending from slab, vibration isolator, etc. conforming to specifications. The air handling units shall have 1 inlet refrigerant coils and 1 outlet refrigerant coils suitable for 1 numbers of 8.5 TR capacity ODU and shall conform to specifications.</p>	Nos	9.00		
4		<p>Supply, installation, testing and commissioning (SITC) of 6.0 TR capacity aircooled Outdoor condensing unit with scroll compressor as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and safety devices like thermal protector, pressure relief valve, over load</p>	Nos	1.00		

		relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.				
5		Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 6.0 TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition	Rmt	12.00		
6		SITC of DX type double skinned air handling units, ceiling suspended/floor mounting type 6.0 TR, 2400 cfm capacity complete with suitable DIDW blower (asper approved make), blower section, with suitable external static pressure, built in pre filter(EU4), fine filter(EU7) ) and controls connected to condensing units, insulated SS drain pan, 6 row cooling coil, electric motor, belt drive package with TEFC motor class 'B' insulation, suitable for 3 phase, 415 V, 50Hz supply, suitable AHU panel & cabling, AHU temp & speed control panel , ARI certified, with 0.8mm double skinned 40mm thick PUF panel, belt guards, suitable supports for suspending from slab, vibration isolator, etc. conforming to specifications. The air handling units shall have 1 inlet refrigerant coils and 1 outlet refrigerant coils suitable for 1 numbers of 8.5 TR capacity ODU and shall conform to specifications.	Nos	1.00		

7		Supply, installation, testing and commissioning (SITC) of 4.5 TR capacity aircooled Outdoor condensing unit with scroll compressor as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and safety devices like thermal protector, pressure relief valve, over load relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.	Nos	1.00		
8		Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 4.5 TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition	Rmt	12.00		

9		<p>SITC of DX type double skinned air handling units, ceiling suspended/floor mounting type 4.5 TR, 1800 cfm capacity complete with suitable DIDW blower (as per approved make), blower section, with suitable external static pressure, built in pre filter(EU4), fine filter(EU7) ) and controls connected to condensing units, insulated SS drain pan, 6 row cooling coil, electric motor, belt drive package with TEFC motor class 'B' insulation, suitable for 3 phase, 415 V, 50Hz supply, suitable AHU panel &amp; cabling, AHU temp &amp; speed control panel , ARI certified, with 0.8mm double skinned 40mm thick PUF panel, belt guards, suitable supports for suspending from slab, vibration isolator, etc. conforming to specifications. The air handling units shall have 1 inlet refrigerant coils and 1 outlet refrigerant coils suitable for 1 numbers of 8.5 TR capacity ODU and shall conform to specifications.</p>	Nos	1.00		
10		<p>Supply, installation, testing and commissioning (SITC) of 4.0 TR capacity aircooled Outdoor condensing unit with scroll compressor as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and safety devices like thermal protector, pressure relief valve, over load</p>	Nos	1.00		

		relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.				
11		Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 4.0 TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition	Rmt	12.00		
12		SITC of DX type double skinned air handling units, ceiling suspended/floor mounting type 4.0 TR, 1600 cfm capacity complete with suitable DIDW blower (as per approved make), blower section, external static pressure of 80mm, built in pre filter(EU4), fine filter(EU7) and controls connected to condensing units, insulated SS drain pan, 6 row cooling coil, electric motor, belt drive package with TEFC motor class 'B' insulation, suitable for 3 phase, 415 V, 50Hz supply, suitable AHU panel & cabling, AHU temp & speed control panel, ARI certified, with 0.8mm double skinned 40mm thick PUF panel, belt guards, suitable supports for suspending from slab, vibration isolator, etc. conforming to specifications. The air handling units shall have 1 inlet refrigerant coils and 1 outlet refrigerant coils suitable for 1 numbers of 8.5 TR	Nos	1.00		



		capacity ODU and shall conform to specifications.				
13		Supply, installation, testing and commissioning of Heat Recovery Ventilator (HRV) as per specifications. The HRV shall be of double skin construction and fitted with centrifugal blowers, drive motors and belt drive arrangement similar to the AHUs specified above, but with no Cooling Coil. Each HRV shall be provided with Two centrifugal blowers of the same capacity and suitable static, each with it's drive motor and drive arrangement. The casing shall be partitioned horizontally to form two separate air flow systems, one for exhausting the room air to the outside and the other for supplying fresh air into the AHU room without mixing of air. A Heat Recovery Wheel shall be provided in the centre of the casing. This HRW shall be capable of transferring a minimum of 85% of both Sensible and Latent Heat, between the two opposing air streams. The HRVof following capacity				
13		3200CFM	Nos	1.00		

14		<p>Supply, installation, testing and commissioning of Air Cooled High Wall mounted Split Air Conditioner of following capacity consisting of high wall mounted type room unit (fan coil) with cordless remote control and one number outdoor condensing unit comprising of energy efficient suitable rotary compressor for operation on single phase, 230 V, 50Hz supply, fixing the outdoor unit on a raised platform as per manufacturers recommendation and fixing of room (fan coil) unit on wall, standard 4 m distance refrigerant copper piping with 13mm nitrile rubber insulation, providing and making interconnection between room &amp; condenser as per site conditions, comprising of 1" dia drain PVC pipe with insulation 4m, canvas connections, full electrical cabling from power plug near indoor unit and to outdoor unit, ODU MS stand, first charge refrigerant gas, suitable stabilizer etc complete as required.</p>				
14.1		2 TR 5 star rated as per BEE	Nos	7.00		
14.2		1.5 TR 5 star rated as per BEE	Nos	4.00		

14.3		Additional Copper Piping Beyond 4M	Rmt	10.00		
15		Supply, Laying and Fixing of control cabling of suitable size required from the Indoor to outdoor units for all units as per specification.	Rmt	120.00		
16		Supply, installation, testing and commissioning PVC drain pipe of 25mm dia ISI marked, connecting the drain lines from the indoor units to floor sump, with 9mm nitrile rubber insulation as per specification	Rmt	120.00		
17		SITC of Humidity Controller electric strip heaters in supply air plenum complete with fixing arrangements humdistat and safety thermostat including all supports, terminations, power and control wiring	Nos	6.00		
<b>PART B</b>		<b>AIR DISTRIBUTION</b>				
18		Supply, installation, testing and commissioning of factory fabricated rectangular GSS sheet metal ducting for Supply/ return/ fresh air duct/ collar connecting to indoor unit as per ducting specifications and with suitable supports using MS angles, channels, rods, anchor bolts, etc to roof/ truss as per IS 655 and as per specifications.				

18.1		22 G	SQM	375.00		
18.2		24 G	SQM	825.00		
19		SITC of External thermal insulation on supply air ducts using min 13mm thick nitrile rubber class "O" closed cell type with antimicrobial protection as per specifications	SQM	1200.00		
20		Supply, installation, testing and commissioning of Acoustic duct lining using 10mm nitrile rubber insulation open cell type inside the ducts, antimicrobial protection at the outlets of all indoor units upto 4m distance from fan outlet as per spec provided.	SQM	81.00		
21		Supply, fabrication, installation, testing of flexible connections made out of fire resistant flexible double canvas sleeve.	Set	12.00		
22	16.17	SITC supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core.	SQM	30.00		

23	16.18	SITC Return air diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core.	SQM	34.00		
24		SITC of Fire Control Damper made of 16G GSS sheet blade and frame with 165mm casing, heavy duty interlocking blades and fully enclosed blade linkage mechanism, SS lateral seal blade seals, self lubricating sintered bronze bushes, fire rating as per UL555-1995 tested as per BS-476 part 20 with 18G extended sleeve 450mm and with fusible link, spring mechanism.	SQM	10.00		
25		SITC of multi blade type volume control dampers made of extruded aluminium for ducts/ collars to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distributions system in main ducts, return ducts & other area as per specification.	SQM	7.50		
26		SITC of Non Return Damper for HRW as per specifications.	SQM	1.00		
27		SITC of Aluminium Extruded Fresh air louvers with wire mesh and birds screen for IDUs/AHUs as per specifications.	SQM	1.00		

28		SITC of Aluminium Extruded powder coated Exhaust air louvers of size with wire mesh and birds screen for IDUs/AHUs as per specifications.	SQM	1.00		
		<b>Total Amount in Words &amp; in figures</b>				