

Client : MADRAS SCHOOL OF ECONOMICS							
New Class Room Block (G+2) at MSE, Kotturpuram, Chennai.							
Electrical Installation work							
S.No	Description of Item	Qty	Unit	Supply		Labour	
				Rate Rs.	Amount Rs.	Rate Rs.	Amount Rs.
	Internal wiring						
1	Wiring for light, fan, exhaust fan, 6 A socket outlet points etc., in recessed conduit system with 3 runs (P + N + E) of 1.5 sq.mm PVC insulated Halogen Free Flame Retardant (HFFR) copper wire in 20/25 mm dia. 2 mm thick FRLS rigid PVC conduit pipe complete with all accessories like bends, couplings, junction boxes etc., including supplying and fixing 6A modular switches with front plate housed in a zinc passivated MS box of approved make including giving connections complete as required. Rate should include for looping circuit from switch box to switch box as necessary						
a	Light point wiring 1 light controlled by 1 no. switch	80	pt		-		-
b	2 way Light point wiring - 1 light controlled by 2 nos. switch	5	pt		-		-
c	Ceiling fan point wiring with provision for fixing the fan regulator, but excluding fan regulator	30	pt		-		-
d	Exhaust fan point wiring including supplying and fixing 6A 2/3 pin socket outlet near the exhaust fan and 6A control switch fixed along with light control switch	10	pt		-		-
e	6A socket point wiring including supplying and fixing 6A 2/3 pin socket controlled by switch	10	pt		-		-
f	Same as above, but supplying and fixing 6A socket outlet controlled by switch in the existing switch control box. (Boarde plug) Socket outlet fixed adjacent to switch control box also will be measured as board plug	20	pt		-		-

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2	Wiring for lighting circuit mains all as detailed in item 1 above, but with 2 runs of 2.5 sq.mm and 1 run of 1.5 HFFR copper wire in 20 mm dia. 2 mm thick FRLS PVC conduit pipe complete with all accessories.						
	Circuit wiring measured from the DB to the first switch control box only. Looping circuit will not be measured. Rate should include for providing permanent identification of circuits both at DB and switch box with cable marking ferrules as required	250	mt		-		-
3	Same as above, but wiring for 16/25A power socket with 2 runs of 4 sq.mm and 1 run of 1.5 sq.mm FRLS copper wire	250	mt		-		-
4	Supplying and fixing 16/25A socket outlet (shuttered) with front plate housed in a suitable electro plated sheet metal box of approved make. Box recessed in wall - for split AC	12	each		-		-
5	Same as above, but supplying and fixing 20A DP switch (for control of indoor unit)	12	each		-		-
6	Same as above, but with weather proof enclosure (for out-door)	12	each		-		-
	Distribution Boards						
7	Supplying and fixing 3 phase with neutral MCB DB phase segregated type with double door fitted with the following. DB recessed in wall. Common DB for Lighting/Power circuits.						
	In comer:						
	1 no. 63A 4 pole MCB						
	Out goings						
	3 nos. 63 A DP 30 mA ELMCB						
	12 nos. 6/16/25A SP MCBS	3	each		-		-
	Panel Board						

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8	Fabricating, supplying, erecting, testing and commissioning of Main Panel made of 16G CRC sheet in welded construcion with necessary stiffners, self supporting, floor mounting, modular construction, compartmentalized pattern complete with copper bus bars, copper interconnections, etc.						
	Instrument panel, instrument wiring using 1.5 sq.mm HFFR copper wire with cable marking ferrules, ring main earthing with 25 x 3 mm copper flat, double earthing of all feeders with adequate size copper flat/wire (8G upto 63A and 25 x 3 mm copper flat above 63A). Copper wire ends terminated with suitable crimping type copper cable sockets) Earth bar to be tinned at all tapping connectins complete as required.						
	The earth bar run inside the bus bar chamber should be suitably shrouded and the copper flat provided for the entire length of bus chamber. The board fitted with the following						
	Incomer						
	1 no. 125A TP + N 25 KA Thermal Magnetic MCCB with adjustable Over Load and Short Circuit Protection						
	Outgoings						
	5 nos. 63A TP + N 25 KA Thermal Magnetic MCCB with adjustable Over Load and Short Circuit Protection. (3 nos. for floor DBs, 1 no. for Lift & 1 no. as spare)						
	1 no. Multi function meter to read A,V,F, KWH etc.						
	125/5 Cast resin CTs						
	1 set Surge Protection Device Class B + C with back up HRC fuses						
	1 set Space Heater with Thermostat						

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	1 set 125 A capacity 4 strip copper bus bars with tinned copper flat for 3 phase and neutral duly insulated with PVC colour sleeve (heat shrink) mounted on SMC/DMC base block. Current density of bus bar should be 1.2A per sq.mm						
	For all MCCBs Icu = Ics = 100%						
	All MCCBs should be provided with phase barrier and shrouding material						
	Board powder coated with approved colour paint over a coat of Primer. Rate should include for providing necessary base channel, foundation bolt, nuts etc., and all connected civil work for grouting the panel	1	each		-		-
	Connecting Cables for Panels/DBs						
9	Supplying and laying 3 1/2 core 95 sq.mm PVC armoured LT XLPE cable with aluminium conductor 1.1 KV grade. From existing panel in Gents Hostel C to the new panel at class room block.						
	Cable partly laid in existing cable trench/hume pipe as per site requirement.						
	Rate should include for providing cable route indicator at 25 mts. interval, entry/exit of building and at road crossings all ass per site requirement	120	mt		-		-
10	Additional Charges for excavation of cable trench, (750 mm deep and 450 mm wide, protective covering with sand and bricks (both on sides and top) back filling the trench with excavated soil including ramming and making good the surface as requiried.	50	mt		-		-
11	Providing end termination for the above cable using brass double compression gland and copper cable sockets. Rate should include for earthing the cable gland with copper earth clamp and copper earth wire	2	each		-		-

S.No	Description of Item	Qty	Unit	Supply		Labour	
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12	Supplying and laying 4 runs of 16 sq.mm (3 Ph + N) and 2 runs of 4 sq.mm (E) PVC insulated Halogen Free Flame Retardent (HFFR) wire with bright annealed Electrolytic brae copper conductor for voltage grade 1100 V in 32 mm dia. 2 mm thick FRLS rigid PVC conduit pipe all as in item 2 above. From Panel Board to DBs.	50	mt		-		-
	UPS System						
13	Supplying and fixing 12 way single phase with neutral MCB distribution board with double door (metal) complete with copper bus bars and copper interconnections etc., and fitted with the following. DB recessed in wall						
	Incomer						
	1 no. 32 A DP MCB						
	Outgoings						
	10 nos. 6A/16 SP MCBs	1	each		-		-
14	Supplying and laying 3 runs (P + N + E) of 6 sq.mm HFFR copper wire in 25 mm dia. 2 mn thick FRLS PVC conduit pipe complete with all accessories all as detailed in item 2 above. From existing UPS MDB to the above UPS DB	50	mt		-		-
15	Same as above but supplying and laying 3 runs (P + N + E) of 4 sq.mm HFFR copper wire in 20 mm dia. 2 mn thick FRLS PVC conduit pipe. From UPS DB to Ceiling Projector points	75	mt		-		-
16	Same as above but supplying and laying 3 runs (P + N + E) of 2.5 sq.mm HFFR copper wire in 20 mm dia. 2 mn thick FRLS PVC conduit pipe. From UPS DB to Dias socket outler points	75	mt		-		-

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17	Supplying and fixing 1 no. 6/16A socket outlet (shutered) controlled by 16A switch (with indicator) with front plate housed in a electro plated sheet metal box of approved make. Box fixes on surface of ceiling/beam/wall as per site requirement. (For Ceiling Projector)	3	each		-		-
18	Same as above but supplying and fixing 16A switch for dual control of Projector	3	each		-		-
19	Wiring for 6A socket outlet points (for lap Top Charging) on the periphery of the class room wall all as detailed in item 2 above	150	mt		-		-
20	Supplying and fixing 6A universal socket controlled by switch (with indicator) for the above points socket outlet points in dias	25	each		-		-
	Earthing						
21	Providing earth electorde all as per IS-3043 with 10 feet long 100 mm dia. 8 -10 mm thick cast iron pipe with flange welded on top including providing copper flat bridge on top with holes drilled for tapping connections.						
	Rate should include for supplying and laying 2 nos. 25 x 3 mm copper flat run along the pipe up to flange with suitable SS bolt nuts. All the tapping connections in the earth flat to be tinned.						
	The electrode should be buried in alternate layers of salt/charcoal mixture						
	Rate should include for providing masonry chameber construction of size 450 x 450 mm and covered with SFRC cover with RCC frame with lifting hooks and necessary hole to receive water to eath pit						
	Rate should also include for providing permanent identification both inside the chamber and on top as required. For Main Panel	2	each		-		-
22	Supplying and lalying 25 x 3 mm copper flat for earthing the panel boards. Tapping connectins in the earth flat to be tinned and colour coded.	30	mt		-		-

S.No	Description of Item	Qty	Unit	Supply		Labour	
				Rate Rs.	Amount Rs.	Rate Rs.	Amount Rs.
23	Supplying and laying 40 mm dia. medium gauge thick PVC conduit as sleeve from earth pit up to the entry of the building	10	mt		-		-
	Lift control/Lift shaft wiring						
24	Supplying and fixing 12W single phase with neutral MCB Distribution board double door type fitted with the following						
	Incomer						
	1 no. 63 A 4 pole MCB						
	Outgoings						
	1 no. 40A 4 pole 30 mA EL MCB for Lift Main Control						
	3 nos. 10A Single pole MCB	1	each		-		-
25	Supplying and laying 4 core 10 sq.mm LT XLPE armoured cable with copper cable from main panel/sub-panel to the lift control main.in lift room.. Cable laid on surface of wall with suitable clamping arrangement	20	each		-		-
26	Providing end termination for the above cable all as detailed in item 11 above	2	each		-		-
27	Wiring for light points in the lift shaft with 3 runs of 2.5 sq.mm FRLS copper wire all as detailed in item 1 above but for a set of 4 points with 20 mm dia. 16 G thick MS conduit pipe complete with all accessories in surface conduit system						
	Each light point should be controlled by 1 no. 10 A modular type switch with front plate with surface mounted zinc passivated MS box of approved make						
	Rate should also include for supplying and fixing 1 no. 20 A double pole switch (for master control) and 1 no. 6 A 2/3 pin socket outlet controlled by switch along with the light switch control box.	1	job		-		-
28	Wiring for light points in the lift machine room all as detailed in item 1 (a) above	4	pt		-		-

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29	Wiring for 16 A socket outlet all as detailed in item 2 above, but with 2 runs of 4 sq.mm + 1 run of 1.5 sq.mm HFFR copper wire	30	mt		-		-
30	Supplying and fixing 6/16A socket outlet (shuttered) controlled by 20 A DP switch (with indicator) with front plate housed in a suitable electro plated sheet metal box of approved make. Box recessed in wall	4	each		-		-
31	Supplying and fixing water tight bulk head light fitting with 10W LED. Philips Type WT 202N LED 10S	5	each		-		-
32	Providing CI Pipe earth electrode all as detailed in item 21 above	2	each		-		-
33	Supplying and laying No. 8 SWG copper wire for earthing lift mains. Ends connected with suitable copper cable sockets	40	mt		-		-
	Conduit for Data/Speakers						
34	Supplying and laying 25 mm dia 2 mm thick rigid FRLS PVC conduit complete with all accessories for Data/Speaker outlet, partly in recessed conduit system (in wall/partition etc.) and partly in surface conduit system (in ceiling/wall etc.), as per site requirement.. The conduit should be embedded in floor/wall etc., using cutting machine/Manual cutting as required						
	Rate should also include for necessary floor/wall/ceiling junction boxes of adequate sizes made of 16G thick sheet steel (Powder coated) with cover on top)	100	mt		-		-
35	Same as above but 32 mm dia 2 mm thick FRLS PVC conduit	45	mt		-		-
36	Supplying and fixing 16G thick MS powder coated J. box of adequate size for termination of TV/Telephone cable with 4 mm thick hylam sheet cover on top	5	each		-		-
	Lighting Fixtures/Fans						

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37	Supplying and fixing fan hook in the RCC Ceiling/beams etc., with suitable bracket supports made of Powder coated MS flat of adequate size & thick for suspension of ceiling fan	30	each		-		-
38	Supplying and fixing modular type 120 W stepped fan regulator (2 Module) with front plate housed in a zinc passivated MS box of approved make including giving connections complete as required. Box recessed in wall	30	each		-		-
39	Supply and erection of 1200 mm sweep high speed Ceiling Fans, 370 rpm with Air Delivery of 230 CMM (of all colour) with adequate length of down rod including giving connections.						
	Rate should include for painting the down rod with 2 coats of primer and 1 coat of approved colour paint	30	each		-		-
40	Supplying and fixing box type LED light fitting with 18W LED tube directly on surface of wall/ceiling including giving connections complete as required						
	Philips Type: TMC 502 1 x 18 TLED with Master LED 18 W tube 2100 lumens output	70	each		-		-
41	Supplying and fixing 9" dia 900 rpm 230 V exhaust fan with louver shutter assembly in the existing opening. Rate should include for providing connections using 6A plug top	10	each		-		-
42	Supply, erection, testing and commissioning of 25W LED Street light fixture with System efficacy of 110 lm/W (6600 lumens).						
	Luminaire shall be made up of pressure die cast Aluminium housing with PC lens PC fresnel diffuser. Luminaire shall be designed with street optic LENS for uniform light distribution.						
	The luminaire fixed on surface of wall with GI pipe bracket suitably bent and fixed with anchoring bolts and nuts including giving connections complete as required - Philips make	10	each		-		-

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44	Supplying and fixing 125A TP N 25 KA MCCB Thermal Magnetic with adjustable Overload & Short Circuit protection after removing the existing 63A MCCB in Gents Hostel C Panel including removing cable connection, existing interconnection between 63A MCCB and bus bar. Rate should include for providing interconnection between 125A MCCB and Bus Bars all as per site requirement.	1	each		-		-
	Total				-		-
	Add CGST @ 9%				-		-
	Add SGST @ 9%				-		-
	Total				-		-
	Grand Total (Supply + Labour)						-