

**Name of work:** Special repairs to Electrical Installation in various building of main campus in Bharathi women's College, Chennai 600 108

<b>EMD: Rs. 30000/-</b>			<b>Date of Tender 29.04.22</b>		
Sl. No.	Approximate Quantity	Description of Work	Rate in Figure & in Words	Per	Amount
1	283 pts (Two hundred and eighty three points)	Rewiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu. Conductor of 1100V grade in suitable PVC rigid pipe on wall and ceiling with PVC accessories and with TW switch box and 5A FT switch with painting with suitable colour for Open PVC light / Fan Point (For electronic regulator) (5 Points Per Coil)		1 pt (One point)	
2	13 pts (Thirteen points)	Rewiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu. Conductor of 1100V grade in suitable PVC rigid pipe on wall and ceiling with PVC accessories and with TW switch box and 5A FT switch with painting with suitable colour for Open PVC light point/fan point (for Electronic regulator).(6 Points Per Coil)		1 pt (One point)	
3	137 Nos (One hundred and thirty seven numbers)	Renewal by supply and fixing of 4' LED Single box type fitting complete with TW round blocks on wall or ceiling with 18W LED tube with PVC unsheathed Copper leads from terminals to the fitting. (Higher End)		1 No (Each)	
4	12 Nos (Twelve numbers)	Renewal by Supply and fixing of 4' LED Twin box type fitting complete with TW round blocks on wall or ceiling with 2nos of 18W LED tube with PVC unsheathed Copper leads from terminals to the fitting.(Higher End)		1 No (Each)	

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5	34 Nos (Thirty four numbers)	Renewal by supply and fixing of 4' LED Twin box type fitting complete with conduit pipe suspension from the ceiling with 2nos of 18W LED tube with PVC unsheathed Copper leads from terminals to the fitting.(Higher End)		1 No (Each)	
6	15 Nos (Fifteen numbers)	Renewal by supply and fixing of 4' LED Twin Mirror Optic suspension type fitting complete with louvers cover complete on conduit pipe suspension from the ceiling with 2nos of 18W LED tube with PVC unsheathed Copper leads from terminals to the fitting.(Higher End)		1 No (Each)	
7	6 Nos ( six numbers)	Renewal by supply and fixing of WT Bulk head fitting with guard (Higher End)suitable for LED bulb with 9W LED bulb.		1 No (Each)	
8	88 Nos (Eighty eight numbers)	Renewal by supply and fixing of 1200 mm (48") AC ceiling fan complete with 500mm down rod on the existing clamp with stepped electronic 300W regulator.(Higher End)		1 No (Each)	
9	4 Nos (Four numbers)	Supply and fixing of 300mm (12") sweep (light duty) AC exhaust fan complete without provision of hole in the wall.		1 No (Each)	

10	2 Nos (Two numbers)	Supply and fixing of 450 mm (18") sweep (Heavy duty) AC exhaust fan complete without provision of hole in the wall.		1 No (Each)	
11	24 Nos (Twenty four numbers)	Supply and fixing of 1 No. 6A modular 3pin wall socket with 6A modular FT control switch (Higher End) concealed in suitable MS modular Box covered with Front cover plate in flush with wall with earth connection.		1 No (Each)	
12	103 Nos (One hundred and three numbers)	Renewal by supply and fixing of 3 Nos. 6A modular 3pin wall socket with 6A modular FT control switches (Higher End) on wall with suitable PVC modular Box covered with modular front cover plate on earth connection.		1 No (Each)	
13	86 Nos (Eighty six numbers)	Renewal by supply and fixing of 1 No. 16A modular 3pin wall socket with 16A modular FT control switch (Higher End) in suitable PVC modular Box covered with modular Front cover plate on wall with earth connection.		1 No (Each)	
14	16 Nos (Sixteen numbers)	Renewal by supply and fixing of 20Amps DP Plug and Socket in sheet enclosure with 32A DP MCB in flush with wall with earth connection.(For AC Plug)		1 No (Each)	

15	10 Nos (Ten numbers)	Renewal by supply and fixing of 12 way Single pole and neutral MCB sheet steel enclosure Distribution board with IP 42 protection metal Double door type with 1No 32 Amps DP MCB as incoming and 10 Nos 6A to 32A SPMCB outgoing on angle iron frame with earth connection only. The MCB DB and MCB's should be with ISI mark (Higher End)		1 No (Each)	
16	2 Nos (Two numbers)	Renewal by supply and fixing of 4 way TPN 7 Segment MCB DB with metal / acrylic door cover with IP 42 protection with 1 No. 63A FP MCB and 63A 30mA FP ELCB as incoming, 3nos. 63 A DP MCB Isolators for sub incomers and 12Nos. 6A to 32A SP MCB as outgoing on angle iron frame with MS cable entry boxes with earth connection. The MCBDB and MCB's should be with the ISI mark (Higher End)		1 No (Each)	
17	8 Nos (Eight numbers)	Renewal by supply and fixing of 6 way TPN 7 Segment MCB DB with metal / acrylic door cover with IP 42 protection with 1 No. 63A FP MCB and 63A 30mA FP ELCB as incoming, 3nos. 63 A DP MCB Isolators for sub incomers and 18Nos. 6A to 32A SP MCB as outgoing on angle iron frame with MS cable entry boxes with earth connection. The MCBDB and MCB's should be with the ISI mark (Higher End)		1 No (Each)	
18	2 Nos (Two numbers)	Renewal by supply and fixing of Three Phase 8 way Vertical type MCCB DB with IP 42 protection Double door type DB (legrand) with 1No 125A 4P MCCB 16kA as incoming and 6 Nos 63A TP MCB and 2 Nos Vacant as outgoing with cable entry boxes on angle iron frame with earth connection only. (The MCB DB and MCB's should be Like Higher End make		1 No (Each)	

19	2414 mts (Two thousand four hundred and fourteen metres)	Renewal by supply and run of 2 of 2.5sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable PVC rigid pipe on wall and ceiling with continuous earth wire connection 14SWG TC wire with painting of suitable colour.		1 Mt (One Metre)	
20	446 mts (Four hundred and forty six metres)	Renewal by supply and run of 2 of 4 sqmm (56/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable PVC rigid pipe on wall and ceiling with continuous earth wire connection of 14 SWG TC wire with painting of suitable colour.		1 Mt (One Metre)	
21	106 mts (One hundred and six metres)	Renewal by supply and run of 4 of 10 sqmm (140/0.3) PVC insulated SC unsheathed Cu Conductor of 1100 V grade in suitable PVC rigid pipe on wall and ceiling with continuous earth wire connection of 14 SWG TC wire with painting of suitable colour		1 Mt (One Metre)	
22	145 mts (One hundred and forty five metres)	Renewal by supply and laying of 3 1/2 x240 sq.mm PVC armoured LTUG cable in HDPE pipe 120mm / 103.50mm in a trench to be excavated at a depth of 0.75 metre and refilling the earth to make good.		1 Mt (One Metre)	
23	192 mts (One hundred and ninety two metres)	Renewal by supply and clamping of 31/2 x 240 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	

24	10 Nos (Ten numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 240 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
25	10 Nos (Ten numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 240 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	
26	145 mts (One hundred and forty five metres)	Renewal by supply and clamping of 31/2 x 150 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	
27	2 Nos (Two numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 150 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
28	2 Nos (Two numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 150 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	

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29	115 mts (One hundred and fifteen metres)	Renewal by supply and clamping of 31/2 x 120 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	
30	2 Nos (Two numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 120 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
31	2 Nos (Two numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 120 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete		1 No (Each)	
32	55 mts (Fifty five metres)	Renewal by supply and laying of 3 1/2 x 70 sq.mm PVC armoured LTUG cable in HDPE pipe 90mm/76mm in a trench to be excavated at a depth of 0.75 metre and refilling the earth to make good.		1 Mt (One Metre)	
33	25 mts (Twenty five metres)	Renewal by supply and clamping of 31/2 x 70 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	

34	2 Nos (Two numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 70 sq.mm PVC armoured LTUG cable with earth connection		1 No (Each)	
35	2 Nos (Two numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 70 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 No (Each)	
36	81 mts (Eighty one metres)	Renewal by supply and clamping of 31/2 x 35 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		1 Mt (One Metre)	
37	4 Nos (Four numbers)	Renewal by supply and fixing of brass cable gland for 31/2 x 35 sq.mm PVC armoured LTUG cable with earth connection.		1 No (Each)	
38	4 Nos (Four numbers)	Renewal by supply and providing cable end termination of 3 1/2 x 35 sq.mm PVC LTUG Aluminum armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete.		1 Mt (One Metre)	



39	3 Nos (Three numbers)	Renewal by supply and fixing of 3600 Ansi Lumens Projector, XGA (1024x768) Resolution, Contrast Ratio: 20000:1 SD		1 No (Each)	
40	3 Nos (Three numbers)	Renewal by supply and fixing 8" x 6" motorised screen SD		1 No (Each)	
41	3 Nos (Three numbers)	Renewal by supply and fixing of 3 feet ceiling mount Kit		1 No (Each)	
42	3 Nos (Three numbers)	Renewal by supply and fixing of 20 metre HDMI cable SD		1 No (Each)	
43	1 No. (One number)	Renewal by supply, Erection, Testing and commissioning of 400A capacity Dust and Vermin Proof Cubical Panel Board made up of 16 SWG CRCA sheet steel with Renewal by supply and fixing of the following interior mounting fuse switches with HRC fuses arranged in two Horizontal or vertical rows with one switch over the other with a central bus bar chamber and two nos of Horizontal or vertical cable chambers at the two ends one on each side next to the fuse switch chamber and confirming to IE rules.		1 No (Each)	

1. 400A TPN SDF unit interior only with HRC fuses Double break Switch (Higher End) - = 1 no

2. 250A TPN SDF unit interior only with HRC fuses Double break Switch(Higher End) - = 2 nos

3. 200A TPN SDF unit interior only with HRC fuses Double break Switch (Higher End) - = 2 nos

4. 125A TPN SDF unit interior only with HRC fuses Double break Switch(Higher End) - = 3 nos

(All the TPN switches should be (Higher End) with front handle make only)

The bus bar chamber will consist of suitable size of copper flat (not below 50x6mm) for phase and neutral buses on epoxy moulded bus insulators at proper and sufficient spacing between the buses as per IE rules. This bus bar chamber should be segregated from the adjacent chambers by providing hylem sheet of suitable thickness as partisans suitable size of copper flats should be provided all round the panel for earth bus.

The fuse switches should be connected with the phase and neutral buses with suitable size of rigid copper rod or flat and each switch should be connected with 2 nos. 25x6 mm earth bus with 2 runs of No:8 SWG rigid copper rod with suitable lugs. Phase and neutral copper buses should be tinned properly.

The panel should have a separate metering chamber at the top side consisting of Digital Multifunction meter Model LT MFM 4405 LED meter CI 0.5/ like and 3nos 400/5 CTR and 1nos 200/5 CTR CT arrangements LED indicator lamps should be provided with control switches and fuse units.

The panel should be painted with one coat of Red oxide as primer coat and two coats of enamel paint of approved colour, Approved by the site engineer and also the danger board. The capacity of fuse switches, size of the incoming and outgoing cables, the place to which the supply is fed shall be marked on switch chamber.

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		The panel board should be mounted on suitable MS channel provided all round at bottom of the panel. The whole arrangement should be erected on a masonry pedestal to be constructed with suitable foundation bolts and nuts such that the lowest switch handle is at the height of 0.75m from the ground level.			
44	1 No. (One number)	Renewal by supply and fixing of 400A TPN Switch Disconnecter Fuse Units in Sheet Steel Enclosure with HRC fuses Double Break switch with suitable angle iron frame work with MS cable entry boxes with PWD earthing		1 No (Each)	
45	1 No. (One number)	Renewal by supply and fixing of 100A TPN sheet double break switch with HRC fuse and neutral on suitable angle iron frame work with earth connection only.		1 No (Each)	
46	27 Nos (Twenty seven numbers)	Renewal by supply and fixing of 12mm MS fan hook by chipping the ceiling, find the rod and fixing fan hook and redoing the ceiling well with rich cement mortar as directed by the site officer		1 No (Each)	

47	1 No. (One number)	<p>Renewal by supply and Fabrication, Erection, Testing and commissioning of pedestal mounted pillar box made out of 16 SWG CRCA MS Sheet of size 48"x48"x18" outdoor type with three compartment with lock and key facilities with sealing(TNEB Type) arrangement with dust and vermin proof and space for fixing TNEB Electronic type energy meter suitable for 3 phase 415 V 4 wire 50hz AC supply having 400A Capacity copper bus bar on suitable bus insulators and provision for mounting 3 nos CTS of 400A/5A for incoming to the energy meter and supply and fixing of 3 NOs 400A/400V fuse units and neutral link on 6mm Thick Hylum sheet and provision for cable entry for both incoming and outgoing cables at the bottom and painting the board with two coats of anti-corrosive paint of approved colour with earth connection and comprising the following.</p> <ol style="list-style-type: none"> <li>1. 6mm thick hylum sheet in metering compartment for fixing 3 phase 415V 4 wire digital energy metre.</li> <li>2. 3 Nos 1" x 1/2" and 1 No. 1/4" x 1/4" copper bus bar on suitable bus support with 315/5A CTS.</li> <li>3. 2 Nos. earth bus of 1"x 1/8" Copper flat in the rear side of the panel.</li> <li>4. Base channel fixed at the bottom of pillar box</li> <li>5. View glasses fixed at both compartments.</li> </ol> <p>Caution/ Danger Board.</p> <ol style="list-style-type: none"> <li>6. 3 Nos. 400A fuse units &amp; 1 No. 250A neutral link on hylum sheet</li> <li>7. For meter wiring should be made with identification fe rules</li> <li>8. The whole arrangement should be Erected on suitable masonry pedestal.</li> <li>9. Painting of the panel with 2 coats of epoxy paint over one coat of red oxide.</li> <li>10. 250A TPN Switch Disconnecter fuse with HRC fuses placed in the Bottom Chamber.</li> </ol>		1 No (Each)	
48	2 Nos (Two numbers)	<p>Earthing as per the ISI specification with an earth electrode of 2.1mt class 'B' GI pipe of dia not less than 40mm, with copper earth plate of size 125mm x 50mm x 6mm, with necessary funneling arrangements with necessary masonry work and with 38mm RCC cover slab for the brick masonry.</p>		1 No (Each)	

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49	385 mts (Three hundred and eighty five metres)	Renewal by supply and run of 1 of NO: 8 SWG Cu wire for earth connection.		1 Mt (One Metre)	
			TOTAL		
		12%	GST		
			GRAND TOTAL		
		49 Items (Forty nine items)			