

## UNIVERSITY OF KERALA

## ENGINEERING UNIT, KARIAVATTOM

Tender schedule for Electrical works for providing modular switches,Light fittings,wall fan and main panel board in

Additional construction in The Department of Bio informatics at Kariavattom campus-(retender)

SI No	Qty	Unit	Description of Item	unit	Rate	Rate in words	Amount
<b>ELECTRICAL WORKS</b>							
<b>1</b>			Supply and Fixing the following modular switches & accessories in the existing front plates and giving necessary connections as required <i>(Group B RoHS compliant )</i>				
1.1	17	nos	6 A SP 1 way switch	E	119.00	Rs. One hundred & nineteen only	2,023.00
1.2	17	nos	16 A SP 1 way switch	E	161.00	Rs. One hundred & sixty one only	2,737.00
1.3	30	nos	6A 3 pin shuttered socket	E	157.00	Rs. One hundred & fifty seven only	4,710.00
1.4	17	nos	6/16 A socket	E	223.00	Rs. Two hundred & twenty three only	3,791.00
1.5	6	nos	32 A DP switch with indicator	E	316.00	Rs. Three hundred & sixteen only	1,896.00
1.6	6	nos	25 A socket	E	223.00	Rs. Two hundred & twenty three only	1,338.00
<b>2</b>	28	Nos	Supply and installation of recess mounmtd 15 W LED down lighter with Drive( Havels Make PLUTO NEO PANEL 1x!/ Bajaj/wipro/Philips)	E	2085.00	Rs. Two thousand & eighty five only	58,380.00
<b>3</b>	6	nos	Supply and fixing 10 W LED Bulk head fittings IP65 on wall and giving copnnections etc as required	E	1598.00	Rs. One thousand five hundred & ninety eight only	9,588.00

4			<i>Supply</i> , conveyance, installation, testing and commissioning <i>wall mounting fan</i> of the following sizes using mounting brackets supplied along with the fan and giving connection with existing wire.				
5	6	nos	400 mm sweep	E	1746.00	Rs. One thousand seven hundred & forty six only	10,476.00
6	7.5	m <sup>2</sup>	Fabrication of fully partitioned, dust and vermin proof enclosure for <i>panel assembly</i> as per form 4 of IS 8623 (with latest amendments) <i>using 1.60 mm CRCA sheet</i> as per approved design and requirement, with front and rear access facility, bus bar chambers, hinged doors for all switch gear compartments, earthing the doors using 4 sq mm braided copper conductor, providing necessary cut-outs for mounting meters, relays, indication lamps, bus bar interconnection etc, detachable covers for bus bar chamber and cable alley, <i>powder coating</i> the assembly after subjecting to 7 tank process etc as required. CRCA sheet alone be used for the fabrication. Angles/ flats/ slotted angles etc shall not be used for the fabrication of panel assembly. The measurements should be taken the area of the complete sheets used for panel board including partitions, folding, shrouding etc. including control wiring	m2	2223.00	Rs. Two thousand two hundred & Twenty Three only	16,672.50
7			Supply and providing the following size of <i>SMC sheets</i> in the panel as barriers & shrouding using required bolts and nuts including cutting to shape etc., as required.				
7.1	0.2	m <sup>2</sup>	2 mm thick	m2	3184.00	Rs. Three thousand one hundred & eighty four only	636.80

8			Supply and fixing the following types of <i>beeding</i> along the periphery of doors/ other detachable compartments to make the panel assembly dust & vermin proof including sticking with glue				
8.1	10	m	U' section rubber beeding suitable for 1.60/ 2.00 mm sheet	m	8.00	Rs. Eight only	80.00
9	30	kg	Fabrication, supply, conveyance and installation of <i>angle iron frame work</i> for wall mounting panel board using suitable size angle iron cut and welded to shape including painting with two coats of synthetic enamel paint over a coat of zinc chromate primer, bolting the frame to the panel using required bolt and nuts, fixing the whole to the wall, making good the damages etc. as required.	kg	126.00	Rs.One hundred & Twenty six only	3,780.00
10	1500	cm <sup>3</sup>	Fabrication, supply & fixing main <i>bus bar system</i> and interconnections with electrolytic grade <i>copper</i> strips/ rigid conductors conforming to IS 1867 (with latest amendments) for bus bar arrangement with <i>single strip per phase</i> supported on finger type bus bar supports of adequate size, spacing between supports not exceeding 50 cm & overhang not exceeding 5 cm including bending to shape, drilling holes, tinning the points of contacts, fixing heat shrinkable PVC sleeves, plated bolts and nuts with plate washers and spring washers, copper sockets for round conductors, etc., as required.	cm <sup>3</sup>	7.30	Rs. Seven & ps. Thirty only	10,950.00
11	300	cm <sup>3</sup>	Fabrication, supply & fixing <i>earth bus</i> system with <i>coppe</i> r strip/ conductor and connecting all accessories as per rule including g tinning the points of contacts etc as required	cm <sup>3</sup>	6.90	Rs.Six & ps. Ninety only	2,070.00

12	1	no	200 A, 35/36 kA (Ics=100%Icu), 4 pole, current limiting type MCCB with microprocessor based release with overload setting of 50 - 100% having adjustable OL & SC	E	18751.00	Rs.Eighteen thousand seven hundred & fifty one only	18,751.00
13	1	no	125A , 25/35 kA (Ics=100%Icu), 3 pole, current limiting type MCCB having thermal setting range of 80 - 100% with thermal magnetic release having adjustable OL	E	6601.00	Rs.Six thousand six hundred & one only	6,601.00
14	4	nos	16A -100A, 25/35 kA (Ics=100%Icu), 3 pole, current limiting type MCCB having thermal setting range of 80 - 100% with thermal magnetic release having adjustable OL	E	5100.00	Rs.Five thousand & one hundred only	20,400.00
15	6	nos	rotary kit		1685.00	Rs.One thousand six hundred & eighty five only	10,110.00
16	1	no	Three phase volt meter (V - RY, YB, BR, R, Y, B) of accuracy class 1	E	1683.00	Rs. One thousand six hundred & eighty three only	1,683.00
17	3	no	Single phase ammeter of accuracy class 1	E	1055.00	Rs.One thousand & fifty five only	3,165.00
18	1	no	5 A 3 pole voltmeter selector switch to read voltage between 3 phases.	E	157.00	Rs. One hundred & fifty seven only	157.00
19	3	no	200/ 5 A, 5 VA, resin cast metering CT of accuracy class 0.5	E	1073.00	Rs.One thousand & seventy three only	3,219.00
20	3	no	LED indicators for all voltage ranges - Red, Green, Black, Yellow or Orange Colour	E	123.00	Rs.One hundred & twenty three only	369.00
21	1	no	Aluminium anodised Danger Notice Board of size 150 x 100 mm. with inscriptions ( both in English and Malayalam) and conventional Skull and Bone in Red colour.	E	76.00	Rs. Seventy six only	76.00
22	3	no	16 A, 415 V, HRC type Kit kat fuse unit.	E	84.50	Rs.Egihty four & ps. Fifty only	253.50

23	3	no	2 A, clip-on offset tag fuse link (Group B)	E	43.00	Rs.Forty three only	129.00
24			Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.				
24.1	5	m	4c 120 sqmm	m	822.00	Rs.Eight hundred & twenty two only	4,110.00
24.2	3	m	4c 95 sqmm	m	663.00	Rs.Six hundred & sixty three only	1,989.00
25			Supplying siemens / tropodur type nickel plated <i>Double compression brass cable gland</i> for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required.				
25.1	2	nos	120 sq mm	E	874.00	Rs.Eight hundred & seventy four	1,748.00
25.2	2	nos	95 sq mm	E	807.00	Rs. Eight hundred & seven only	1,614.00
26			Supplying and providing <i>earth clamps made out of copper strips</i> of the following sizes including cutting and bending the flat exactly to the shape of the gland, drilling necessary holes for nut & bolt, tinning the points of contacts and giving connections to the main earthing system as required.				

26.1	2	nos	20 x 3 mm for earthing glands of size 120 sq mm to 185 sq mm	E	99.00	Rs.Ninety nine only	198.00
27			Supplying and providing <i>earth clamps</i> for siemens/tropodur type cable glands of suitable length and other dimensions noted along with each size of glands for the following sizes of cables as required.				
27.1	2		25 sq - 95sq mm with 20 mm wide x 1.20 mm thick clip	E	27.00	Rs.Twenty seven only	54.00
28			Supply of superior quality <i>aluminium tubular cable socket</i> and making core termination of cables of the following sizes including crimping etc. as required.				
28.1	8	nos	120 sq mm	E	42.00	Rs.Forty two only	336.00
28.2	8	nos	95 sq mm	E	26.00	Rs.Twenty six only	208.00
29			Supply and drawing bare <i>earthing conductors</i> of the following sizes <i>along with wiring/ cables</i> and giving connection as required.				
29.1	15	m	4.00 mm copper conductor (8 SWG)	m	97.00	Rs. Ninety seven only	1,455.00
30			supply of superior quality <i>copper earth socket</i> for the following sizes of earth conductor including crimping etc. as required.				
30.1	4	nos	4.00 mm (8 SWG)	E	23.00	Rs.Twenty three only	92.00

31	1	no	Fabrication, supply and installation of dust and vermin proof bus bar chamber made out of 1.6mm CRCA sheet of size 400x300x250 as per approved design and requirement including supply and fixing 4 nos 25x6 mm copper strip for bus bar arrangement supported by DMC/FRP with front door screwed to the box, painting the same with 2 coats of synthetic enamel paint over a coat of zincchromate primer and fixing the same on wall using suitable size anchor bolt etc.	E	3079.00	Rs.Three thousand & seventy nine only	3,079.00
<b>TOTAL</b>						<b>Rs.</b>	<b>208,924.80</b>

**PAC Rs.2,08,925/- (Rupees Two lakh eight thousand nine hundred & twenty five only)**

I/We agreed to execute the work.

1. ....% below the estimate rate.

2. .... % above the estimate rate.

3. At the estimate rate.

Sd/-

**CONTRACTOR**

**UNIVERSITY ENGINEER**