

**UNIVERSITY OF KERALA**

**ENGINEERING UNIT**

<b>Tender schedule Electrical works for Alteration works to the SEM Lab allotted for XRF in SICC building under Department of Geology at Kariavattom Campus</b>						
<b>Sl. No</b>	<b>Qty</b>	<b>Specification</b>	<b>Unit</b>	<b>Rate</b>	<b>Rate in words</b>	<b>Amount</b>
1		Supply and fixing the following sizes of <i>PVC Conduit</i> conforming to IS 9537 / 1983 part III along with all required accessories <i>on surface</i> including making good the damages etc as required.				
1.1	110	25 mm dia light gauge	m	95.00	Rs.Ninety Five only	10450.00
2		Supply and drawing 650/1100 V grade <i>PVC insulated stranded single core copper conductor cables</i> conforming to IS 694 part I 1990 in the existing surface / recess conduit as required including giving necessary connections of the following sizes.				
2.1	25	4.00 sq mm 4 run	m	184.00	Rs.One hundred & Eighty Four only	4600.00
2.2	60	6.00 sqmm 4run	m	260.00	Rs.Two hundred & Sixty only	15600.00
2.3	20	10.00 sq mm 4 run	m	426.00	Rs.Four hundred & twenty six only	8520.00
3		Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper /brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/ isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing etc. as required				

3.1	1	4 way (8+12) - double cover TPN vertical DB with provision for fixing 4P MCB / Isolator/ RCCB/ RCBO as incomer and SP/ TP MCB as outgoing (IP 42/43)	E	7739.00	Rupees Seven Thousand Seven Hundred and Thirty Nine Only	7739.00
4		Supply and installation of the following <i>accessories</i> suitable for 50 Hz , AC supply conforming to IS 8828-1995/ IEC 60898 of the following current ratings in the existing enclosure and giving connections as required				
4.1	1	40 A four pole mini break isolator	E	716.00	Rupees Seven Hundred and Sixteen Only	716.00
4.2	1	63 A, 4 pole, 100 mA RCCB	E	3306.00	Rs.Three thousand three hundred & six only	3306.00
5		Supply and installation of the following <i>accessories</i> suitable for 50 Hz , AC supply conforming to IS 8828-1995/ IEC 60898 of the following current ratings in the existing enclosure and giving connections as required				
		S & F TP MCB				
5.1	3	32A	E	908.00		2724.00
5.2	1	40 A, 10 kA, TP MCB (C curve)	E	1369.00	Rs.One thousand three hundred & sixty nine only	1369.00
5.3	3	50 A and 63 A, 10 kA, TP MCB (C curve)	E	1369.00	Rs.One thousand three hundred & sixty nine only	4107.00

6		Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper /brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/ isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing etc. as required				
6.1	4	FP enclosure for independent mounting of MCB/ RCCB/ RCBO	E	604.00	Rupees Six Hundred and Four Only	2416.00
7		Supply & Fixing the following types/ sizes of boxes suitable for modular accessories in surface/ recess including making good the damages, colour washing etc as required (ROHS)				
7.1	2	9 module moulded plastic box on surface	E	235.00	Rupees Two Hundred and Thirty Five Only	470.00
8		Supply & Fixing the following types/ sizes of front plates on the existing modular boxes. (RoHS)				
8.1	2	9 module white/ off-white	E	195.00		390.00
9		Supply and Fixing the following modular switches & accessories in the existing front plates and giving necessary connections as required (Group B)				
9.1	6	16 A SP 1 way switch	E	161.00	Rupees One Hundred and Sixty One Only	966.00
9.2	6	6/16 A socket	E	223.00	Rupees Two Hundred and Twenty Three Only	1338.00
		<b>EARTHING &amp; EARTH CONDUCTORS</b>				

10	2	Supply and providing <i>plate earthing</i> as per IS 3043 with <i>600x600x6.30 mm GI/CI earth plate</i> , 20 mm GI watering pipe fixed to the earth plate with 20 x 3 mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top. (in hard soil)	E	4102.00	Rs.Four thousand One hundred & Two only	8204.00
11	10	6.00 mm copper conductor (4 SWG)	E	189.00	Rupees One Hundred and Sixty One Only	1890.00
12		Supply and providing the following sizes of <i>cast iron gully trap with covering</i> at the top of the inspection chamber of earth pit as required				
12.1	2	300 x 300 x 6 mm cast iron gully trap with covering	E	267.00	Rupees Two Hundred and Sixty Seven Only	534.00
13		Supply and providing <i>test joint for the earthing system</i> using 2 Nos of the following sizes of strips including cutting and bending to shape, drilling necessary holes and fixed to the watering pipe etc as required.				
13.1	0.8	2 x 25 x 3 mm GI strip	m	165.00	Rupees One Hundred and Sixty Five Only	132.00
14		Supply and providing <i>earth lead from the test joint to the earth electrode</i> using the following sizes of conductors/ strips including cutting, drilling necessary holes (in case of strip) and fixing firmly with plate test joint etc as required.				
14.1	8	25 x 3 mm GI strip	E	73.00	Rupees Seventy Three Only	584.00

15		Supply and providing the following sizes of <i>bolt and nut</i> with washers on the existing MS box / earth bus etc. as required including drilling necessary holes as required				
15.1	20	25 x 6 mm GI bolt & nut	E	10.70	Rupees Ten and paise Seventy Only	214.00

16		Supply and drawing bare <i>earthing conductors</i> of the following sizes <i>along with wiring/ cables</i> and giving connection as required.				
16.1	10	2.00 mm copper conductor (14 SWG)	E	26.00	Rupees Twenty Six Only	260.00
		<b>TOTAL</b>				<b>76529.00</b>

PAC Rs.76,529/- (Rupees Seventy Six Thousand Five hundred & Twenty Nine only)

1. I/We agreed to execute the work.

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

2. ....% below the estimate rate.

3. At the estimate rate.

**CONTRACTOR**

sd/-  
**UNIVERSITY ENGINEER**