

**UNIVERSITY OF KERALA
ENGINEERING UNIT, KARIAVATTOM**

TENDER SCHEDULE FOR ELECTRICAL MAINTENANCE OF THE ROOM NO:22 AND 49 OF THE DEPARTMENT OF PHYSICS AT KARIAVATTOM CAMPUS

PART 1-ROOM NO:49						
SI No	Specification	Qty	Unit	Rate	Rate in words	Amount
1	Supply and wiring points according to IS 732-1989 using rigid PVC conduit of minimum size 20 mm with specials conforming to IS 9537 part III 1983 and with suitable size specials conforming to IS 3419-1988, fixing the conduit using metal saddles spacing not exceeding 50 cm or concealed suitably and with 1.00 sq mm FR PVC insulated stranded single core copper conductor cable 650V grade, including <i>providing switch board main and continuous earthing with No.14 SWG bare copper</i> , required quantity of copper earth socket, brass bolt and nut crimping/ soldering etc complete with suitable size modular type metal switch boxes, <i>modular type front plates (white)</i> etc. up to and including 6A modular type SP switches and making good the surface of wall, colour washing etc. complete. All the terminations in the switch boards and DB's shall be tinned and the wires shall be drawn and fixed along the periphery of the box using suitable ties, tie mounts etc as required. (<i>Group B/ RoHS compliant modular accessories</i>).					
1.1	Single control light point with 6A, 3 plate ceiling rose	8.00	E	841.00	Rs.Eight hundred & forty one only	6,728.00
1.2	Single control ceiling fan point with 6 A, 3 plate ceiling rose & with socket size stepped electronic regulator.	4.00	E	1,498.00	Rs.One thousand four hundred & ninety eight only	5,992.00

1.3	Combined plug point with 6 A, 5 pin plug socket controlled by 6 A switch in the same switch board as that of light points.	2.00	E	483.00	Rs.Four hundred & eighty three only	966.00
2	<i>Supply</i> , conveyance, installation, testing and commissioning the light fittings of following types made of CRCA sheet of .5mm thickness complete with all accessories and lamps etc. directly on wall using <i>2 nos. flat iron brackets</i> made from 25x6mm flat iron, painting the flat iron bracket and giving connections with required length of 16/0.20mm 3 core copper conductor flex wire conforming to relevant ISS or extending the original wiring and giving connection etc. as required.					
2.1	1x28wT5 fitting with APF electronic ballast suitable for continuous operation with THD <10%, power factor >0.98, RoHS compliant,high lumen tube .	8.00	E	1,773.00	Rs. One thousand seven hundred & seventy three only	14,184.00
4	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.					
4.1	20 mm dia light gauge	150.00	m	83.00	Rs. Eighty three only	12,450.00
4.2	25 mm dia light gauge	30.00	m	95.00	Rs.Ninety five only	2,850.00
5	Supply and fixing the following sizes of <i>PVC Conduit</i> conforming to IS 9537 / 1983 part III along with all required accessories <i>in recess</i> including cutting the wall and making good the damages etc as required.					
5.1	20 mm dia light gauge	10.00	m	120.00	Rs.One hundred & twenty only	1,200.00
5.2	25 mm dia light gauge	5.00	m	133.00	Rs. One hundred & thirty three only	665.00

6	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.					
6.1	4.00 sq mm 2 run	70.00	m	106.00	Rs. One hundred & six only	7,420.00
6.2	2.50 sq mm 1 run	70.00	m	55.00	Rs. Fifty five only	3,850.00
6.3	2.50 sq mm 2 run	140.00	m	81.00	Rs. Eighty one only	11,340.00
6.4	1.50 sq mm 1 run	120.00	m	45.00	Rs. Forty five only	5,400.00
6.5	2.50 sq mm 4 run	20.00	m	134.00	Rs. One hundred & thirty four only	2,680.00
6.6	1.50 sq mm 2 run	20.00	m	61.00	Rs. Sixty one only	1,220.00
6.7	6.00 sq mm 4 run	40.00	m	260.00	Rs. Two hundred & sixty only	10,400.00
7	Supply and fixing <i>SP & N metal case enclosure</i> with 2 pole and earth plug socket with pin suitable for incorporating , SP MCB (excluding cost of SP MCB) in surface/ recess including giving necessary connections, making good the damages etc. as required.					
7.1	250V, 20A, 2 pole and earth	3.00	E	917.00	Rs. Nine hundred & seventeen only	2,751.00
8	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 (<i>Group B/ RoHS compliant</i>)					
8.1	12 module metal box in recess	3.00	E	354.00	Rs. Three hundred & fifty four only	1,062.00
8.2	16 module moulded plastic box on surface	6.00	E	333.00	Rs. Three hundred & thirty three only	1,998.00
9	Supply & Fixing the following types/ sizes of front plates on the existing modular boxes. (<i>Group B/ RoHS compliant</i>)		E			
9.1	12 module white/ off-white	3.00	E	251.00	Rs. Two hundred & fifty only	753.00
9.2	16 module white/ off-white	6.00	E	270.00	Rs. Two hundred & seventy only	1,620.00

10	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>)		E			
10.1	6 A SP 1 way switch	33.00	E	119.00	Rs.One hundred & nineteen only	3,927.00
10.2	6A 3 pin shuttered socket	54.00	E	157.00	Rs. One hundred & fifty seven only	8,478.00
10.3	16 A SP 1 way switch	3.00	E	161.00	Rs. One hundred & sixty one only	483.00
10.4	6/16 A socket	3.00	E	223.00	Rs. Two hundred & twenty three only	669.00
11	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					
11.1	8 way (8+24) - three phase double cover (IP 42/43)	1.00	E	4,783.00	Rs. Four thousand seven hundred & eighty three only	4,783.00
11.2	12 way single phase double cover (IP 42/43) after dismantling the existing rewirable type DB	1.00	E	1,899.00	Rs. One thousand eight hundred & ninety nine only	1,899.00
11.3	40 A double pole mini break isolator	1.00	E	356.00	Rs. Three hundred & fifty six only	356.00
11.4	40 A four pole mini break isolator	1.00	E	716.00	Rs. Seven hundred & sixteen only	716.00
12	S & F SP MCB					
12.1	6-32A(C curve)	26.00	E	219.00	Rs.Two hundred & nineteen only	5,694.00
12.2	40 A, 2 pole, 30 mA RCCB	1.00	E	2,357.00	Rs.Two thousand Three hundred & fifty seven only	2,357.00
12.3	40 A, 4 pole, 100 mA RCCB	1.00	E	2,881.00	Rs.Two thousand eight hundred & eighty one only	2,881.00

13	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					
13.1	25 x 3mm brass bolt & nut	10.00	E	17.00	Rs. Seventeen onlyl	170.00
14	Supply and providing 5 Kg. <i>Dry Chemical Powder type Fire Extinguisher</i> with hose and clamps including fixing it to wall as required.	1.00	E	2,324.00	Rs.Two thousand three hundred & twenty four only	2,324.00
14.1	25 x 3mm brass bolt & nut	10.00	E	17.00	Rs.Seventeen only	170.00
15	Dismantling the existing electrical installations and conveyiong to section store without further damage	1.00	Job	981.00	Rs. Nine hundred & eighty one only	981.00
16	S & F switch disconnecter fuse unit complete with handle assembly, door inter lock and padlocking arrangement of the following ratings: in the existing Sub panel board and giving connections with adequate size copper strips tinned at the points of sleeved with heat shrink sleeves, drilling holes etc as required					
16.1	32 A, AC 23 A, TPN SDF for DIN/ BS fuse	1.00	E	2,819.00	Rs. Two Thousand eight hundred & nineteen only	2,819.00
	PART II ROOM NO. 22					

1	Supply and wiring points according to IS 732-1989 using rigid PVC conduit of minimum size 20 mm with specials conforming to IS 9537 part III 1983 and with suitable size specials conforming to IS 3419-1988, fixing the conduit using metal saddles spacing not exceeding 50 cm or concealed suitably and with 1.00 sq mm FR PVC insulated stranded single core copper conductor cable 650V grade, including <i>providing switch board main and continuous earthing with No.14 SWG bare copper</i> , required quantity of copper earth socket, brass bolt and nut crimping/ soldering etc complete with suitable size modular type metal switch boxes, <i>modular type front plates (white)</i> etc. up to and including 6A modular type SP switches and making good the surface of wall, colour washing etc. complete. All the terminations in the switch boards and DB's shall be tinned and the wires shall be drawn and fixed along the periphery of the box using suitable ties, tie mounts etc as required. (<i>Group B/ RoHS compliant modular accessories</i>).					
1.1	Single control light point with 6A, 3 plate ceiling rose	8.00	E	841.00	Rs. Eight hundred & forty one only	6,728.00
1.2	Single control ceiling fan point with 6 A, 3 plate ceiling rose & with socket size stepped electronic regulator.	4.00	E	1,498.00	Rs.One thousand four hundred & ninety eight only	5,992.00
1.3	Combined plug point with 6 A, 5 pin plug socket controlled by 6 A switch in the same switch board as that of light points.	2.00	E	483.00	Rs.Four hundred & eighty three only	966.00
2	<i>Supply</i> , conveyance, installation, testing and commissioning the light fittings of following types made of CRCA sheet of .5mm thickness complete with all accessories and lamps etc. directly on wall using <i>2 nos. flat iron brackets</i> made from 25x6mm flat iron, painting the flat iron bracket and giving connections with required length of 16/0.20mm 3 core copper conductor flex wire conforming to relevant ISS or extending the original wiring and giving connection etc. as required.					

2.1	1x28wT5 fitting with APF electronic ballast suitable for continuous operation with THD <10%, power factor >0.98, RoHS compliant, high lumen tube .	8.00	E			14,184.00
				1,773.00	Rs.One thousand four hundred & seventy three only	
3	<i>Supply</i> , conveyance, installation, testing and commissioning of ceiling fans of the following sizes using standard accessories <i>excluding resistance type regulator</i> , wiring the down rod with 16/0.20mm PVC insulated and PVC sheathed 650/1100V grade 3 core round copper conductor flex wire or with extended original wiring etc. as required.					
3	1200 mm sweep - 5 star rated	1.00	E		Rs. One thousand eight hundred & fifty three only	1,853.00
				1,853.00		
4	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.					
4.1	20 mm dia light gauge	170.00	m	83.00	Rs.Eighty three only	14,110.00
4.2	25 mm dia light gauge	15.00	m	95.00	Rs.Ninety five only	1,425.00
5	Supply and fixing the following sizes of <i>PVC Conduit</i> conforming to IS 9537 / 1983 part III along with all required accessories <i>in recess</i> including cutting the wall and making good the damages etc as required.					
5.1	20 mm dia light gauge	10.00	m	120.00	Rs.One hundred & twenty only	1,200.00
5.2	25 mm dia light gauge	5.00	m			665.00
				133.00	Rs.One hundred & thirty three only	
6	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.					

6.1	4.00 sq mm 2 run	70.00	m	106.00	Rs.One hundred & six only	7,420.00
6.2	2.50 sq mm 1 run	70.00	m	55.00	Rs.Fifty five only	3,850.00
6.3	2.50 sq mm 2 run	120.00	m	81.00	Rs.Eighty one only	9,720.00
6.4	1.50 sq mm 1 run	120.00	m	45.00	Rs.Forty five only	5,400.00
6.5	2.50 sq mm 4 run	20.00	m	134.00	Rs.One hundred & thirty four only	2,680.00
6.6	1.50 sq mm 2 run	20.00	m	61.00	Rs.Sixty one only	1,220.00
6.7	6.00 sq mm 4 run	20.00	m	260.00	Rs.Two hundred & sixty only	5,200.00
7	Supply and fixing <i>SP & N metal case enclosure</i> with 2 pole and earth plug socket with pin suitable for incorporating , SP MCB (excluding cost of SP MCB) in surface/ recess including giving necessary connections, making good the damages etc. as required.					
7.1	250V, 20A, 2 pole and earth	3.00	E	917.00	Rs.Nine hundred & seventeen only	2,751.00
8	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 (<i>Group B/ RoHS compliant</i>)					
8.1	12 module metal box in recess	5.00	E	354.00	Rs.Three hundred & fifty four only	1,770.00
8.2	16 module moulded plastic box on surface	7.00	E	333.00	Rs. Three hundred & thirty three only	2,331.00
9	Supply & Fixing the following types/ sizes of front plates on the existing modular boxes. (<i>Group B/ RoHS compliant</i>)		E			
9.1	12 module white/ off-white	5.00	E	251.00	Rs.Two hundred & fifty one only	1,255.00
9.2	16 module white/ off-white	7.00	E	270.00	Rs.Two hundred & seventy only	1,890.00
10	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>)		E			
10.1	6 A SP 1 way switch	43.00	E	119.00	Rs. One hundred & nineteen only	5,117.00

10.2	6A 3 pin shuttered socket	57.00	E	157.00	Rs.One hundred & fifty seven only	8,949.00
10.3	16 A SP 1 way switch	5.00	E	161.00	Rs.One hundred & sixty one only	805.00
10.4	6/16 A socket	5.00	E	223.00	Rs.Two hundred & twenty three only	1,115.00
11	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					
11.1	4 way (8+12) - three phase double cover (IP 42/43)	1.00	E	3,329.00	Rs.Three thousand three hundred & twenty nine only	3,329.00
11.2	12 way single phase double cover (IP 42/43) after dismantling the existing rewirable type DB	1.00	E	1,899.00	Rs.One thousand eight hundred & ninety nine only	1,899.00
11.3	40 A double pole mini break isolator	1.00	E	356.00	Rs. Three hundred & fifty six only	356.00
11.4	40 A four pole mini break isolator	1.00	E	716.00	Rs.Seven hundred & sixteen only	716.00
12	S & F SP MCB					
12.1	6-32A(C curve)	20.00	E	219.00	Rs.Two hundred & nineteen only	4,380.00
12.2	40 A, 2 pole, 30 mA RCCB	1.00	E	2,357.00	Rs.Two thousand three hundred & fifty seven only	2,357.00
12.3	40 A, 4 pole, 100 mA RCCB	1.00	E	2,881.00	Rs.Two thousand eight hundred & eighty one only	2,881.00
12.4	40 A, 10 kA, TP MCB (C curve)	1.00	E	1,369.00	Rs.One thousand three hundred & sixty nine only	1,369.00
13	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					
13.1	25 x 3mm brass bolt & nut	10.00	E	17.00	Rs.Seventeen only	170.00

14	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.	1.00	E			2,324.00
				2,324.00	Rs.Two thousand three hundred & twenty four only	
14.1	25 x 3mm brass bolt & nut	10.00	E	17.00	Rs.Seventeen only	170.00
15	Dismantling the existing electrical installations and conveyiong to section store without further damage					981.00
		1.00	Job	981.00	Rs.Nine hundred & eighty one only	
						263,764.00

PAC Rs.2,63,764/- (Rupees Two Lakhs Sixty Three thousand Seven Hundred and Sixty Four Only)

I/We agreed to execute the work.

1.% above the estimate rate

2.percentage below the estimate rate

3. At the estimate rate.

CONTRACTOR

UNIVERSITY ENGINEER

