

**University of Kerala**

**Engineering Unit**

**TENDER SCHEDULE FOR THE WORK OF UNDER GROUND CABLE CONNECTION WITH OUT DOOR PILLAR BOX AT NEWLY CONSTRUCTED OPEN WEL NEAR HYMAVATHY PUMP HOUSE , KARIAVATTOM CAMPUS. (RETENDER)**

| Sl.No | Qty |                | Specification   | Unit           | Rate     | Rate in words                                   | Amount    |
|-------|-----|----------------|---|----------------|----------|---|-----------|
| 1     |     |                | Fabrication, supply, conveyance, installation testing and commissioning of dust and vermin proof, cubicle type Out door feeder pillar box of size 1000x1000x300 mm made out of 2 mm thick CRCA sheet with four compartment with copium at the top for rain water protection and hinged door at the front side with lock and key arrangement, earthing .all doors with 4 sqmm braided copper,provisions for accommodating 1 no 3 phase 4 way Vertical DB double cover, 2 Nos Fully Automatic star Delta Starter, Phase indication Lamps, providing necessary cut outs for mounting indication lamps, control fuses , knockouts for cable entry and exit etc painting and powder coating the assembly comprising of the following components/ devices & complying to IS 8623. fixing the same in ground using suitable size painted angle iron frame grouted with cement concrete etc as required |                |          |   |           |
|       | 5.5 | m <sup>2</sup> |   | m <sup>2</sup> | 3,308.00 | Rs.Three thousand three hundred & Ps eight only | 18,194.00 |
| 2     |     |                | 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.   |                |          |   |           |

|     |     |    |   |    |          |   |          |
|-----|-----|----|---|----|----------|---|----------|
| 2.1 | 0.2 | m2 | 2 mm thick  | m2 | 3,184.00 | Rs.Three thousand one hundred & Ps eighty four only | 636.80   |
| 3   |     |    | 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   |    |          |   |          |
| 3.1 | 15  | m  | U' section rubber beeding suitable for 1.60/ 2.00 mm sheet  | m  | 8.00     | Rs.Eight oly  | 120.00   |
| 4   |     |    | 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 |    |          |   |          |
| 4.1 | 1   | no | 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  | 7,739.00 | Rs.Seven thousand seven hundred & thirty nine only  | 7,739.00 |
| 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  |    |          |   |          |
| 5.1 | 1   | no | 63 A four pole mini break isolator  | E  | 752.00   | Rs.Seven hundred & fifty two only                   | 752.00   |

|      |     |     |   |   |          |   |           |
|------|-----|-----|---|---|----------|---|-----------|
| 5.2  | 1   | no  | 63 A, 4 pole, 300 mA RCCB   | E | 3,334.00 | Rs.Three thousad three hundred & thirty four only | 3,334.00  |
| 5.3  | 3   | no  | 32 A, 10 KA, D Curve TP MCB   | E | 964.00   | Rs.Nine hundred & sixty four only                 | 2,892.00  |
| 5.4  | 3   | no  | 6-32A( C curve) SP MCB  | E | 219.00   | Rs.Two hundred & nineteen only                    | 657.00    |
| 6    | 1   | no  | Dismantling the existing Automatic Start Delta starter from the pump house and refixing the same in the newly erected pillar box using suitable size bolts and nuts with washers and giving connections etc as required                       | E | 750.00   | Rs.Seven hundred & fifty only                     | 750.00    |
| 7    | 9   | Nos | LED indicators for all voltage ranges - Red, Green, Black, Yellow or Orange Colour  | E | 123.00   | Rs.One hundred & ps twenty three only             | 1,107.00  |
| 8    | 9   | No  | 16 A, 415 V, HRC type Kit kat fuse unit.  | E | 84.50    | Rs.Eighty four & ps only                          | 760.50    |
| 9    | 9   | No  | 2 A, clip-on offset tag fuse link (Group B)   | E | 43.00    | Rs.Forty three only                               | 387.00    |
| 10   | 1   | no  | Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions ( both in English and Malayalam) and conventional Skull and Bone in Red colour.  | E | 126.00   | Rs.One hundred & twenty six only                  | 126.00    |
| 11   |     |     | Supply and drawing PVC insulated & sheathed 650/1100 V grade <i>3 core copper conductor flat cable for submersible pump motor</i> conforming to IS 694 part I 1990 as required including giving necessary connections of the following sizes. |   |          |   |           |
| 11.1 | 120 | m   | 4.00 sq. mm   | m | 153.00   | Rs.One hundred & fifty three only                 | 18,360.00 |

|      |     |     |   |   |        |                                    |           |
|------|-----|-----|---|---|--------|------------------------------------|-----------|
| 12   |     |     | Supply & laying of one number PVC insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade of the following sizes in the existing RCC/ HUME / STONE WARE/ GI/ DWC pipe as required.   |   |        |                                    |           |
| 12.1 | 165 | m   | 4 core 50 sq mm   | m | 417.00 | Rs.Four hundred & seventeen only   | 68,805.00 |
| 13   |     |     | 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. |   |        |                                    |           |
| 13.1 | 15  | m   | 4c 50 sqmm  | m | 435.00 | Rs.Four hundred & thirty five only | 6,525.00  |
| 14   |     |     | Supply & laying of DWC pipe in <b>ordinary soil</b> 0.75m below ground level including excavation   |   |        |                                    |           |
| 14.1 | 165 | m   | 50 / 38 mm or nearest size  | m | 164.00 | Rs.One hundred & sixty four only   | 27,060.00 |
| 15   | 6   | nos | Supply route marker with 102mmx102mm <i>cast iron, spike</i> 5mm thick with inscription 'LT Cable' there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.  | e | 194.00 | Rs.One hundred & ninety four only  | 1,164.00  |

|      |    |     |  |   |        |                                 |          |
|------|----|-----|--|---|--------|---------------------------------|----------|
| 16   |    |     | Supply and providing the following sizes of <i>PVC pipe</i> in the existing trench with all required accessories e tc. as required as protective covering to cables.   |   |        |                                 |          |
| 16.1 | 40 | m   | 32 mm PVC pipe ( 8 Kgf/cm2   | m | 47.00  | Rs.Forty seven only             | 1,880.00 |
| 17   |    |     | 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. |   |        |                                 |          |
| 17.1 | 2  | nos | 50 sq mm   | E | 646.00 | Rs.Six hundred & forty six only | 1,292.00 |
| 18   |    |     | 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.  |   |        |                                 |          |
| 18   | 2  | Nos | 25 sq - 95sq mm with 20 mm wide x 1.20 mm thick clip   | E | 27.00  | Rs.Twenty seven only            | 54.00    |
| 19   |    |     | Supply of superior quality <i>aluminium reducer (banana) cable socket</i> and making core termination of cables of the following sizes including crimping etc. as required.  |   |        |                                 |          |
| 19   | 8  | nos | 35 sq mm   | E | 25.00  | Rs.Twenty five only             | 200.00   |

|      |       |  |   |          |   |          |
|------|-------|--|---|----------|---|----------|
| 20   | 2 nos | Supply and providing <i>plate earthing</i> as per IS 3043 <i>with 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. <i>(in ordinary soil)</i> | E | 3,917.00 | Rs.Three thousand nine hundred & seventeen only | 7,834.00 |
| 21   |       | 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  |   |          |   |          |
| 21.1 | 2 nos | 300 x 300 x 6 mm cast iron gully trap with covering  | E | 267.00   | Rs.Two hundred & sixty seven only               | 534.00   |
| 22   |       | 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.   |   |          |   |          |
| 22.1 | 1 no  | 2 x 25 x 3 mm GI strip   | m | 165.00   | Rs.One hundred & sixty five only                | 165.00   |

|      |    |     |   |   |        |                            |          |
|------|----|-----|---|---|--------|----------------------------|----------|
| 23   |    |     | 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. |   |        |                            |          |
| 23.1 | 4  | m   | 25 x 3 mm GI strip  | m | 73.00  | Rs.Seventy three only      | 292.00   |
| 24   |    |     | Supply and drawing bare <i>earthing conductors</i> of the following sizes <i>along with wiring/ cables</i> and giving connection as required.   |   |        |                            |          |
| 24.1 | 15 | m   | 4.00 mm copper conductor (8 SWG)  | m | 97.00  | Rs.Ninety seven only       | 1,455.00 |
| 25   |    |     | Supply and laying bare <i>earthing conductors</i> of the following sizes <i>laid 0.6 m below ground level including excavating trench</i> of suitable size and refilling etc. as required ( <i>in ordinary soil</i> ).                                    |   |        |                            |          |
| 25.1 | 40 | m   | 4.00 mm copper conductor (8 SWG)  | m | 107.00 | Rs.One hundred& seven only | 4,280.00 |
| 26   |    |     | supply of superior quality <i>copper earth socket</i> for the following sizes of earth conductor including crimping etc. as required.   |   |        |                            |          |
| 26.1 | 10 | nos | 4.00 mm (8 SWG)   | E | 23.00  | Rs.Twenty three only       | 230.00   |
| 27   |    |     | 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   |   |        |                            |          |
| 27.1 | 10 | nos | 25 x 3mm brass bolt & nut   | E | 17.00  | Rs.Seventeen only          | 170.00   |

|      |    |     |   |   |        |                                   |          |
|------|----|-----|---|---|--------|-----------------------------------|----------|
| 28   |    |     | Supplying , threading , laying and jointing of the following sizes of 'B' class <i>GI pipe</i> with all required accessories <i>in ground in the existing trench</i> as protective covering to earth leads.   |   |        |                                   |          |
| 28.1 | 15 | m   | 15 mm dia   | m | 90.00  | Rs.Ninety only                    | 1,350.00 |
| 29   |    |     | 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> . |   |        |                                   |          |
| 29.1 | 3  | nos | Single control light point with 6A, 3 plate ceiling rose  | E | 841.00 | Rs.Eight hundred & forty one only | 2,523.00 |



|      |   |                |   |                |          |   |                   |
|------|---|----------------|---|----------------|----------|---|-------------------|
| 30   | 2 | nos            | Supply, conveyance, installation, testing and commissioning of pre-wired 48 W LED pressure die cast aluminium IP66 Outdoor light fitting complete with all accessories in the existing GI pipe 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.( Havels make ENDURA CITYLINER NEO/Philips/Crompton/Bajaj) | E              | 6,884.00 | Rs.Six thousand eight hundred & eighty four only      | 13,768.00         |
| 31   |   |                | Supply and <i>clamping</i> the following sizes of "B" class <i>GI pipe</i> on wall with all required accessories & clamps etc., including cutting and making good the walls, painting the exposed portions etc., <i>as protective covering to earth leads / cables.</i>   |                |          |   |                   |
| 31.1 | 5 | m              | 25 mm dia   | m              | 207.00   | Rs.Two hundred & seven only                           | 1,035.00          |
| 32   |   |                | <b><i>Earth work excavation</i></b>   |                |          |   |                   |
| 32.1 | 2 | m <sup>3</sup> | Earth work excavation in <i>hard soil</i> and depositing with a lead up to 50 m and lift up to 1.50 m including neat banking  | m <sup>3</sup> | 237.37   | Rs.Two hundred & thirty seven & ps. Thirty seven only | 474.74            |
|      |   |                | <b>Total Rs</b>   |                |          |   | <b>196,906.04</b> |

PAC Rs.1,96,906/- (Rs.One lakh ninety six thousand nine hundred & six only)

I/We agreed to execute the rate.

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

1. ....% above the estimate rate

3. At the estimate rate.

**CONTRACTOR**

Sd/-  
**UNIVERSITY ENGINEER**