

**OFFICE OF THE SUPERINTENDING ENGINEER, PWD, BUILDING CONSTRUCTION & MAINTENANCE CIRCLE, TIRUNELVELI.**

**Name of Work: Providing Internal and External Electrification to the Newly Constructed Prefabricated Structure Workshop and Laboratory in Government **ITI at Tenkasi** in Tenkasi District.**

<b>Sl No</b>	<b>Qty</b>	<b>Description of work</b>	<b>Rate</b>	<b>Per</b>	<b>Amount</b>
1	74 Pts (Seventy Four Poinys Only)	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed copper conductor cable of 1100V grade in suitable heavy gauge MS conduit pipe on wall and ceiling with MS accessories with Flush type Metal Box and 6A Modular switch with continous earth wire connection of 1sq.mm unsheathed Cu.conductor with painting of suitable colour for making good of the concealed portion with suitable colour for light point / Fan point (for electronic regulator). (Legrand make)		Pts	
2	87 Pts (Eighty Seven Points only)	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed copper conductor cable of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessoires in flush with wall with Flush type Metal Box and 6A Modular switch with Light/Fan marking & painting of suitable colour for making good of the concealed portion with suitable colour for PVC concealed light point / fan point (for electronic regulator) (Legrand make) (5Pts/Coil)		Pts	

3	14 Pts (Fourteen Points only)	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed copper conductor cable of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessoires in flush with wall with Flush type Metal Box and 6A Modular switch with Light/Fan marking & painting of suitable colour for making good of the concealed portion with suitable colour for PVC concealed light point / fan point (for electronic regulator) (Legrand make) (6Pts/Coil) (for rooms like bath, toilet & pumproom, etc.).		Pts	
4	6 Nos (Six Numbers only)	Supply and fixing of 20 W Surface Single 4' LED fitting complete on wall with PVC unsheathed Copper leads from the terminals to the fittings (philips/Havells make).		Ea	
5	8 Nos (Eight Numbers only)	Supply and fixing of WT bulk head fitting with guard (Philips / Bajaj / Crompton make) suitable for 9W LED lamp		Ea	
6	2 Nos (Two Numbers only)	Supply and fixing of 24W LED 1'X1' square type surface mounted LED light fitting on ceiling with connection complete. (havells/equ make)		Ea	
7	52 Nos (Fifty Two Numbers only)	Supply and fixing of 42 W LED 2x2 square type recessed mounted LED fitting on false ceiling with connection complete. (havells /eq make)		Ea	

8	20 Nos (Twenty Numbers Only)	Supply and fixing of 1200 mm (48") AC crompton High speed ceiling fan complete with stepped electronic 100W regulator of Crabtree/ Legrand /Eq. with 3.0Mtr down rod on MS fan clamp.		Ea	
9	24 Nos (Twenty Four Numbers Only)	Supply and fixing of 400mm (16") wall mounted fan (Almonard make) in the existing point on wall with connection complete.		Ea	
10	9 Nos (Nine Numbers Only)	Supply and fixing of 600mm Air circulator fan (Almonard make) in the existing point on wall with connection complete.		Ea	
11	8 Nos (Eight Numbers Only)	Supply and fixing of 48W LED street light fitting with 1 metre 25mm dia GI pipe (class B) with 1 no 25mm dia GI bend complete on the existing post/wall with PVC unsheathed copper leads MS clamps with aluminium painting with connecting leads from terminals to the fitting.		Ea	

12	6 Nos ( Six Numbers Only)	Supply and erection of 65mm (2 1/2") dia G.I. pipe (class-B) of 6 mtr length with 300mm x 300 x 6mm MS base plate, duly welded at the bottom with concreting with construction of Masonry pedestal with fixing the SMC Junction Box fire proof and shock proof with suitable clamp of size 275 x 150 x 100mm with door and lock and key arrangements in incorporating 1 No 10A SP MCB for control to be housed in the above junction box with painting and supply and fixing of Street light Luminaire with deep drawn MS housing with epoxy powder coated finish and acrylic cover suitable for Energy saving and environmental friendly long life 48W LED street light on Higher end (Philips/ Havells / Eq.) of 25mm dia G.I. pipe (class B) and 25mm dia GI bend with suitable cowl arrangements and using 3 Nos of bolt fixing on the above post including inter connection with PVC unsheathed leads with painting of suitable colour		Ea	
13	36 Nos ( Thirty Six Numbers Only)	Supply and fixing of 120W Highbay LED fitting on the post / wall with MS clamps and with connection complete (Havells SAUCER NEXTGEN HIGHBAY/eq make).		Ea	
14	3 Nos ( Three Numbers Only)	Supply and fixing of 300 mm (12") sweep (light duty) AC exhaust fan complete without provision of hole in the wall.		Ea	
15	3 Nos ( Three Numbers Only)	Supply and fixing of louvers shutters arrangements for 300mm (12") sweep (light duty) AC Exhaust fan.		Ea	
16	9 Nos ( Nine Numbers Only)	Supply and fixing of Heavy duty Exhaust fan 15" with necessary wall opening with clamps.		Ea	
17	9 Nos ( Nine Numbers Only)	Supply and fixing of louvers shutters arrangements for 375mm (15") sweep light duty AC Exhaust fan.		Ea	

18	147 Nos ( One Hundred Forty Seven Numbers only)	Supply and fixing of 8 Module Metal Box With Front Plate With 2 Nos.16A Modular Indicator Switch, 2 Nos 6A/16A Socket (3 module) in flush with wall with necessary earth connection. (Legrand Make)		Ea	
19	10 Nos ( Ten Numbers only)	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) [Legrand (MDS) / Hager (L&T) make]		Ea	
20	8 Nos (Eight Numbers only)	Supply and fixing of 32A Double pole MCB in sheet steel enclosure in flush with wall and making good of the concealed portion with earth connection.[The MCB and metal enclosure should be of Legrand (MDS) / Hager (L&T) make].		Ea	
21	4 Nos ( Four Numbers only)	Supply and fixing of 63A Four pole MCB in sheet steel enclosure in flush with wall and making good of the concealed portion with earth connection.[The MCB and metal enclosure should be of Legrand (MDS) / Hager (L&T) make].		Ea	
22	9 Nos ( Nine Numbers Only)	Supply and fixing of 32A, FP (3P+N+E ) P 17 Tempera Plug and Socket DB with 32A FP MCB with suitable cable entry box and internal connections on suitable angle iron frame work with earth connection only. (The FP Tempera Plug and Socket DB and FP MCB should be (Legrand (MDS) / Hager(L & T) make.		Ea	

23	2 Nos (Two Numbers Only)	Supply and fixing of 63A, FP (3P+N+E ) P 17 Tempera Plug and Socket DB with 63A FP MCB with suitable cable entry box and internal connections on suitable angle iron frame work with earth connection only. (The FP Tempera Plug and Socket DB and FP MCB should be (Legrand (MDS) / Hager(L & T) make.		Ea	
24	1 No (One Number Only)	Supply and fixing of 4 Way 7 segment TPN MCB distribution board with metal double door cover with IP 42 protection in sheet steel enclosure with 63A 4 pole MCB isolator as incoming and 3Nos32A DP MCB and 25A 30mA DP RCCB/ELCB,and 12 Nos.6A to 32 A SP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCBDB and MCB's should be Legrand /Hager make)		Ea	
25	5 Nos ( Five Numbers Only)	Supply and fixing of 12way single pole and neutral MCB sheet steel enclosure with IP 42 protection with 1No 32 Amps DP MCB as incoming and 10 Nos 6 Amps to 32 Amps SPMCB as outgoing inflush with wall and making good of the concealed portion with earth connection only. (The MCB DB and MCB's should be of Legrand/Hager make)		Ea	

26	5 Nos ( Five Numbers Only)	supply and fixing of Vertical type 8 way triple pole neutral MCB distribution board in sheet steel enclosure double door type with metal door cover with IP 42 protection with 100A FP MCB isolator as incoming and 4 Nos. 32A TP MCB, 2 Nos. 63A TP MCB as outgoing inflush with wall with earth connection. (The MCBDB and MCB's should be with Legrand / Hager make.		Ea	
27	5 No ( Five Numbers Only)	supply and fixing of Horizontal type 6 way triple pole neutral MCB distribution board in sheet steel enclosure double door type with metal door cover with IP 42 protection with 63A FP MCB isolator as incoming and 18 Nos. 32A SPN MCB as outgoing inflush with wall with earth connection. (The MCBDB and MCB's should be with Legrand / Hager make. (for Class Room 16A set plugs)		Ea	
28	200 Mtrs (Two Hundred Meters Only)	Supply and run of 2 of 6 sq.mm. (84 / 0.3) PVC insulated SC unsheathed copper conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with contiinuous earth wire connection of 14 SWG TC wire and making good of the concealed portion with suitable colour. (For LDBS & 32A DP)		Mtr	

29	1400 Mtrs (One Thousand Four Hundred Meters Only)	Supply and run of 2 of 4 sq.mm. (56 / 0.3) PVC insulated SC unsheathed copper conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with continuous earth wire connection of 14 SWG TC wire and making good of the concealed portion with suitable colour.		Mtr	
30	250 Mtrs (Two Hundred Fifty Meters Only)	Supply and run of 2 of 6 sq.mm. (84 / 0.3) PVC insulated SC unsheathed copper conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with continuous earth wire connection of 14 SWG TC wire and making good of the concealed portion with suitable colour. (For LDBS & 32A DP)		Mtr	
31	150 Mtrs (One Hundred Fifty Meters Only)	Supply and laying of 2 x 10 sq.mm PVC armoured LTUG cable in a trench to be excavated at a depth of 0.75 metre putting 0.15 mt. Layer of sand and covering the cable completely with bricks and sand and refilling the earth to make good. (For Street Light Post)		Mtr	
32	30 Mtrs (Thirty Meters Only)	Supply and clarnping of 2 x 10 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. (For Street Light Post)		Mtr	
33	500 Mtrs (Five Hundred Meters Only)	Supply and clarnping of 3-1/2 x 25 sq.mm. PVC LTUG armoured cable on post or on wall with MS clamps.		Mtr	



34	16 Nos (Sixteen Numbers Only)	Supply and fixing of brass cable gland for 3-1/2 x 25 sq.mm. PVC armoured LTUG cable with earth connection.		Ea	
35	16 Nos (Sixteen Numbers Only)	Supply and providing cable end termination of 3-1/2 x 25 sq.mm. PVC LTUG aluminium armoured cable with necessary aluminium cable sockets by crimping etc with electrical connection complete.		Ea	
36	350 Mtrs (Three Hundred Fifty Meters Only)	Supply and clamping of 3 ½ x 50 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. (SD-224) (For 100A in Vertical DB)		Mtr	
37	10 Nos (Ten Numbers Only)	Supply and fixing of brass cable gland for 3½ x50 sqmm PVC armoured LTUG cable with earth connection		Ea	
38	10 Nos (Ten Numbers Only)	Supply and providing cable end termination of 3½ x 50 sqmm PVC LTUG Aluminium armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete		Ea	
39	154 Mtrs (One Hundred Fifty Four Meters Only)	Supply and run of No-8 SWG Cu Conductor in suitable PVC rigid pipe on wall and ceiling with painting of suitable colour.		Mtr	
40	70 Mtrs (Seventy Meters Only)	Supply and run of 25mm x 3mm tinned copper flat with necessary clamps / supports on wall / floor / ground for earth connection.		Mtr	

41	14 Nos (Fourteen Numbers Only)	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 .		Ea	
42	10 Nos (Ten Numbers Only)	Earthing as per P.W.D standard with an earth electrode of 2 Mtr. Class 'B' GI pipe of dia not less than 32mm complete with necessary masonry work.		Ea	
43	10 Nos (Ten Numbers Only)	Supply and erection of 2.0 Ton 5 STAR rated Carrier make Duractiv Split type Airconditioners (4800 K.cal/hr) GI sheet (ABS, HIPS plastic Fitted with Hermetically,scaled compressors operating refrigerant R-22/non CFC suitable (for floor mounting and ceiling mounting) confirming to IS 1391 (part2) 92 (AMDT .1)(except power consumption Norms) suitable,operation on 230V,50HZ single phase AC supply. a. Mounting/Filting Indoor & Outdoor units at their respective location. b. Laying Refrigerant pipe line of required length connecting both units units after drilling hole/ holes in the wall,if required .Thckness of copper tubing shall not be less than 0.7 mm		Ea	

		<p>c. Insulating the suction pipe with expanded pol yethelene foam 5mm tubing</p> <p>.d.Laying 15mm dia flexible pvc drain pipe to throw out the condensate water being formed in the indoor unit.</p> <p>e. Leak testing the entire system unit</p> <p>f. Charging Refrigerant gas in the unit</p> <p>g.Suitable electric wiring &amp; switch should be provided with in 3 meters of the location of unit.</p>			
44	10 Nos (Ten Numbers Only)	Supplying and installation of 5KVA electronic wide range automatic voltage stabilizer (V. Guard / equ. 500/ equ. ) with input range of 140 - 270 V and out put voltage cut off and 3 minutes time delay relay with demonstration.		Ea	
45	40 Mtrs (Forty Meters Only)	Supply and laying of 1/2" and 3/8" copper refrigerant pipe of 0.8mm thick with 2.5sqmm 3 core chord between indoor and outdoor unit. (Extra beyond 3 mts/AC unit)		Mtr	
46	10 Nos (Ten Numbers Only)	Supply and fixing of MS stand for fixing outdoor unit		Ea	

47	1 (One Number Only)	<p>Supply and erection of 250 A capacity dust and vermin proof cubical panel board size of 7'X 5' X 1' made up of 16 SWG CRCA sheet steel for outer body, with doors, switch supports and separations etc., and with supply and fixing of the following interior switch with bus bar chamber complete with 1 "X1/4" tinned cu. Flat for 3 phase , neutral and 2 Nos 25 x 3 mm tinned cu flat for earth connections with bus bar insulators complete with the following tinned Cu flat should be used between busbar and switches 25 X 6 mm tinned cu. Flat for interconnection of 250A incoming switch to bus bar,</p> <p>25 X 3 mm tinned cu. Flat for 7 Nos 100A outgoing Switch and No:8 SWG HDBC conductor for 7 Nos 63A Outgoing Switches and including supply and fixing of multifunction meter (VAF) with suitable CT –coil, selector switches &amp; indication lamps with HRC fuses connections complete etc.The panel should be fabricated as per IE rules &amp; CEIG specification.The housing accommodate 15 Nos 3 phase switches and supply and fixing of the following switches.</p>		Ea	
----	---------------------	---	--	----	--

		<p>1. 250 A FP switch disconnecter fuse units interior only with HRC fuses double break-1 no</p> <p>2. 100A TPN switch disconnecter fuse units interior only with HRC fuses double break- 7 nos</p> <p>3. 63 A TPN switch disconnecter fuse units interior only with HRC fuses double break- 7 nos</p> <p>The panel board should be painted with two coats of high quality epoxy paint over one coat of red oxide primer with superscriptions. (lettering and numbering) The above cubical panel board rest on suitable angle iron base. (All switches should be L&amp;T/siemens)</p>			
48	70 Mtrs (Seventy Metres Only)	Supply and laying of 3 compartment GI raceways in flush with ground surface floor/Tile with necessary Coupler and fixing bracket for the laying the Electrical cables and LAN port CAT-6 cables.		Mtr	
49	8 Nos (Eight Numbers Only)	Supply and fixing of 3 compartment GI Adjustable junction boxes suitable for the 3 compartment GI raceways with Cover with necessary Coupler, brackets and junction boxes for the laying the Electrical cables and LAN port CAT-6 cables.		Ea	
50	28 Nos (Twenty Eight Numbers Only)	Supply and fixing of wire outlet boxes suitable for 3 compartment GI raceways for Tap off the Electrical cables and LAN port CAT-6 cables.		Ea	

51	2 Nos (Two Numbers only)	Supply, Installation, Testing and commissioning of 15 KVA UPS system 3 phaseinput and Single phase output and as per the detailed specification enclosed, Sealed Maintenance free batteries to support 15 KVA for 2 hrs backup complete with intercell connectors & copper cables, battery stand made out of powder coated MS Angles with adequate support to carry the load of the batteries. The vendor shall submit dimensional GA drawing of complete UPS/ Inverter system battery rack with batteries, Service panel and battery bank calculation. (SOR rate) (For lighting Hz DB and Class rooms 15A plugs)		Ea	
		Sub - Total		Rs	
		GST @ 12%		Rs	
		<b>Total</b>		<b>Rs:</b>	

Superintending Engineer, PWD, (I/C)  
Building (Constn & Mtce ) Circle,  
Tirunelveli-2