

CONSTRUCTION OF W & C BLOCK FOR TALUK HOSPITAL, ALATHUR

PART II - ELECTRICAL WORKS

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Point	195		
2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Point	5		
3	Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in recessed medium class PVC conduit as required.				
a	2x1.5 sq.mm + 1x1.5 sq.mm earth wire	Rm	730		
b	2x2.5 sq.mm + 1x2.5 sq mm earth wire	Rm	640		
c	2x4 sq.mm + 1x4 sq mm earth wire	Rm	490		
d	2x6 sq. mm + 1x6 sq. mm earth wire	Rm	80		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
4	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in recess including cutting the wall and making good the same in case of recessed conduit as required.				
a	20 mm	Rm	280		
b	25 mm	Rm	160		
5	Supply and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.				
a	200 mm x 250 mm x 100 mm deep	Each	5		
b	250 mm x 300 mm x 100 mm deep	Each	5		
6	Supplying and fixing following size / modules, PVC box alongwith modular base & cover for modular telephone/ data sockets in recess etc as required.				
	1 or 2 module	Each	20		
7	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
a	Telephone socket outlet	Each	15		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
b	TV antenna socket outlet	Each	2		
8	Supplying and drawing following pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
a	2 Pair	Rm	300		
b	4 pair	Rm	80		
9	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	Rm	40		
10	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required.	Each	75		
11	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	25		
12	Supplying and fixing of call bell or buzzer suitable for single phase 230 volts, complete as required	Each	3		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
13	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	30		
14	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	80		
15	Supplying and fixing modular blanking plate on the existing modular plate and switch box excluding modular plate as required.	Each	60		
16	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, false ceiling with chain and hook including connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	110		
17	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	30		
18	Supplying and fixing extra down rod of 20 cm length GI pipe, 15 mm dia, heavy gauge including painting etc, as required.(Note More than 5 cm length shall be rounded to the nearest 10cm and 5cm or less shall be ignored).	Each	30		
19	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
	Upto 450 mm sweep	Each	10		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
20	Supply laying and termination of 4 pair CAT 6 UTP cable in the exisiting surface / recessed steel / PVC conduit as required.	Rm	150		
21	Providing and fixing 100 Amps, 16kA, TP rating and breaking capacity MCCB in the existing cubicle panel board / DBs including drilling holes in cubicle panel, making connections etc as required.	Each	1		
22	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
	2 + 12 way/14 way, Double door	Each	2		
23	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
a	4 way, Double door	Each	4		
b	6 way, Double door	Each	2		
c	8 way, Double door	Each	1		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
24	Supplying and fixing following way, surface / recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required)				
a	4 way, Double door	Each	4		
b	8 way, Double door	Each	1		
25	Supplying and fixing following rating, double pole, 240 volts,isolator in the existing MCB DB complete with connections,testing and commissioning etc. as required.				
a	40 amps	Each	1		
b	63 amps	Each	1		
26	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current of 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	40 amps	Each	1		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
b	63 amps	Each	1		
27	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	Single pole	Each	90		
b	Double pole	Each	2		
c	Triple pole	Each	12		
d	Triple pole and neutral	Each	8		
28	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc as required.	Each	25		
29	Supplying and fixing following rating, four pole, 415 volts,isolator in the existing MCB DB complete with connections,testing and commissioning etc. as required.				
a	40 amps	Each	12		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
b	63 amps	Each	5		
30	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current of 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	25 amps	Each	5		
b	40 amps	Each	3		
c	63 amps	Each	2		
31	Supply and fixing FP sheet steel enclosure on surface / recess along with 16/25/32 amps 415 volt "C" curve FP MCB complete with connection, testing and commissioning etc as required.	Each	2		
32	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps, C curve SP MCB in sheet steel enclosure on surface or in recess, with chained metal cover for the socket outlet and complete with connection, testing and commissioning etc as required.	Each	15		
33	Supply and installing following size of perforated GI cable tray with perforations not more than 17.5% in convenient sections, joined with connectors, fixed to surface / suspended from the ceiling with GI suspenders including bolt & nuts, including required bends, tees, reducers etc as required.				

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
a	200 mm width x 50 mm depth x 1.6 mm thickness	Rm	80		
b	300 mm width x 50 mm depth x 1.6 mm thickness	Rm	60		
34	Earthing with G.I. earth pipe 3 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke as required.	Each	2		
35	Earthing with G.I. earth plate 600 mm x 600 mm x 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 m long etc. with charcoal/ coke as required.	Each	4		
36	Supplying and laying 6 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/ termination with GI thimble etc. as required.	Rm	60		
37	Supplying and laying 25 mm x 5 mm GI strip at 0.50 metre below ground as strip earth electrode, including connection/ termination with GI nut, bolt, spring, washer etc. as required (Jointing shall be done by overlapping and with 2 sets of GI nut, bolt & spring washer spaced at 50mm).	Rm	60		
38	Providing and fixing 25 x 5 mm GI strip on surface or in recess for connection etc as required.	Rm	140		
39	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Rm	230		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
40	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring/cable as required.	Rm	250		
41	Laying of one no. PVC insulated and PVC sheathed / XLPE power cable of 1.1kV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
a	Upto 35 sqmm	Rm	10		
b	Above 35 sqmm and upto upto 95sqmm	Rm	10		
c	Above 95 sqmm and upto upto 185sqmm	Rm	210		
42	Laying of one no. PVC insulated and PVC sheathed / XLPE power cable of 1.1kV grade of following size in the existing RCC / Hume / Metal pipe as required.				
a	Upto 35 sqmm	Rm	10		
b	Above 35 sqmm and upto upto 95sqmm	Rm	10		
c	Above 95 sqmm and upto upto 185sqmm	Rm	10		
43	Laying of one no. PVC insulated and PVC sheathed / XLPE power cable of 1.1kV grade of following size on wall surface as required.				

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
a	Upto 35 sqmm (clamped with 1mm thick saddle)	Rm	310		
b	Above 35 sqmm and upto 95 sqmm (clamped with 25 x 3 mm MS flat clamp)	Rm	20		
c	Above 95 sqmm and upto 185 sqmm (clamped with 25/40 x 3 mm MS flat clamp)	Rm	10		
44	Laying of one no. PVC insulated and PVC sheathed / XLPE power cable of 1.1kV grade of following size on cable tray as required.				
a	Upto 35 sqmm (clamped with 1mm thick saddle)	Rm	300		
b	Above 35 sqmm and upto 95 sqmm (clamped with 25 x 3 mm MS flat clamp)	Rm	10		
c	Above 95 sqmm and upto 185 sqmm (clamped with 25/40 x 3 mm MS flat clamp)	Rm	20		
45	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement:2 coarse sand: 4 graded stone aggregate 20mm nominal size) of size 60 cm x 60 cm at the bottom and 50 cm x 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Each	10		
46	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1kV grade as required.				
a	3.5 C x 25 sqmm	Each	4		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
b	3.5 C x 35 sqmm	Each	4		
c	3.5 C x 50 sqmm	Each	4		
d	3.5 C x 185 sqmm	Each	2		
e	4 C x 6 sqmm	Each	12		
f	4 C x 10 sqmm	Each	8		
g	4 C x 16 sqmm	Each	12		
47	Providing, laying and fixing following dia GI pipe (medium class) in ground complete with GI fittings including trenching (75cm deep) and refilling etc as required.				
a	50 mm dia	Rm	20		
b	100 mm dia	Rm	10		
48	Providing, laying and fixing 150 mm dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75cm deep) and refilling etc as required.	Rm	20		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
49	Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				
a	3.5 C x 25 sqmm	Rm	70		
b	3.5 C x 35 sqmm	Rm	50		
c	3.5 C x 50 sqmm	Rm	30		
e	3.5 C x 185 sqmm	Rm	250		
f	4 C x 6 sqmm	Rm	160		
g	4 C x 10 sqmm	Rm	150		
h	4 C x 16 sqmm	Rm	180		
50	Supply, Installation, Testing & Commissioning of LT panel, cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
	200A, TPN, 35kA, MCCB with thermal magnetic based adjustable OL, SC protection - 1 no.				
	Busbar				
	1 Set of 200 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F, kWh Acc class 1.				
	200/5A 10VA class 1 resin cast CT - 1 set				
	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	125A, TPN, 16kA, MCCB with thermal magnetic based adjustable OL protection - 1 no.				
	100A, TPN, 16kA, MCCB with thermal magnetic based adjustable OL protection - 1 no.				
	63A TPN MCB, C curve - 4 nos.				
	40A TPN MCB, C curve - 4 nos.	Each	1		
51	KSEB Meter Board - Supply, Installation, Testing & Commissioning of Three phase meter box, cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP54, wall / floor mounting, dust and vermin proof, powder coated, outdoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Switchgear & other Accessories				
	Space provision for accomodating 3 phase CT operated energy meter from KSEB with all connections, glass view panel, control MCB, lockable compartment etc.				
	3 nos. Suitable ratio CT (as per KSEB) with Acc. Class 0.5, 10VA in lockable compartment.				

SI.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
	3 nos 200A cutout fuse unit with fuse and 1 no. Neutral link.				
	1 no. 200A, FP, AC23A, 415V, 50Hz switch disconnector fuse unit with Din type HRC fuse of suitable rating (as per KSEB) in separate cubical.				
	1 Set of phase indicating lamps, LED type, RYB.				
	1 Set of 2A 10kA C curve SP control MCB				
	1 no of digital voltmeter, Acc. Class 1 with selector switch.				
	The meter board shall have 200 Amp TPN busbars of high conductivity electrolytic quality Aluminium alloy, earth bus of required size, 4P terminal connectors, control wiring with all required accessories complete.	Job	1		
52	Supply, installation, testing & commissioning of 15 kVA, 3 phase, input, 3 phase output, true on-line UPS system (specifically for Medical application) with 30 minutes back up (full load), including all accessories, Tubular batteries VRLA type with powder coated MS cabinet, battery cabling including all accessories as required complete having following specification.				
	Fully digital controlled based on DSP				
	Power factor corrected from end > 0.9				
	Pure sine wave output.				
	Full time output voltage & frequency regulation				
	Auto regulation of battery end voltage				
	Intelligent interface with LED/LCD display				
	Static bypass switch & manual by pass switch				
	Auto temperature compensation				
	Make: Hykon / Power one / Su-kam	Each	1		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
53	Supply of 1x28W, indoor surface mounted channel type decorative luminaire with end cap, electronic ballast, 28W T5 lamp, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Crompton T5GP28EBS9 / Bajaj BTIR 128 / Havells LHFYBYF10N1W028).	Each	50		
54	Supply & installation of 2x36W, indoor recess mounted front opening clean room luminaire with intergral control gear, lamps, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Bajaj BPRF 236 C LHD / Crompton CRFW12236EB(595) / Havells LHHCO2236127).	Each	4		
55	Supply & installation of 2x18W, indoor recess mounted down light fixture with bright anodised aluminium reflector, frosted glass diffuser, intergral control gear, lamps, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Crompton DDLH218EB/G/B6 / Bajaj BJDR 218 SLH FR FGL W2EB).	Each	5		
56	Supply of 1x11/14 W compact and decorative luminaire with anti glare diffuser & decorative end caps , lamp, prewired complete with all necessary accessories suitable for operation 230V 50Hz AC supply complete with all mounting accessories as required. (Havells LHFOECF1OZ1W011 / Bajaj BJC 111 / Crompton T5JB13114EB).	Each	15		
57	Supply of 2x18W, indoor surface mounted decorative luminaire with low glare P5 paralite louver assembly, lamps, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Crompton TLE218EB/P5 / Bajaj BSMLA 01 218 WEBS / Havells LHCCO1218425).	Each	45		
58	Supply & installation of 2x36W, indoor recess mounted mirror optic luminaire, bright anodised aluminium reflector, with low glare P5 paralite louvre, intergral control gear, lamps, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Crompton CRFQN236EB/P5/G / Bajaj BMLA 01 236 CFL WEB2 / Havells LHCC01236425).	Each	10		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
59	Supply & installation of 2x36W, outdoor type street light fixture, with aluminium housing, clear acrylic cover, intergral control gear, lamps, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required. The light fitting shall be mounted on suitable dia GI pipe bended to required size and fixed to wall as required heigh as per the direction of Engineer-in-charge. (Crompton SCE 13236EB / Bajaj BJSLF 236CFL WEB2 / Havells LHRC02236025).	Each	5		
60	Supplying and fixing ISI marked PVC angle batten holder with 11W CFL lamp including all connection etc as required.	Each	10		
61	Supply of ceiling fan 1200 mm sweep, double ball bearing, approved colour and quality with original down rod,suspension shackle,canopy etc with out regulator complete with all accessories as required. (Usha Technix Decorative (5 star rating) / Crompton High Breeze plus (5 star) / Orient Energy star)	Each	30		
62	Supply of ventillating fan 250 mm sweep of approved colour, for single phase 230 volt, 50Hz AC supply complete with motor, capacitor, auto close and open grill cover and all accessories as required complete.	Each	10		
63	Supply & installation of Wall fan ,400mm sweep, powder coated guard suitable for single phase 230 volt, 50Hz AC supply complete with motor, capacitor and all accessories as required complete. (Make : Usha Max Air white or equivalent)	Each	10		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
64	Supply and Installation of 10 pair Telephone Terminal box with 1 no. 10 pair krone IDC module and SS BMF with all accessories.	Each	2		
65	Supply and Installation of 20 pair Telephone Terminal box with 1 no. 20 pair krone IDC module and SS BMF with all accessories.	Each	1		
66	Supplying and fixing 4 way surface / recess mounting vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs with provision of 100A TP 16kA MCCB as incomer, interconnection between incomer MCCB and bus bars (but without MCBs / MCCB) as required.	Each	1		
67	Supplying and fixing FP sheet steel enclosure (outdoor type) on surface/ recess along with 16/25/32amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	2		
68	Providing and fixing 10 SWG dia Copper wire on surface or in recess for loop earthing as required.	Rm	250		
69	Supplying and fixing 40Amps TP MCB rating, 415 volts, "C" curve, miniature circuit breaker in the existing MCB VDB complete with connections, testing and commissioning etc. as required.	Each	4		
70	Supplying and fixing UTP CAT -6 socket on the existing modular plate & switch box including connections but excluding modular plate etc as required.	Each	5		

Sl.No	DESCRIPTION	UNIT	QTY	RATE (In figures& words)	AMOUNT in Rs.
71	Dismantling the existing light fixing including lamp, ceiling fan, exhaust fan, wall fan, Air-conditioner etc. and stacking the same to the place as per the direction of Engineer in charge.	Each	12		
72	Dismantling of existing electrical conduits / cassing & capping, switches, switch boards, junction boxes, wires, angle batten including all accessories in a total floor area (under renovation) and storing in space as directed by Engineer-in-charge	Job	1		
73	Supply & laying ISI marked electrical grade chequered type rubber mat of size 2m x 1m x 6 mm suitable for 415V power supply.	Each	5		
74	Laisoning, preparation of necessary electrical drawing & documents for submission in statutory body (electrical inspectorate, KSEB, PWD, PCB etc) and obtaining all approvals for the energisation of the building. Including all incidental expenses except the fees payable to the statutory bodies with valid receipts from the authorities.	Job	1		
	TOTAL - PART II- ELECTRICAL WORKS				