



**INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT**

CHENNAI – 600 036

Price Bid (Volume 2)

T. No 03/2013-14/Eldb

Name of the work : Annual maintenance contract for day to day electrical maintenance, minor and alterations works for Hostel Buildings and maintenance of power mains starters for motors pump sets in IIT Madras Campus for the year 2013-14

Date of Submission of Technical & Price bid : 03.00 pm on 28/01/2013

Date of opening of Technical bid : 03.10 pm on 28/01/2013

Date of opening of Price bid : Will be intimated later

**Bid Submitted to : The Executive Engineer (E),
Engineering Unit,
Administrative Block III Floor,
IITM, Chennai-36**

-sd-

Consultant (Elec)

-sd-

Executive Engineer (Elec)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT

CHENNAI – 600 036

<p>TENDER DOCUMENT</p> <p>FOR</p> <p>Annual maintenance contract for day to day electrical maintenance, minor and alterations works for Hostel Buildings and maintenance of power mains starters for motors pump sets in IIT Madras Campus for the year 2013-14</p>
<p>VOLUME-2 (PRICE BID)</p>
<p>BILL OF QUANTITIES</p>
<p>Other volume:</p>
<p>Vol-1: Notice inviting tenders, Conditions of Contract, Additional specifications, General Conditions of Contract , list of approved makes etc.,</p>

INDIAN INSTITUTE OF TECHNOLOGY, MADRAS
ESTIMATE

Name of work: Annual Maintenance of for day to day Electrical Maintenance, minor and alteration works for Hostel zone Buildings and maintenance of power mains starters for motors pumpsets in IIT - Madras Campus for the year of 2013-14.

PART A- Maintenance

S.No	Description of work	Unit	Quantity	Rate	Amount
1	Labour Charges for rectification of general electrical faults in all electrically connected boards/equipments/all electrical accessories, including replacement, cleaning and making them in good working condition in all hostel zone buildings and as per the terms & condition vide annexure. The replacement items should also be returned promptly for accountability. The rectification of defects and replacement of accessories should be carried by posting 3 sets of technicians- 1 set consists of 1 electrician & 1 helper. one set should be made available from 9.00 am to 6.00pm(1 hour break) and other 2 batch should be made available from 3.30pm to 12.30am(1/2 hour break).	Month	12		
(Rate in words Rupees					
2	Supplying of following accessories while attending the faults. The contractor shall assure at least 10% of the total quantities made available always at site. The items selected for replacement shall be compatible with the existing installations.				
2.1	1200mm X 40W Fluorescent tube	Each	2500		
(Rate in words Rupees					
2.2	600mm x 18W Fluorescent lamp	Each	100		
(Rate in words Rupees					
2.3	54 W TL5 Fluorescent Tube	Each	60		
(Rate in words Rupees					
2.4	28 W TL5 Fluorescent Tube	Each	60		
(Rate in words Rupees					
2.5	14 W TL5 Fluorescent Tube	Each	30		
(Rate in words Rupees					

2.6	9/11/13W CFL/PL	Each	400		
(Rate in words Rupees					
2.7	8W/10W PL	Each	50		
(Rate in words Rupees					
2.8	18W 2pin/4 pin CFL	Each	50		
(Rate in words Rupees					
2.9	36 W CFL	Each	50		
(Rate in words Rupees					
2.10	1000W Hologen lamp	Each	50		
(Rate in words Rupees					
2.11	40/60/100W Incandesent lamp/15W colour lamp (Philips/Wirpo)	Each	50		
(Rate in words Rupees					
2.12	25W/40W/60W candle clear lamp/threaded lamp	Each	50		
(Rate in words Rupees					
2.13	70W Metal halide lamp (Philips/Wirpo)	Each	15		
(Rate in words Rupees					
2.14	150W Metal halide lamp (Philips/Wirpo)	Each	10		
(Rate in words Rupees					
2.15	250W Metal halide lamp (Philips/Wirpo)	Each	6		
(Rate in words Rupees					
2.16	400W Metal halide lamp (Philips/Wirpo)	Each	6		
(Rate in words Rupees					
2.17	28W TL5 Electronics ballast(Philips)	Each	25		
(Rate in words Rupees					
2.18	14W TL5 Electronics ballast(Philips)	Each	10		
(Rate in words Rupees					

2.19	28W TL5 Electronics ballast(Philips)	Each	20		
(Rate in words Rupees)					
2.20	2 x 28W TL5 Electronics ballast(Philips)	Each	10		
(Rate in words Rupees)					
2.21	2 x 54W TL5 Electronics ballast(Philips)	Each	10		
(Rate in words Rupees)					
2.22	36/40W copper ballast for FTL	Each	350		
(Rate in words Rupees)					
2.23	18/20W copper ballast for FTL	Each	10		
(Rate in words Rupees)					
2.24	40W Electronics ballast for FTL	Each	200		
(Rate in words Rupees)					
2.25	20W Electronics ballast for FTL	Each	50		
(Rate in words Rupees)					
2.26	9/11/13W CFL Choke	Each	100		
(Rate in words Rupees)					
2.27	18W ballast for CFL	Each	50		
(Rate in words Rupees)					
2.28	36W ballast for CFL	Each	30		
(Rate in words Rupees)					
2.29	70W MH lamp ballast	Each	10		
(Rate in words Rupees)					
2.30	150W MH lamp ballast	Each	6		
(Rate in words Rupees)					
2.31	250W MH lamp ballast	Each	6		
(Rate in words Rupees)					
2.32	11 W CFL 2 pin Lamp Holder	Each	60		
(Rate in words Rupees)					

2.33	FTL side holder	Each	60		
(Rate in words Rupees					
2.34	Holder for MV/SV/MH lamps	Each	10		
(Rate in words Rupees					
2.35	Holder for Hologen lamps	Each	10		
(Rate in words Rupees					
2.36	20/40W Starter	Each	1600		
(Rate in words Rupees					
2.37	Ignitor for SV/Metal halide lamp	Each	20		
(Rate in words Rupees					
2.38	Capacitor for 400/250W SV lamp/MH lamp (Philips/Wirpo)	Each	20		
(Rate in words Rupees					
2.39	2.5MFD Fan condensor (USHA)	Each	1500		
(Rate in words Rupees					
2.40	Slanting/Pattern/Pendent holder (Anchor Make)	Each	100		
(Rate in words Rupees					
2.41	1Way/2Way/3Way/4Way PVC junction box/Cover	Each	100		
(Rate in words Rupees					
2.42	Musical call bell (Anchor Make)	Each	10		
(Rate in words Rupees					
2.43	Ceiling rose (Anchor Make)	Each	75		
(Rate in words Rupees					
2.44	2 to 32Amps HRC Fuse	Each	50		
(Rate in words Rupees					
2.45	63 Amps HRC Fuse	Each	20		
(Rate in words Rupees					

2.46	100/125 Amps HRC Fuse(Knife/bolted type)	Each	20		
(Rate in words Rupees					
2.47	200/250 Amps HRC Fuse(Knife/bolted type)	Each	9		
(Rate in words Rupees					
2.48	315/400 Amps HRC Fuse(Knife/bolted type)	Each	9		
(Rate in words Rupees					
2.49	3 core 2.5 sqmm copper flexible wire	Meter	100		
(Rate in words Rupees					
2.50	3 core 4 sqmm copper flexible wire	Meter	100		
(Rate in words Rupees					
3	Supplying of following 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.				
3.1	10KA,6A to 32A Single Pole MCB	Each	180		
(Rate in words Rupees					
3.2	10KA,6A to 32A double Pole/SPN MCB	Each	24		
(Rate in words Rupees					
3.3	10KA,6A to 32A Triple Pole MCB	Each	90		
(Rate in words Rupees					
3.4	10KA,6A to 32A Four Pole/TPN MCB	Each	24		
(Rate in words Rupees					
3.5	10KA,40A to 63A Triple Pole MCB	Each	24		
(Rate in words Rupees					
3.6	10KA,40A to 63A Four Pole MCB	Each	12		
(Rate in words Rupees					
3.7	24 hours time switch(Legrand Microrex QT11)	Each	3		
(Rate in words Rupees					

3.8	40 amps TP Lexic power contactor (DIN mounting)	Each	3		
(Rate in words Rupees					
4	Supplying of following rating isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
4.1	40A Double pole isolator	Each	24		
(Rate in words Rupees					
4.2	63A Double pole isolator	Each	12		
(Rate in words Rupees					
4.3	40A to 63A Four pole isolator	Each	24		
(Rate in words Rupees					
4.4	80 A-100 A Four pole isolator	Each	12		
(Rate in words Rupees					
5	Supplying of following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
5.1	100 ma, 25-32A DP RCBO	Each	3		
(Rate in words Rupees					
5.2	100 ma, 20-32A 4P RCBO	Each	3		
(Rate in words Rupees					
5.3	100 ma, 40 to 63A 4P RCBO	Each	3		
(Rate in words Rupees					
6	Supplying of following rating and breaking capacity MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				
6.1	16kA, 100 amps TPN MCCB	Each	3		
(Rate in words Rupees					
6.2	16kA, 125 amps TPN MCCB	Each	3		
(Rate in words Rupees					

7	Supply and replacement of following type kWh meter/CTs as required				
7.1	3 phase 4 wire -/5A CT operated Panel mounting kWh meter class 1 accuracy	Each	25		
(Rate in words Rupees					
7.2	10-40 amps single phase static energy meter class 1 accuracy	Each	6		
(Rate in words Rupees					
7.3	10-40 amps three phase static energy meter class 1 accuracy	Each	6		
(Rate in words Rupees					
7.4	upto 63/5A CTs(class 1 accuracy)	Each	12		
(Rate in words Rupees					
7.5	100/125A/5A CTs(class 1 accuracy)	Each	12		
(Rate in words Rupees					
7.6	200/250A/5A CTs(class 1 accuracy)	Each	12		
(Rate in words Rupees					
7.7	315/400A/5A CTs(class 1 accuracy)	Each	12		
(Rate in words Rupees					
8	Supply and replacement of following heating element/thermostat in the existing equipments in various hostel zone buildings				
8.1	Heating element for Geyser upto 2000watts(Racold make)	Each	20		
(Rate in words Rupees					
8.2	Thermostat with control for Geyser upto 2000watts(Racold make)	Each	20		
(Rate in words Rupees					
8.3	2000 watts heating element for Bain marie equipment(food warmer)	Each	30		
(Rate in words Rupees					

9	Labour charges to provide duty to an electrician for various function at SAC or any other location as and when requires as directed by the concerned engineer to monitor and attend the minor electrical faults, switch on the lights and fans as and when required during the function . The minimum duration of the posting will be 4 hours. Every four hours will be calculated as 1 duty.	Each	50		
(Rate in words Rupees					
10	Labour charges for making temporary power connection by laying 4 core 16 sq.mm alu.arm cable and making the energy meter panel for different vendors for taking temporary power supply.	Job	20		
(Rate in words Rupees					
11	Labour charges for checking the earth electrode as and when required as directed by the concerned engineer at site using suitable earth megger and tools & plant and submit the printed report or log sheet/book.	Each	120		
(Rate in words Rupees					
12	Placing the pedestal type fans 10 numbers in the bowl and gallery area in SAC building for various functions as and when occurred with necessary extendable plug points and making the fan in the good working condition. The above work involves collection of fans from the electrical store inside the premises and handing over the same properly after completion of the function.	Each	50		
(Rate in words Rupees					
13	Charges for cleaning the fans, fittings, switch boards and other electrical accessories with required cleaning agents.	Each	100		
(Rate in words Rupees					
14	Supplying & fixing of following sizes lamimnated sheet with required cutting in the existing wooden/metal box.				
14.1	300MM X 200MM	Each	25		
(Rate in words Rupees					
14.2	200MM X 150MM	Each	25		
(Rate in words Rupees					

14.3	200MM X 100MM	Each	25		
(Rate in words Rupees					
14.4	150MM X 100MM	Each	25		
(Rate in words Rupees					
14.5	100MM X 100MM	Each	25		
(Rate in words Rupees					
15	Supplying of following Modular base & cover plate on existing modular metal boxes etc. as required.				
15.1	1 or 2 Module	Each	200		
(Rate in words Rupees					
15.2	3 Module	Each	100		
(Rate in words Rupees					
15.3	4 Module	Each	100		
(Rate in words Rupees					
15.4	6 Module	Each	50		
(Rate in words Rupees					
15.5	8 Module	Each	50		
(Rate in words Rupees					
15.6	12 Module	Each	50		
(Rate in words Rupees					
15.7	18/16 Module	Each	30		
(Rate in words Rupees					
16	Supplying of following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.				
16.1	1 or 2 Module (75mmX75mm)	Each	100		
(Rate in words Rupees					
16.2	3 Module (100mmX75mm)	Each	50		
(Rate in words Rupees					

16.3	4 Module (125mmX75mm)	Each	50		
(Rate in words Rupees					
16.4	6 Module (200mmX75mm)	Each	25		
(Rate in words Rupees					
16.5	8 Module (125mmX125mm)	Each	25		
(Rate in words Rupees					
16.6	12 Module (200mmX150mm)	Each	25		
(Rate in words Rupees					
16.7	18/16 Module(250mmx200mm)	Each	15		
(Rate in words Rupees					
17	Supplying of 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.				
17.1	100 mm X 100 mm X 60 mm deep	Each	25		
(Rate in words Rupees					
17.2	150 mm X 150 mm X 60 mm deep	Each	20		
(Rate in words Rupees					
17.3	200 mm X 150 mm X 60 mm deep	Each	15		
(Rate in words Rupees					
17.4	200 mm X 300 mm X 100 mm deep	Each	10		
(Rate in words Rupees					
18	Supplying of following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
18.1	5/6 amps switch	Each	300		
(Rate in words Rupees					
18.2	2 way 5/6 amps switch	Each	50		
(Rate in words Rupees					
18.3	15/16 amp switch	Each	50		
(Rate in words Rupees					

18.4	3 pin 5/6 amp socket outlet	Each	150		
(Rate in words Rupees					
18.5	6 pin 15/16 amp socket outlet	Each	60		
(Rate in words Rupees					
18.6	TV antenna socket outlet	Each	10		
(Rate in words Rupees					
18.7	Bell push	Each	20		
(Rate in words Rupees					
18.8	100 watts Fan regulator	Each	200		
(Rate in words Rupees					
18.9	Blanking plate	Each	100		
(Rate in words Rupees					
18.10	15/16 amp switch with indicator	Each	25		
(Rate in words Rupees					
19	Supplying of following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.				
19.1	5/6 amps switch	Each	200		
(Rate in words Rupees					
19.2	2 way 5/6 amps switch	Each	20		
(Rate in words Rupees					
19.3	15/16 amp switch	Each	100		
(Rate in words Rupees					
19.4	3 pin 5/6 amp socket outlet	Each	200		
(Rate in words Rupees					
19.5	6 pin 15/16 amp socket outlet	Each	100		
(Rate in words Rupees					
19.6	TV antenna socket outlet	Each	10		
(Rate in words Rupees					

19.7	Bell push	Each	20		
(Rate in words Rupees					
19.8	15 amps 5 in one CS plug	Each	25		
(Rate in words Rupees					
19.9	15 amps 2 in one CS plug	Each	25		
(Rate in words Rupees					
19.10	5Amps 3 Pin Top (Anchor/Record)	Each	25		
(Rate in words Rupees					
19.11	15Amps 3Pin Top (Anchor/Record)	Each	25		
(Rate in words Rupees					
19.12	2 pin & scrapping earth MC pin top	Each	10		
(Rate in words Rupees					
19.13	3 pin & scrapping 3 phase MC pin top	Each	6		
(Rate in words Rupees					
19.14	2 pin & earth MC socket	Each	10		
(Rate in words Rupees					
19.15	3 pin & earth MC socket	Each	6		
(Rate in words Rupees					
19.16	Resistance type Regulator	Each	100		
(Rate in words Rupees					
20	Rewinding of the following fans using enameled copper wire of required gauge, varnishing oiling, greasing etc., overhauling such as cleaning, replacement of same size and rating of bearing, condenser, cotter pins, shackle insulator, twin core copper wire and other defective materials required for making the fan in good working condition. The cost should include the rebate of old enameled copper materials. The guarantee of the fan after rewinding should be one year from the date of installation. The workmanship shall be Grade A and up to the satisfaction of the Engineer -in-charge.				

20.1	1200mm/1400 mm sweep AC ceiling fan	Each	250		
(Rate in words Rupees					
20.2	300mm sweep medium duty exhaust fan	Each	100		
(Rate in words Rupees					
20.3	450mm sweep heavy duty exhaust fan	Each	20		
(Rate in words Rupees					
21	Overhauling the sweep ceiling fan and supplying and replacement of same size and rating of bearing condenser, cotter pins, shackle insulator, twin core copper wire and other defective materials required for making the fan in good working condition .				
21.1	1200mm/1400 mm sweep AC ceiling fan	Each	300		
(Rate in words Rupees					
21.2	300mm sweep medium duty exhaust fan	Each	100		
(Rate in words Rupees					
21.3	450mm sweep heavy duty exhaust fan	Each	10		
(Rate in words Rupees					
PART B - MOTOR PUMP ROOM MAINTENANCE					
22	Attending the general electrical faults in starters / power mains / terminal of motors in domestic water / sewage water pump motor up to 20.0 Hp pump motors at anywhere in IIT Madras campus as and when required.	Each	300		
(Rate in words Rupees					
23	Installation testing and commissioning of submersible starter / DOL / star delta panel on the existing board / wall with required accessories (The starter panel will be supplied by the dept. at free of cost)	Each	40		
(Rate in words Rupees					
24	Supply and fixing of following electrical accessories for domestic water / sewage water pump room in anywhere in IIT Madras as and when required.(Samples to be approved before purchase)				
24.1	3 phase DOL starter up to 7.5 HP motors (Type MN of L & T or equivalent)	Each	6		
(Rate in words Rupees					

24.2	3 phase Star delta starter suitable for 10.0 HP/ 15 HP motors (Type MN of L&T or equivalent)	Each	6		
(Rate in words Rupees					
24.3	3 phase Star delta starter suitable for 20 HP motors (Type MN of L & T or equivalent)	Each	2		
(Rate in words Rupees					
24.4	3 phase DOL submersible starter up to 7.5 HP motors (Type MU-G10 of L & T or equivalent of Siemens)	Each	24		
(Rate in words Rupees					
24.5	3 phase Star delta submersible starter suitable for 7.5 / 10 HP motors (Type MUG of L & T or equivalent of Siemens)	Each	12		
(Rate in words Rupees					
24.6	Current sensing single phase preventor (Type SPPR SDz5/L & T)	Each	6		
(Rate in words Rupees					
24.7	TP motor protection Circuit breaker with SC & OL protection range 9-13.0 amps	Each	6		
(Rate in words Rupees					
24.8	TP motor protection Circuit breaker with SC & OL protection range 11-16.0 amps	Each	6		
(Rate in words Rupees					
24.9	Electronics timer Range 3-30 seconds suitable for star delta starter	Each	3		
(Rate in words Rupees					
24.10	OLR for existitng L & T/Siemens make starter upto 10 HP(MN 2)	Each	3		
(Rate in words Rupees					
24.11	OLR for existitng L & T/Siemens make starter upto 20 HP(MN 2)	Each	3		
(Rate in words Rupees					
24.12	OLR for existitng L & T/Siemens make starter (MN 5/20-33A)	Each	3		
(Rate in words Rupees					
24.13	OLR for existitng L & T/Siemens make starter (MN 5/30-50A) or (60-110A)	Each	3		
(Rate in words Rupees					

24.14	TP star/Delta AC3 rating power contactor suitable for existing L & T/Siemens make starter upto 10 HP motors(ML 1.5)	Each	2		
(Rate in words Rupees					
24.15	TP star/Delta AC3 rating power contactor suitable for existing L & T/Siemens make starter upto 30 HP motors(ML 2)	Each	2		
(Rate in words Rupees					
24.16	TP star/Delta AC3 rating power contactor suitable for existing L & T/Siemens make starter upto 50 HP motors(ML 3)	Each	2		
(Rate in words Rupees					
24.17	Powder coated sheet steel enclosure suitable to accommodate DP/TP/4 Pole MCB	Each	6		
(Rate in words Rupees					
25	Supply and installation of 1100v grade unarmoured copper conductor cable/flat cables on wall with necessary GI clamps hardware and as per site conditions from starters terminals to motor terminals				
25.1	3 core 6 sq.mm	Meter	100		
(Rate in words Rupees					
25.2	3 core 10 sq.mm	Meter	30		
(Rate in words Rupees					
25.3	3 core 16 sq.mm	Meter	30		
(Rate in words Rupees					
25.4	3 core 2.5 sq.mm copper flat wire	Meter	200		
(Rate in words Rupees					
25.5	3 core 4 sq.mm copper flat wire	Meter	100		
(Rate in words Rupees					

PART C - Addition alteration and minor works					
26	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required.				
26.1	Group B	Point	50		
(Rate in words Rupees)					
27	Wiring for twin control light point with 1.5 sq.mm FR 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. FR PVC insulated copper conductor single core cable etc as required.	Point	10		
(Rate in words Rupees)					
28	Wiring for circuit/ sub main wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required				
28.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Metre	100		
(Rate in words Rupees)					
28.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Metre	750		
(Rate in words Rupees)					
28.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Metre	500		
(Rate in words Rupees)					
28.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Metre	100		
(Rate in words Rupees)					
28.5	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	Metre	100		
(Rate in words Rupees)					
28.6	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Metre	100		
(Rate in words Rupees)					

28.7	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Metre	200		
(Rate in words Rupees					
28.8	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	Metre	100		
(Rate in words Rupees					
28.9	4 X 16 sq. mm + 2 X 16 sq. mm earth wire	Metre	60		
(Rate in words Rupees					
29	Supplying and drawing following sizes of FR PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
29.1	1 x 1.5 sq. mm	Metre	50		
(Rate in words Rupees					
29.2	2 x 2.5 sq. mm	Metre	200		
(Rate in words Rupees					
29.3	2 x 4 sq. mm	Metre	50		
(Rate in words Rupees					
29.4	2 x 6 sq. mm	Metre	50		
(Rate in words Rupees					
30	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
30.1	20 mm	Metre	100		
(Rate in words Rupees					
30.2	25 mm	Metre	100		
(Rate in words Rupees					
30.3	32 mm	Metre	30		
(Rate in words Rupees					
31	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				

31.1	20 mm	Metre	24		
(Rate in words Rupees					
31.2	25 mm	Metre	24		
(Rate in words Rupees					
32	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. (For light plugs to be used in non residential buildings).	Each	150		
(Rate in words Rupees					
33	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	30		
(Rate in words Rupees					
34	Supply Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of following types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.				
34.1	1200mmx40 watts single box type fitting with tube & electronics ballast. The accepted brands are Philips(TMC 55/136/HF)	Each	250		
(Rate in words Rupees					
34.2	1200mmx28 watts fitting with 28 watts T5 lamp with electronics ballast. The accepted brands are CG/Bajaj/Havells.	Each	100		
(Rate in words Rupees					
35	Supplying Installation, testing & commissioning of 1200 mm sweep ceiling fan, including wiring the down rods of standard length (up to 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required. The accepted brand will be POLAR (Winchestor), ALSTOM (TOOFAN). CG)	Each	750		
(Rate in words Rupees					

36	Supplying and fixing extra down rod of 10 cm length G.I. pipe, 15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	120		
(Rate in words Rupees					
37	Supply Installation of exhaust fan of following ratings in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
37.1	225mm medium duty exhaust fan(Metal blade)	Each	20		
(Rate in words Rupees					
37.2	300mm medium duty exhaust fan(Metal blade)	Each	120		
(Rate in words Rupees					
37.3	450 mm heavy duty exhaust fan(Metal blade)	Each	3		
(Rate in words Rupees					
37.4	225mm Fresh air fan	Each	6		
(Rate in words Rupees					
38	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	Each	25		
(Rate in words Rupees					
39	Supplying and fixing of 1x36 watts road way lighting luminaire suitable for 1x36 watts CFL (Make : BAJAJ BJSLA 136 CFL) on suitable size 0.60 metres long of MS pipe pending to shape with necessary connection.	Each	20		
(Rate in words Rupees					
40	Providing and fixing following capacity TP&N disconnecter fuse switch unit inside the existing panel board with ISI marked HRC fuses including drilling holes in cubicle panel, making connections, etc. as required.				
40.1	32 Amp TP&N	Each	2		
(Rate in words Rupees					
40.2	63 Amp TP&N	Each	2		
(Rate in words Rupees					

40.3	100 Amp TP&N	Each	2		
(Rate in words Rupees					
40.4	125 Amp TP&N	Each	2		
(Rate in words Rupees					
40.5	200 Amp TP&N	Each	2		
(Rate in words Rupees					
40.6	315 amp TP & N	Each	1		
(Rate in words Rupees					
40.7	400 amp TP & N	Each	1		
(Rate in words Rupees					
41	Providing and fixing following rating and breaking capacity MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				
41.1	100 Amp, 16 KA	Each	2		
(Rate in words Rupees					
41.2	125 Amp, 16 KA	Each	2		
(Rate in words Rupees					
41.3	160 Amp, 16 KA	Each	2		
(Rate in words Rupees					
42	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)				
42.1	2 + 8 way, Double door	Each	2		
(Rate in words Rupees					
42.2	2 + 12 way, Double door	Each	2		
(Rate in words Rupees					

43	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)				
43.1	4 way (4 + 12), Double door	Each	6		
(Rate in words Rupees					
43.2	6 way (4 + 18), Double door	Each	1		
(Rate in words Rupees					
43.3	8 way (4 + 24), Double door	Each	1		
(Rate in words Rupees					
44	Supplying and fixing of following ways 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.)				
44.1	4 way (4 + 12), Double door	Each	3		
(Rate in words Rupees					
44.2	8 way (4 + 24), Double door	Each	3		
(Rate in words Rupees					
45	Supplying and fixing following ways 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, with provision of 100 amps TP 16 KA MCCB as incomer, interconnection between incomer MCCB and bus bars (but without MCB's/ MCCB) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
45.1	8 Way TP	Each	2		
(Rate in words Rupees					

46	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.				
46.1	Single pole	Each	136		
(Rate in words Rupees					
46.2	Double pole	Each	6		
(Rate in words Rupees					
46.3	Triple pole	Each	44		
(Rate in words Rupees					
46.4	Triple pole and neutral	Each	14		
(Rate in words Rupees					
47	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	75		
(Rate in words Rupees					
48	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
48.1	40 amps	Each	2		
(Rate in words Rupees					
48.2	63 amps	Each	2		
(Rate in words Rupees					
49	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
49.1	40 amps	Each	7		
(Rate in words Rupees					
49.2	63 amps	Each	6		
(Rate in words Rupees					

49.3	100 amps	Each	1		
(Rate in words Rupees					
50	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32amps 240 volts "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	each	6		
(Rate in words Rupees					
51	Supplying and fixing TP sheet steel enclosure on surface/ recess along with 16/25/32amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required.	each	6		
(Rate in words Rupees					
52	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	24		
(Rate in words Rupees					
53	Supplying and fixing 20 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	6		
(Rate in words Rupees					
54	Supplying and fixing 30 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	3		
(Rate in words Rupees					

55	Supplying and fixing of fan hook on ceiling with necessary precaution for concrete and steel reinforcement including masonry works.	Each	20		
(Rate in words Rupees					
56	Making round shaped hole on the wall to suit 225mm/300mm heavy duty exhaust fan including dismantling and finishing the wall to good.	Each	25		
(Rate in words Rupees					
57	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required	Each	3		
(Rate in words Rupees					
58	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required	Metre	250		
(Rate in words Rupees					
59	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required	Metre	200		
(Rate in words Rupees					
60	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Metre	50		
(Rate in words Rupees					
MV CABLE LAYING					
61	Supply of 4 core 6 sq.mm copper armoured UG cable of approved make.	Metre	100		
(Rate in words Rupees					
62	Supply of 4 core 6 sq.mm copper armoured UG cable of approved make.	Meter	100		
(Rate in words Rupees					

63	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
63.1	Up to 35 sq. mm	Metre	200		
(Rate in words Rupees					
63.2	Above 35 sq. mm and upto 95 sq. mm	Metre	60		
(Rate in words Rupees					
64	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
64.1	Up to 35 sq. mm (clamped with 1mm thick saddle)	Metre	100		
(Rate in words Rupees					
64.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Metre	60		
(Rate in words Rupees					
	TOTAL				

Total Amount in words Rupees

.....

.....

Signature of the Contractor

**-sd-
Consultant (Elect)**

**-sd-
Executive Engineer (E)**