



**ESTATE MAINTENANCE DEPARTMENT / ELECTRICAL
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-15,
TAMIL NADU, GOVT OF INDIA (Deemed University)**

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TENDER NOTIFICATION

Ref No: NITT/EO/EMD/EE (E)/AE (P&D)/Enq.No:40-49/15-16.

Date: 18.12.2015

The Estate Officer, Estate Maintenance Department, NIT, Trichirappalli- 620 015 invites on behalf of The Director, NIT, Trichirappalli-620 015. Sealed item rate tenders from the approved and eligible contractors of NITT/CPWD and those in the appropriate list of Tamilnadu state PWD, Railways, MES and BSNL for the following work. Sealed tenders will be received by the **Registrar, National Institute of Technology** at his Office at National Institute of technology, Tiruchirappalli-15 up to **3.00 p.m on 04.01.2016.**

Details

Enq No	Name of works & Location	Period of completion in days	Estimate cost put to tender (Rs)	Earnest Money (Rs)	Tender cost (Rs)	Last date and time of submission of Tender	Time and date of opening of Tender
40	Renovation of electrical works in laboratory of EEE annex (old physics annex) at Ground floor.	120	952364	19047	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
41	Modification of electrical works in laboratory of EEE annex (old physics annex) at First floor.	120	952208	19044	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
42	Providing electrification works in laboratory of EEE annex (old physics annex) at Second floor.	120	952192	19044	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
43	Providing Power panel and UG cable to laboratory of EEE annex (old physics annex).	120	950451	19009	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
44	Renovating the lab area of heat transfer, refrigeration and Air Conditioner laboratory in Mechanical dept (old Physics Dept).	120	948923	18978	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
45	Providing three phase power supply to proposed material testing laboratory at room no : M25 & M26 in Mechanical Dept.(Old Physics)	120	947046	18941	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
46	Renovation of electrical works in B Mess & F Mess kitchens and cabling to high mast lighting system near Ojas building.	120	875442	17509	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
47	Providing High mast lighting system near OJAS, Architecture and Orion building premises.	120	952071	19041	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
48	Modification of electrical works to newly formed second kitchen at Opal mess and replacement of old Street light fitting into LED street light fittings to 20th street.	120	499837	9997	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016
49	Replacement of CFL Street light fitting into LED street light fittings to Amber-Aquamarine-Jasper road, Aquamarine-Zircon road and Amber-STP road.	120	498683	9974	525	At 3.00 P M on 04.01.2016	At 3.30 P M on 04.01.2016

The tender should accompany, Earnest Money Deposit and Tender cost as detailed above through two different Demand Drafts payable at Tiruchirappalli, Drawn in favor of **The Director, National Institute of Technology, Trichy-15**. This earnest money will be refunded to the unsuccessful tenderer or rejection of the tender or at the expiry of two months from date of tender, whichever is earlier. The earnest money will be retained in the case of the successful tenderer and will not carry any interest. Tender must be submitted in sealed covers and should be addressed to The Director, National Institute of Technology, Trichirappalli-15 and the name of the tenderer, name of the work and Ref .No. being noted on the cover. **The rates should be quoted inclusive of all taxes and duties. Submission of tender without EMD is liable to be rejected.**

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Estate Officer

Enq.no.40

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMC

Name of Work : Renovation of electrical works in laboratory of EEE annex (old physics annex) at Ground floor.

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	WIRING					
1.1	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 surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.					
1.1.1	Group C	5.00	Point			
1.2	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 surface / 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.					
1.2.1	Group C	42.00	Point			
1.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
1.3.1	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	93.00	Metre			
1.3.2	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	63.00	Metre			
1.4	Supplying 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.					
1.4.1	200 mm X 300 mm X 60 mm deep	20.00	Each			
1.5	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.					
1.5.1	15/16 amp switch	34.00	Each			
1.5.2	6 pin 15/16 amp socket outlet	34.00	Each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.5.3	Indicator switch type	7.00	each			
1.6	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
1.6.1	5/6 amps switch	10.00	Each			
1.6.2	15/16 amp switch	5.00	Each			
1.6.3	3 pin 5/6 amp socket outlet	5.00	Each			
1.6.4	6 pin 15/16 amp socket outlet	5.00	Each			
1.6.5	(Market item) Rj-11 Telephone Socket	12.00	each			
1.6.6	Supplying and fixing stepped Modular socket type electronic fan regulator on the existing switch box including connections but excluding modular plate etc. as required.	4.00	Each			
1.6.7	UTP Cat6-2 Module	39.00	each			
1.7	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.					
1.7.1	12 Module (200mmX150mm)	15.00	Each			
1.8	DLP plastic Trunking wiring (But the rate without wires) (Make: Legrand/Siemens)					
1.8.1	DLP Pastic Trunking 105x50mm and accessories Flexible cover 40mm width-1No, Flexible cover 85mm -1No, Joints for cover 40mm width-1No, Joints for cover 85mm width-1No, Basejoint-25Nos, Clips-15Nos, Separation partition-1No, Endcap-1No, Internal angles-adjustable from 80 degr - 120 deg - 1No, VDI accessories for internal angles-1No, VDI accessories for external angles -1No, Flat angles -1No, VDI accessories for flat angles-1No, Flat junctions-1No, Flat junctions for specific size-tap off to an 80mm wide branch -1No, VDI accessories for junctions -1No, Wall crossing -1No, Capacity change -1No, Capacity change-1No, partition junction -1No, Cable ties base -1No. (Make: Legrand)	95.00	metre			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.9	DLP Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed (The rate without DLP Pastic Trunking) as required.(Make: Finolex)					
1.9.1	2 X 4.0 sq. mm + 1 X 4.0 sq. mm earth wire	430.00	metre			
1.9.2	4 X 4.0 sq. mm + 2 X 4.0 sq. mm earth wire	235.00	metre			
1.10	"Supplying of following size ISI marked Module Arteor frame for fixing swiches or sockets in DLP plastic trunking wiring of 1.1 KV grade as required.					
1.10.1	8 Module surface box for 85 mm cover	43.00	each			
1.11	Supply and fixing following Arteor switch/socket on the existing arteor frame & switch box including connections but excluding modular plate etc as required.					
1.11.1	5/6 amps switch 1Module	100.00	Each			
1.11.2	15/16 amps switch 1way 1module	33.00	Each			
1.11.3	3 Pin 5/6 amp socket outlet	100.00	Each			
1.11.4	15/16 amp socket outlet 3pin 2module	33.00	Each			
	Sub-Total					
2	E A R T H I N G					
2.1	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.	20.00	Metre			
	Sub-Total					
3	MV CABLE LAYING					
3.1	Computer net Cable laying.					
3.1.1	Cat-6 4Pair net cable	620.00	Meter			
3.2	Laying of telephone cable unarmoured pair 0.5Sq.mm FRLS PVC insulated annealed copper conductor in the existing surface/recessed steel/PVC conduit/DLP trunking etc as required.					
3.2.1	2-4 Pair	270.00	Meter			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
	Sub-Total					
4	MV CABLE JOINTING & END TERMINATION					
4.1	Supplying and making indoor end termination with copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 KV grade as required.					
4.1.1	1X35Sq.mm	6.00	each			
4.1.2	1X16Sq.mm	8.00	each			
4.1.3	1X25Sq.mm	16.00	each			
	Sub-Total					
5	SUPPLY (MARKET ITEM)					
5.1	Supplying and fixing of ceiling fan of following sweep, suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including 300 mm long down rod and resistance type regulator as equired.(Make: Crompton Greaves,Rivera)					
5.1.1	1200 mm sweep	4.00	Each			
5.2	Supplying and fixing extra conduit down rod					
5.2.1	G.I.Pipe down rod length 90 cm and dia 20 mm.	4.00	Metre			
5.2.2	Wall mounting ball socket for light fixing 20 mm dia.G.I.pipe heavy class 1.5+0.075 (Wastage @ 5%)=1.575m	10.00	each			
5.3	Supplying and fixing of wall mounting fan of following 450mm sweep , suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including wall bracket rod and resistance type regulator as required.					
5.3.1	Wall mounting fan (Medium type)	17.00	each			
5.4	Supplying and fixing of flexible hose/sleeve as required.					
5.4.1	25mm flexible pvc/metal hose	15.00	metre			
5.4.2	8mm pvc sleeve	15.00	metre			
	Sub-Total					
6	Supplying of Cables (MARKET ITEM)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
6.1	Supplying and fixing of following size ISI marked PVC insulated and unsheathed copper single core conductor cable of 1.1 KV grade as required.(Make:Finolex,Gloster and Polycab)					
6.1.1	1x16.0sq mm	80.00	metre			
6.1.2	1x25.0sq mm	155.00	metre			
6.1.3	1x35.0sq mm	90.00	each			
	Sub-Total					
7	Supply of Light Fixtures with Lamps (MARKET ITEM)					
7.1	Supply and fixing of industrial batten suitable for TL5 lamp 28w. Available with optional reflector. (Make: Bajaj,Crompton Greaves, & philips etc) (with 2 years manufacturer's warranty)					
7.1.1	TMSI 22 M 1 X TL5 -28W EBT	5.00	each			
	Sub-Total					
8	MCCB,MCB&DB'S DSR 2012					
8.1	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.					
8.1.1	Single pole	60.00	each			
8.1.2	Double pole	1.00	each			
8.1.3	Triple pole	23.00	each			
8.1.4	Four pole 6-32 Amps MCB	2.00	each			
8.1.5	MCB Blanking plates.	10.00	each			
8.2	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 1 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. (Make:Legrand/Siemens)	7.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
8.3	Supplying and fixing TP sheet steel enclosure on surface/ recess along with following amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required. (Make:Legrand/Siemens)					
8.3.1	Four pole 6-32 Amps MCB with enclosure.	20.00	each			
8.3.2	Double pole 6-32 A MCB with enclosure	44.00	each			
8.4	Supply and fixing of Terminal connector.					
8.4.1	Terminal connector (Panana type)	192.00	each			
8.4.2	Supply and fixing of indicators as LED type/Filament type in the existing board equipments etc. as required.(Make: L&T)	40.00	each			
8.5	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 160 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 equired.) TPN DBs-DPX 160 MCCB DBs and ELM as Incomer.(Make: Legrand/Siemens)					
8.5.1	8 Way (DPX3 160+24), Double door (160A,IP 43)	2.00	each			
8.6	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.(Make:Legrand/Siemens)					
8.6.1	4 Pole MCCB 160A , 36KA	1.00	each			
8.6.2	4 Pole MCCB 125A , 36KA	1.00	each			
8.7	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, D.C, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.(Make:Legrand/ABB/Siemens)					
8.7.1	Double pole MCB 5-32A	44.00	each			
8.8	Removing/Fixing of Mccb/Mcb/DBs with connections as required.					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
8.8.1	Labour charges for removing of 3phase MCCB DB with connections as required.	1.00	each			
	Sub-Total					
	Total					

Enq.no.41

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMC

Name of Work : Modification of electrical works in laboratory of EEE annex (old physics annex) at First floor.

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	WIRING					
1.1	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 surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.					
1.1.1	Group C	4.00	Point			
1.2	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
1.2.1	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	93.00	Metre			
1.2.2	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	63.00	Metre			
1.3	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.					
1.3.1	15/16 amp switch	64.00	Each			
1.3.2	6 pin 15/16 amp socket outlet	64.00	Each			
1.3.3	Indicator switch type	16.00	each			
1.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
1.4.1	5/6 amps switch	10.00	Each			
1.4.2	15/16 amp switch	5.00	Each			
1.4.3	3 pin 5/6 amp socket outlet	5.00	Each			
1.4.4	6 pin 15/16 amp socket outlet	5.00	Each			
1.4.5	(Market item) Rj-11 Telephone Socket	4.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.4.6	Supplying and fixing stepped Modular socket type electronic fan regulator on the existing switch box including connections but excluding modular plate etc. as required.	10.00	Each			
1.4.7	UTP Cat6-2 Module	10.00	each			
1.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.					
1.5.1	12 Module (200mmX150mm)	15.00	Each			
1.6	DLP plastic Trunking wiring (But the rate without wires) (Make: Legrand/Siemens)					
1.6.1	DLP Pastic Trunking 105x50mm and accessories Flexible cover 40mm width-1No, Flexible cover 85mm -1No, Joints for cover 40 mm width-1No, Joints for cover 85mm width-1No, Basejoint-25Nos, Clips-15Nos, Separation partition-1No, Endcap-1No, Internal angles-adjustable from 80 degr - 120 deg - 1No, VDI accessories for internal angles-1No, VDI accessories for external angles -1No, Flat angles -1No, VDI accessories for flat angles-1No, Flat junctions-1No, Flat junctions for specific size-tap off to an 80mm wide branch -1No, VDI accessories for junctions -1No, Wall crossing -1No, Capacity change -1No, Capacity change-1No, partition junction -1No, Cable ties base -1No. (Make: Legrand)	85.00	metre			
1.7	DLP Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed (The rate without DLP Pastic Trunking) as required.(Make: Finolex)					
1.7.1	2 X 4.0 sq. mm + 1 X 4.0 sq. mm earth wire	510.00	metre			
1.7.2	4 X 4.0 sq. mm + 2 X 4.0 sq. mm earth wire	340.00	metre			
1.8	"Supplying of following size ISI marked Module Arteor frame for fixing swiches or sockets in DLP plastic trunking wiring of 1.1 KV grade as required.					
1.8.1	8 Module surface box for 85 mm cover	31.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.9	Supply and fixing following Arteor switch/socket on the existing arteor frame & switch box including connections but excluding modular plate etc as required.					
1.9.1	5/6 amps switch 1Module	65.00	Each			
1.9.2	15/16 amps switch 1way 1module	17.00	Each			
1.9.3	3 Pin 5/6 amp socket outlet	65.00	Each			
1.9.4	15/16 amp socket outlet 3pin 2module	17.00	Each			
	Sub-Total					
2	E A R T H I N G					
2.1	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.	15.00	Metre			
	Sub-Total					
3	MV CABLE LAYING					
3.1	Computer net Cable laying.					
3.1.1	Cat-6 4Pair net cable	310.00	Meter			
3.2	Laying of telephone cable unarmoured pair 0.5Sq.mm FRLS PVC insulated annealed copper conductor in the existing surface/recessed steel/PVC conduit/DLP trunking ets as required.					
3.2.1	2-4 Pair	90.00	Meter			
	Sub-Total					
4	MV CABLE JOINTING & END TERMINATION					
4.1	Supplying and making indoor end termination with copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 KV grade as required.					
4.1.1	1X35Sq.mm	6.00	each			
4.1.2	1X25Sq.mm	4.00	each			
	Sub-Total					
5	SUPPLY (MARKET ITEM)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
5.1	Supplying and fixing of ceiling fan of following sweep, suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including 300 mm long down rod and resistance type regulator as equired.(Make: Crompton Greaves,Rivera)					
5.1.1	1200 mm sweep	10.00	Each			
5.2	Supplying and fixing extra conduit down rod					
5.2.1	Wall mounting ball socket for light fixing 20 mm dia.G.I.pipe heavy class 1.5+0.075 (Wastage @ 5%)=1.575m	10.00	each			
5.2.2	Supplying and fixing of tube light fitting hook & chain including chipping,fixing & surfacing to make good condition.	10.00	each			
5.3	Supplying and fixing of flexible hose/sleeve as required.					
5.3.1	25mm flexible pvc/metal hose	15.00	metre			
5.3.2	8mm pvc sleeve	15.00	metre			
	Sub-Total					
6	Supplying of Cables (MARKET ITEM)					
6.1	Supplying and fixing of following size ISI marked PVC insulated and unsheathed copper single core conductor cable of 1.1 KV grade as required.(Make:Finolex,Gloster and Polycab)					
6.1.1	1x25.0sq mm	75.00	metre			
6.1.2	1x35.0sq mm	105.00	each			
	Sub-Total					
7	Supply of Light Fixtures with Lamps (MARKET ITEM)					
7.1	Supply and fixing of industrial batten suitable for TL5 lamp 28w. Available with optional reflector. (Make: Bajaj,Crompton Greaves, & philips etc) (with 2 years manufacturer's warranty)					
7.1.1	TMSI 22 M 1 X TL5 -28W EBT	25.00	each			
	Sub-Total					
8	MCCB,MCB&DB'S DSR 2012					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
8.1	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.					
8.1.1	Single pole	20.00	each			
8.1.2	Double pole	1.00	each			
8.1.3	Triple pole	20.00	each			
8.1.4	MCB Blanking plates.	10.00	each			
8.2	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 1 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. (Make:Legrand/Siemens)	5.00	each			
8.3	Supplying and fixing TP sheet steel enclosure on surface/ recess along with following amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required. (Make:Legrand/Siemens)					
8.3.1	Four pole 6-32 Amps MCB with enclosure.	32.00	each			
8.3.2	Double pole 6-32 A MCB with enclosure	32.00	each			
8.4	Supply and fixing of Terminal connector.					
8.4.1	Terminal connector (Panana type)	512.00	each			
8.4.2	Supply and fixing of indicators as LED type/Filament type in the existing board equipments etc. as required.(Make: L&T)	80.00	each			
8.5	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 250 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of for DPX 250 ER MCCB and ELM 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 equired.) (MARKET ITEM Make:Legrand/Siemens with Metal door)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
8.5.1	TPN DBs-DPX 250 ER MCCB DBs and ELM as Incomer 12 Way DB	3.00	each			
8.6	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.(Make:Legrand/Siemens)					
8.6.1	4 Pole MCCB 250A , 36KA	3.00	each			
8.7	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, D.C, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.(Make:Legrand/ABB/Siemens)					
8.7.1	Double pole MCB 5-32A	32.00	each			
	Sub-Total					
	Total					

Enq.no.42

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMC

Name of Work : Providing electrification works in laboratory of EEE annex (old physics annex) at Second floor.

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	WIRING					
1.1	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 surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.					
1.1.1	Group C	2.00	Point			
1.2	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 surface / 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.					
1.2.1	Group C	99.00	Point			
1.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
1.3.1	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	94.00	Metre			
1.3.2	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	64.00	Metre			
1.4	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.					
1.4.1	15/16 amp switch	6.00	Each			
1.4.2	6 pin 15/16 amp socket outlet	6.00	Each			
1.4.3	Indicator switch type	3.00	each			
1.5	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.5.1	5/6 amps switch	10.00	Each			
1.5.2	15/16 amp switch	5.00	Each			
1.5.3	3 pin 5/6 amp socket outlet	5.00	Each			
1.5.4	6 pin 15/16 amp socket outlet	5.00	Each			
1.5.5	(Market item) Rj-11 Telephone Socket	4.00	each			
1.5.6	Supplying and fixing stepped Modular socket type electronic fan regulator on the existing switch box including connections but excluding modular plate etc. as required.	23.00	Each			
1.5.7	UTP Cat6-2 Module	16.00	each			
1.6	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.					
1.6.1	12 Module (200mmX150mm)	5.00	Each			
1.7	DLP plastic Trunking wiring (But the rate without wires) (Make: Legrand/Siemens)					
1.7.1	DLP Pastic Trunking 105x50mm and accessories Flexible cover 40mm width-1No, Flexible cover 85mm -1No, Joints for cover 40 mm width-1No, Joints for cover 85mm width-1No, Basejoint-25Nos, Clips-15Nos, Separation partition-1No, Endcap-1No, Internal angles-adjustable from 80 degr - 120 deg - 1No, VDI accessories for internal angles-1No, VDI accessories for external angles -1No, Flat angles -1No, VDI accessories for flat angles-1No, Flat junctions-1No, Flat junctions for specific size-tap off to an 80mm wide branch -1No, VDI accessories for junctions -1No, Wall crossing -1No, Capacity change -1No, Capacity change-1No, partition junction -1No, Cable ties base -1No. (Make: Legrand)	90.00	metre			
1.8	DLP Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed (The rate without DLP Pastic Trunking) as required.(Make: Finolex)					
1.8.1	2 X 4.0 sq. mm + 1 X 4.0 sq. mm earth wire	415.00	metre			
1.8.2	4 X 4.0 sq. mm + 2 X 4.0 sq. mm earth wire	290.00	metre			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.9	"Supplying of following size ISI marked Module Arteor frame for fixing swiches or sockets in DLP plastic trunking wiring of 1.1 KV grade as required.					
1.9.1	8 Module surface box for 85 mm cover	20.00	each			
1.10	Supply and fixing following Arteor switch/socket on the existing arteor frame & switch box including connections but excluding modular plate etc as required.					
1.10.1	5/6 amps switch 1Module	20.00	Each			
1.10.2	15/16 amps switch 1way 1module	20.00	Each			
1.10.3	3 Pin 5/6 amp socket outlet	20.00	Each			
1.10.4	15/16 amp socket outlet 3pin 2module	20.00	Each			
	Sub-Total					
2	E A R T H I N G					
2.1	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.	15.00	Metre			
	Sub-Total					
3	MV CABLE LAYING					
3.1	Computer net Cable laying.					
3.1.1	Cat-6 4Pair net cable	720.00	Meter			
3.2	Laying of telephone cable unarmoured pair 0.5Sq.mm FRLS PVC insulated annealed copper conductor in the existing surface/recessed steel/PVC conduit/DLP trunking ets as required.					
3.2.1	2-4 Pair	90.00	Meter			
	Sub-Total					
4	MV CABLE JOINTING & END TERMINATION					
4.1	Supplying and making indoor end termination with copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 KV grade as required.					
4.1.1	1X35Sq.mm	6.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
4.1.2	1X25Sq.mm	4.00	each			
	Sub-Total					
5	SUPPLY (MARKET ITEM)					
5.1	Supplying and fixing of ceiling fan of following sweep, suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including 300 mm long down rod and resistance type regulator as equired.(Make: Crompton Greaves,Rivera)					
5.1.1	1200 mm sweep	23.00	Each			
5.2	Supplying and fixing extra conduit down rod					
5.2.1	G.I.Pipe down rod length 90 cm and dia 20 mm.	12.00	Metre			
5.2.2	Wall mounting ball socket for light fixing 20 mm dia.G.I.pipe heavy class 1.5+0.075 (Wastage @ 5%)=1.575m	60.00	each			
5.2.3	Supplying and fixing of tube light fitting hook & chain including chipping,fixing & surfacing to make good condition.	27.00	each			
5.3	Supplying and fixing of wall mounting fan of following 450mm sweep , suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including wall braket rod and resistance type regulator as required.					
5.3.1	Wall mouting fan (Medium type)	4.00	each			
5.4	Supplying and fixing of flexible hose/sleeve as required.					
5.4.1	25mm flexible pvc/metal hose	15.00	metre			
5.4.2	8mm pvc sleeve	15.00	metre			
	Sub-Total					
6	Supplying of Cables (MARKET ITEM)					
6.1	Supplying and fixing of following size ISI marked PVC insulated and unsheathed copper single core conductor cable of 1.1 KV grade as required.(Make:Finolex,Gloster and Polycab)					
6.1.1	1x25.0sq mm	30.00	metre			
6.1.2	1x35.0sq mm	45.00	each			
	Sub-Total					
7	Supply of Light Fixtures with Lamps (MARKET ITEM)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
7.1	Supply and fixing of industrial batten suitable for TL5 lamp 28w. Available with optional reflector. (Make: Bajaj,Crompton Greaves, & philips etc) (with 2 years manufacturer's warranty)					
7.1.1	TMSI 22 M 1 X TL5 -28W EBT	19.00	each			
	Sub-Total					
8	MCCB,MCB&DB'S DSR 2012					
8.1	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.					
8.1.1	Double pole	1.00	each			
8.1.2	Triple pole	10.00	each			
8.1.3	MCB Blanking plates.	10.00	each			
8.2	Supplying and fixing TP sheet steel enclosure on surface/ recess along with following amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required. (Make:Legrand/Siemens)					
8.2.1	Four pole 6-32 Amps MCB with enclosure.	64.00	each			
8.2.2	Double pole 6-32 A MCB with enclosure	60.00	each			
8.3	Supply and fixing of Terminal connector.					
8.3.1	Terminal connector (Panana type)	32.00	each			
8.3.2	Supply and fixing of indicators as LED type/Filament type in the existing board equipments etc. as required.(Make: L&T)	10.00	each			
8.4	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 250 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of for DPX 250 ER MCCB and ELM 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 equired.) (MARKET ITEM Make:Legrand/Siemens with Metal door)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
8.4.1	TPN DBs-DPX 250 ER MCCB DBs and ELM as Incomer 12 Way DB	1.00	each			
8.5	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.(Make:Legrand/Siemens)					
8.5.1	4 Pole MCCB 250A , 36KA	1.00	each			
8.6	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, D.C, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.(Make:Legrand/ABB/Siemens)					
8.6.1	Double pole MCB 5-32A	68.00	each			
	Sub-Total					
	Total					

Enq.no.43

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMC

Name of Work : Providing Power panel and UG cable to laboratory of EEE annex (old physics annex).

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	E A R T H I N G					
1.1	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.	30.00	Metre			
1.2	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	40.00	Metre			
1.3	Supplying and fixing cosmos earthig electrode systems.					
1.3.1	COSMOS ROMA 40mm DIA 2 Mtrs LENGTH WITH MOISTURE ENHANCER 25 Kg.	2.00	each			
	Sub-Total					
2	MV CABLE LAYING					
2.1	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.					
2.1.1	Above 185 sq. mm and upto 400 sq. mm	245.00	Metre			
2.2	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.					
2.2.1	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	15.00	Metre			
2.3	Supply and laying of following size Double walled Corrugated High Density Polyethylene pipe having corrugation on the outer wall and plain surface inner wall conforming to IS 14930 part- I and part -II complete with necessary HDPE fitting for protection of 1.1 KV grade under ground cable directly in ground at a depth 75cm including excavation and refilling the trench etc as required.					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
2.3.1	90mm/76mm (Outer Nominal Dia / Inner Nominal Dia)	135.00	mtrs			
	Sub-Total					
3	MV CABLE JOINTING & END TERMINATION					
3.1	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 1.1 KV grade as required.					
3.1.1	3½ X 240 sq. mm (62mm)	2.00	Each			
	Sub-Total					
4	CIVIL ITEMS					
4.1	Excavation of the cable trenches in hard rock not exceeding 1.5 metres in width, and lift upto 1.5 metres, including getting out the excavated soil and disposal of excavated soil as directed within a lead of 50 metres.	4.00	cum			
4.2	Providing, laying and fixing following 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 (75 cm deep) and refilling etc as required.					
4.2.1	300 mm dia	40.00	metre			
	Sub-Total					
5	FABRICATION OF CUBICLE BOARDS/LADDER/SOLAR STRUCTURE					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
5.1	<p>Manufacturing, Supplying, installation, testing and commissioning of Indoor cubicle flush type floor mounted compartmentalized main power cum control panel made out of not less than 2.2 mm thick MS sheet connection inter-connection etc. as per CPWD specifications (Part IV & V).Providing and fixing following switch gears with cable entry boxes for both incoming and outgoing cables termination, glands, interconnection, connections powder coated painting, earthings ,replacement of old panels by new panels, and including of all erection, Labelling of incoming and outgoing feeders, cable trench formation works, removing termination in old panel & transport charges etc., as required. The panel drawing should be submitted before execution of the works. (Make: L&T/Legrand)</p> <p>"Specification for Thermal Magnetic MCCB Conforms to IS/IEC 60947-2 & IEC 60947-2, Ics=100% of Icu,Suitable for Isolation, Adjustable Overload from 0.8-1.0 X In,Adjustable short circuit from 6-10 XIn, Provision of Manual, Rotary or motorized versions Wide range of snap fit internal and external accessories</p>					
5.1.1	<p>Essential supply Pannel size 1800mm x1850 mm x 450mm mm deep (Nominal)</p> <p>a) 4 strip copper bus bars of suitable capacity b)Incomer 400A,4P,36kA MCCB Thermal Magnetic release-1No c) 250A,4P,36kA MCCB Thermal Magnetic release -4Nos d) 160A,4P,36kA MCCB Thermal Magnetic release-1Nos e) 125A,4P,36kA MCCB Thermal Magnetic release -1Nos f) LED VEGA multifunction meter class 1 with RS 485 port (WDM303FDWA1) Make -L&T -1Nos,g) CT'S-3Nos,h) 5A Backlite fuses-3Nos,j) R,Y,B indicators-each 1,k)Toggle switch -3Nos inculsive of all wiring charges etc as required.</p>	1.00	each			
5.2	Supply of Rubber mats/ fabricated chequered plate/MS plate for following size with bottom support and necessary cutting, grinding, welding, erection including painting and transport charges.					
5.2.1	2mm Class A high voltage 3.3kV(Batch No: 150524) IS15652-2006 insulation mat	2.00	Sq mtr			
5.2.2	Chequered plate thickness 6mm	4.00	Sq mtr			
	Sub-Total					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
6	Supplying of Cables (MARKET ITEM)					
6.1	Supplying of following size ISI marked PVC insulated and PVC sheathed aluminium grade with armoured as required.(Make:Finolex,Gloster and Polycab)					
6.1.1	3½ X 240 Sq mm	395.00	Metre			
	Sub-Total					
7	MCCB,MCB&DB'S DSR 2012					
7.1	(2.3) 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)					
7.1.1	2 + 12 way, Double door (IP 43)	3.00	each			
	Sub-Total					
	Total					

Enq.no.44

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMD

Name of Work : Renovating the lab area of heat transfer,refrigeration and Air Conditioner laboratory in Mechanical dept (old Physics Dept).

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	WIRING					
1.1	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 surface / 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.					
1.1.1	Group C	10.00	Point			
1.2	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
1.2.1	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	250.00	Metre			
1.2.2	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	50.00	Metre			
1.2.3	Labour charges for removing old PVC conduit pipe wiring and the same wire laying at the existing DLP trunking box etc.as required.	860.00	Meter			
1.3	Supplying 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.					
1.3.1	200 mm X 150 mm X 60 mm deep	20.00	Each			
1.3.2	200 mm X 300 mm X 60 mm deep	8.00	Each			
1.3.3	250 mm X 300 mm X 100 mm deep	1.00	Each			
1.4	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.					
1.4.1	5/6 amps switch	95.00	Each			
1.4.2	15/16 amp switch	20.00	Each			
1.4.3	3 pin 5/6 amp socket outlet	95.00	Each			
1.4.4	6 pin 15/16 amp socket outlet	20.00	Each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.5	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
1.5.1	(Market item) Rj-11 Telephone Socket	6.00	each			
1.5.2	Blanking plate	6.00	each			
1.5.3	UTP Cat6-2 Module	20.00	each			
1.6	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.					
1.6.1	1 or 2 Module (75mmX75mm)	20.00	Each			
1.7	DLP plasticTrunking wiring (But the rate without wires) (Make: Legrand/Siemens)					
1.7.1	DLP Pastic Trunking 105x50mm and accessories Flexible cover 40mm width-1No,Flexible cover 85mm -1No,Joints for cover 40 mm width-1No, Joints for cover 85mm width-1No,Basejoint-25Nos,Clips-15Nos,Separation partition-1No,Endcap-1No,Internal angles-adjustable from 80 degr - 120 deg - 1No, VDI accessories for internal angles-1No,VDI accessories for external angles -1No, Flat angles -1No, VDI accessories for flat angles-1No, Flat junctions-1No, Flat junctions for specific size-tap off to an 80mm wide branch -1No, VDI accessories for junctions -1No, Wall crossing -1No, Capacity change -1No,Capacity change-1No, partition junction -1No, Cable ties base -1No. (Make: Legrand)	110.00	metre			
1.8	DLP Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed (The rate without DLP Pastic Trunking) as required.(Make: Finolex)					
1.8.1	2 X 4.0 sq. mm + 1 X 4.0 sq. mm earth wire	150.00	metre			
1.8.2	4 X 4.0 sq. mm + 2 X 4.0 sq. mm earth wire	80.00	metre			
1.8.3	4 X 10.0 sq. mm + 2 X 10.0 sq. mm earth wire	60.00	metre			
1.8.4	4 X 25.0 sq. mm + 2 X 25.0 sq. mm earth wire	35.00	metre			
	Sub-Total					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
2	E A R T H I N G					
2.1	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.	25.00	Metre			
2.2	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	30.00	Metre			
2.3	Supplying and fixing cosmos earthig electrode systems.					
2.3.1	COSMOS ROMA 40mm DIA 2 Mtrs LENGTH WITH MOISTURE ENHANCER 25 Kg.	2.00	each			
	Sub-Total					
3	MV CABLE LAYING					
3.1	Computer net Cable laying.					
3.1.1	Cat-6 4Pair net cable	250.00	Meter			
3.2	Laying of telephone cable unarmoured pair 0.5Sq.mm FRLS PVC insulated annealed copper conductor in the existing surface/recessed steel/PVC conduit/DLP trunking ets as required.					
3.2.1	2-4 Pair	180.00	Meter			
	Sub-Total					
4	MV CABLE JOINTING & END TERMINATION					
4.1	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 1.1 KV grade as required.					
4.1.1	3½ X 185 sq. mm (57mm)	2.00	Each			
4.2	Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.					
4.2.1	3½ X 185 sq. mm	1.00	Each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
4.3	Supplying and making indoor end termination with copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 KV grade as required.					
4.3.1	1X25Sq.mm	6.00	each			
	Sub-Total					
5	CIVIL ITEMS					
5.1	Excavation of the cable trenches in hard rock not exceeding 1.5 metres in width, and lift upto 1.5 metres, including getting out the excavated soil and disposal of excavated soil as directed within a lead of 50 metres.	6.00	cum			
	Sub-Total					
6	FABRICATION OF CUBICLE BOARDS/LADDER/SOLAR STRUCTURE					
6.1	Manufacturing, Supplying, installation, testing and commissioning of Indoor cubicle flush type floor mounted compartmentalized main power cum control panel made out of not less than 2.2 mm thick MS sheet connection inter-connection etc. as per CPWD specifications (Part IV & V).Providing and fixing following switch gears with cable entry boxes for both incoming and outgoing cables termination, glands, interconnection, connections powder coated painting, earthings ,replacement of old panels by new panels, and including of all erection, Labelling of incoming and outgoing feeders, cable trench formation works, removing termination in old panel & transport charges etc., as required. The panel drawing should be submitted before execution of the works. (Make: L&T/Legrand)					
6.1.1	Essential supply Pannel size 1800mm x1850 mm x 450mm mm deep (Nominal),a) 4 strip copper bus bars of suitable capacity b) Incomer 400A,4P,36kA MCCB Thermal Magnetic release- 1Nos c) outgoing 250A,4P,36kA MCCB Thermal Magnetic release-3Nos d) 125A,4P,36kA MCCB Thermal Magnetic release-1No e)Dummy Compartment suitable for 200A,4P,MCCB Thermal Magnetic release -2 Nos, g) LED VEGA multifunction meter class 1 with RS 485 port (WDM303FDWA1) Make -L&T -1Nos,h) CT'S -3Nos i) 5A Backlite fuses-3Nos,j) R,Y,B indicators-each 1,k)Toggle switch-3Nos with all wiring connections etc as required.	1.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
6.2	Supply of Rubber mats/ fabricated chequered plate/MS plate for following size with bottom support and necessary cutting, grinding, welding, erection including painting and transport charges.					
6.2.1	415V Rubber mats.(1mtrX1mtr) IS15652 medium	2.00	Sq mtr			
6.2.2	Chequered plate thickness 4mm	6.00	Sq mtr			
	Sub-Total					
7	SUPPLY (MARKET ITEM)					
7.1	Supplying and fixing of ceiling fan of following sweep, suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including 300 mm long down rod and resistance type regulator as equired.(Make: Crompton Greaves,Rivera)					
7.1.1	1200 mm sweep	3.00	Each			
7.2	Supplying and fixing extra conduit down rod					
7.2.1	G.I.Pipe down rod length 90 cm and dia 20 mm.	6.00	Metre			
7.2.2	Wall mounting ball socket for light fixing 20 mm dia.G.I.pipe heavy class 1.5+0.075 (Wastage @ 5%)=1.575m	6.00	each			
7.2.3	Supplying and fixing of MS "S" type fan hook including chipping,fixing & surfacing to make good condition.	5.00	each			
7.3	Supplying and fixing of wall mounting fan of following 450mm sweep , suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including wall braket rod and resistance type regulator as required.					
7.3.1	Wall mouting fan (Medium type)	3.00	each			
7.4	Repairing and painting works.					
7.4.1	Removing and fixing of switch boards/DBs/light fittings/Fuse control box from wall works	5.00	each			
7.4.2	Checking of all switch bords/DBs/light fittings.	1.00	Ls			
	Sub-Total					
8	Supplying of Cables (MARKET ITEM)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
8.1	Supplying of following size ISI marked PVC insulated and PVC sheathed aluminium grade with armoured as required.(Make:Finolex,Gloster and Polycab)					
8.1.1	3½ X185 Sq mm	10.00	Metre			
	Sub-Total					
9	Supply of Light Fixtures with Lamps (MARKET ITEM)					
9.1	Supply and fixing of industrial batten suitable for TL5 lamp 28w. Available with optional reflector. (Make: Bajaj,Crompton Greaves, & philips etc) (with 2 years manufacturer's warranty)					
9.1.1	TMSI 22 M 2 X TL5 -28W EBT with lamp	4.00	each			
9.2	Supply and fixing of indoor decorative LED fitting of high efficacy luminaire range suitable for recessed/surface mounting in modular ceiling with 600 x 600/300X300/round type module and extremely low height of 50 mm. (Make: Crompton Greaves, philips etc)					
9.2.1	2x2 LED TUBE Light fitting with tubes. (Crompton Greaves)	2.00	each			
	Sub-Total					
10	MCCB,MCB&DB'S DSR 2012					
10.1	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)					
10.1.1	4 way (8 + 12), Double door	1.00	each			
10.2	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.					
10.2.1	Single pole	20.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
10.3	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 1 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. (Make:Legrand/Siemens)	4.00	each			
10.4	Supplying and fixing for following 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.(Make:Legrand/Siemens)					
10.4.1	Triple pole 80 amps MCB	1.00	each			
10.4.2	Four pole 80 Amps MCB	1.00	each			
10.5	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 160 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 equired.) TPN DBs-DPX 160 MCCB DBs and ELM as Incomer.(Make: Legrand/Siemens)					
10.5.1	8 Way (DPX3 160+24), Double door (160A,IP 43)	1.00	each			
10.6	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.(Make: Legrand/Siemens)					
10.6.1	4 Pole MCCB 125A , 36KA	1.00	each			
	Sub-Total					
	Total					

Enq.no.45

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMC

Name of Work : Providing three phase power supply to proposed material testing laboratory at room no : M25 & M26 in Mechanical Dept.(Old Physics)

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	W I R I N G					
1.1	DLP plastic Trunking wiring (But the rate without wires) (Make: Legrand/Siemens)					
1.1.1	DLP Pastic Trunking 105x50mm and accessories Flexible cover 40mm width-1No, Flexible cover 85mm -1No, Joints for cover 40 mm width-1No, Joints for cover 85mm width-1No, Basejoint-25Nos, Clips-15Nos, Separation partition-1No, Endcap-1No, Internal angles-adjustable from 80 degr - 120 deg - 1No, VDI accessories for internal angles-1No, VDI accessories for external angles -1No, Flat angles -1No, VDI accessories for flat angles-1No, Flat junctions-1No, Flat junctions for specific size-tap off to an 80mm wide branch -1No, VDI accessories for junctions -1No, Wall crossing -1No, Capacity change -1No, Capacity change-1No, partition junction -1No, Cable ties base -1No. (Make: Legrand)	110.00	metre			
1.2	DLP Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed (The rate without DLP Pastic Trunking) as required.(Make: Finolex)					
1.2.1	2 X 4.0 sq. mm + 1 X 4.0 sq. mm earth wire	40.00	metre			
1.2.2	4 X 4.0 sq. mm + 2 X 4.0 sq. mm earth wire	80.00	metre			
1.2.3	4 X 10.0 sq. mm + 2 X 10.0 sq. mm earth wire	200.00	metre			
1.2.4	4 X 25.0 sq. mm + 2 X 25.0 sq. mm earth wire	55.00	metre			
	Sub-Total					
2	E A R T H I N G					
2.1	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.	20.00	Metre			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
2.2	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	15.00	Metre			
2.3	Supplying and fixing cosmos earthig electrode systems.					
2.3.1	COSMOS ROMA 40mm DIA 2 Mtrs LENGTH WITH MOISTURE ENHANCER 25 Kg.	1.00	each			
	Sub-Total					
3	MV CABLE JOINTING & END TERMINATION					
3.1	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 1.1 KV grade as required.					
3.1.1	3½ X 185 sq. mm (57mm)	2.00	Each			
3.2	Supplying and making indoor end termination with copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 KV grade as required.					
3.2.1	4X10Sq.mm	6.00	each			
3.2.2	1X120Sq.mm	8.00	each			
3.2.3	1X25Sq.mm	12.00	each			
3.2.4	1X90Sq.mm	4.00	each			
	Sub-Total					
4	Supplying of Cables (MARKET ITEM)					
4.1	Supplying and fixing of following size ISI marked PVC insulated and unsheathed copper single core conductor cable of 1.1 KV grade as required.(Make:Finolex,Gloster and Polycab)					
4.1.1	1x95sq mm	120.00	metre			
4.1.2	1x120sq mm	180.00	metre			
	Sub-Total					
5	Adaptor box (MARKET ITEM)					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
5.1	Cable adaptor box (MARKET ITEM)					
5.1.1	Supplying and fixing of M.S Box of following size with painting with red axid and enamel paint coating as required suitable for out door.(Size 300x250x150 mm)	1.00	each			
	Sub-Total					
6	MCCB,MCB&DB'S DSR 2012					
6.1	Supplying and fixing for following 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.(Make:Legrand/Siemens)					
6.1.1	Triple pole 40-63 amps MCB	7.00	each			
6.1.2	Triple pole 100 amps MCB	1.00	each			
6.2	Supplying and fixing TP sheet steel enclosure on surface/ recess along with following amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required. (Make:Legrand/Siemens)					
6.2.1	Four pole 40-63 Amps MCB with enclosure.	6.00	each			
6.2.2	Four Pole MCB 100A with Enclosure	1.00	each			
6.3	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 250 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of for DPX 250 ER MCCB and ELM 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 equired.) (MARKET ITEM Make:Legrand/Siemens with Metal door)					
6.3.1	TPN DBs-DPX 250 ER MCCB DBs and ELM as Incomer 12 Way DB	1.00	each			
6.4	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.(Make:Legrand/Siemens)					
6.4.1	4 Pole MCCB 250A , 36KA	1.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
	Sub-Total					
	Total					

Enq.no.46

SCHEDULE OF WORK

State Tamilnadu
Branch ElectricalDivision EMD
Sub-Division EMC

Name of Work : Renovation of electrical works in B Mess & F Mess kitchens and cabling to high mast lighting system near Ojas building.

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1	WIRING					
1.1	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 surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.					
1.1.1	Group C	15.00	Point			
1.2	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
1.2.1	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	90.00	Metre			
1.2.2	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	20.00	Metre			
1.2.3	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	30.00	Metre			
1.2.4	Labour charges for removing old PVC conduit pipe wiring and the same wire laying at the existing DLP trunking box etc.as required.	350.00	Meter			
1.3	Supplying 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.					
1.3.1	200 mm X 125 mm X 60 mm deep	2.00	Each			
1.3.2	200 mm X 150 mm X 60 mm deep	10.00	Each			
1.3.3	200 mm X 250 mm X 60 mm deep	4.00	Each			
1.3.4	200 mm X 300 mm X 60 mm deep	43.00	Each			
1.3.5	400 mm X 300 mm X 100 mm deep	2.00	each			
1.4	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.					
1.4.1	5/6 amps switch	100.00	Each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
1.4.2	15/16 amp switch	32.00	Each			
1.4.3	3 pin 5/6 amp socket outlet	10.00	Each			
1.4.4	6 pin 15/16 amp socket outlet	40.00	Each			
1.5	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
1.5.1	Supplying and fixing stepped Piano socket type electronic fan regulator on the existing switch box including connections but excluding modular plate etc. as required.	20.00	Each			
1.6	DLP plastic Trunking wiring (But the rate without wires) (Make: Legrand/Siemens)					
1.6.1	DLP Plastic Trunking with cover 80x50mm flexible cover 65 mm -1No Joints for cover 65 mm width -1No,Base joint -1No,Clips-1No,Separation partition- 1No,End cap - 1No,Internal angles adjustable from 80 degr - 120 deg - 1No ,VDI accessories for internal angles - 1No,VDI accessories for external angles - 1No,Flat angles - 1No,VDI accessories for flat angles - 1No,Flat junctions-1No Flat junctions for specific size-tap off to an 80mm wide branch- 1No VDI accessories for junctions - 1No,Wall crossing-1No,capacitychange - 1No,Capacity change - 1No,partition junction- 1No and Cable tiesbase- 1No.	35.00	metre			
1.7	DLP Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed (The rate without DLP Pastic Trunking) as required.(Make: Finolex)					
1.7.1	2 X 4.0 sq. mm + 1 X 4.0 sq. mm earth wire	90.00	metre			
1.7.2	4 X 4.0 sq. mm + 2 X 4.0 sq. mm earth wire	60.00	metre			
1.7.3	4 X 6.0 sq. mm + 2 X 6.0 sq. mm earth wire	80.00	metre			
	Sub-Total					
2	E A R T H I N G					
2.1	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.	30.00	Metre			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
2.2	Supplying and fixing cosmos earthig electrode systems.					
2.2.1	COSMOS ROMA 40mm DIA 2 Mtrs LENGTH WITH MOISTURE ENHANCER 25 Kg.	1.00	each			
	Sub-Total					
3	MV CABLE LAYING					
3.1	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.					
3.1.1	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	15.00	Metre			
3.2	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.					
3.2.1	Supplying and making LT cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm X 30 cm with a thickness of 8cm including inscription duly engraved as required.	35.00	each			
3.3	Supply and laying of following size Double walled Corrugated High Density Polyethylene pipe having corrugation on the outer wall and plain surface inner wall conforming to IS 14930 part- I and part -II complete with necessary HDPE fitting for protection of 1.1 KV grade under ground cable directly in ground at a depth 75cm including excavation and refilling the trench etc as required.					
3.3.1	40mm/32mm (Outer Nominal Dia / Inner Nominal Dia)	450.00	mtrs			
3.3.2	77mm/63mm (Outer Nominal Dia / Inner Nominal Dia)	185.00	mtrs			
	Sub-Total					
4	MV CABLE JOINTING & END TERMINATION					
4.1	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 1.1 KV grade as required.					
4.1.1	3½ X 70 sq. mm (38mm)	2.00	Each			
4.1.2	4 X 50 sq. mm (35mm)	2.00	Each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
	Sub-Total					
5	CIVIL ITEMS					
5.1	Providing, laying and fixing following 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 (75 cm deep) and refilling etc as required.					
5.1.1	300 mm dia	16.00	metre			
	Sub-Total					
6	SUPPLY (MARKET ITEM)					
6.1	Supplying and fixing of ceiling fan of following sweep, suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including 300 mm long down rod and resistance type regulator as equired.(Make: Crompton Greaves,Rivera)					
6.1.1	1200 mm sweep	24.00	Each			
6.2	Supplying of heavy duty 960 RPM exhaust fan of following sweep, suitable for operation on 230 Volts, single phase, 50 Hz, AC Supply including suitable size louvers as required.					
6.2.1	380 mm	4.00	each			
6.3	Repairing and painting works.					
6.3.1	Removing of switch bords/DBs/light fittings/Fuse control box from wall works	40.00	each			
6.3.2	supply and fixing readymade round cement block -1Nos Labour charges for exhaust fan fixing including mesh wire ,wall cutting bolt nuts fixing and finishing.	4.00	each			
6.3.3	Labour charges for removing ceiling/exhaust/wall mounting/pedestal fan	24.00	each			
6.4	Supply and fixing of energy meter/multifunction meter/ammeter/voltmeter/selector switch/timer /Starter for following ratings suitable operation on 230/415 Volts, 1 ph,3 ph 50 Hz, AC Supply as required.(Make: L & T / Siemens)					
6.4.1	Trivector Meter Class 1 whole current meter,Model ER300P Class 1 (Base Mounting),4W TVM 240 V 10 - 60A BM RS 485,Cat no :WR300BC73RS.	2.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
	Sub-Total					
7	Supplying of Cables (MARKET ITEM)					
7.1	Supplying of following size ISI marked PVC insulated and PVC sheathed aluminium grade with armoured as required.(Make:Finolex,Gloster and Polycab)					
7.1.1	3½ X 70 sq. mm	200.00	Metre			
7.1.2	4x50 sq mm	450.00	metre			
	Sub-Total					
8	Supply of Light Fixtures with Lamps (MARKET ITEM)					
8.1	Supply and fixing of industrial batten suitable for TL5 lamp 28w. Available with optional reflector. (Make: Bajaj,Crompton Greaves, & philips etc) (with 2 years manufacturer's warranty)					
8.1.1	TMSI 22 M 1 X TL5 -28W EBT	40.00	each			
8.2	Supply and fixing of angle bracket for fixing of flood light fittings.					
8.2.1	Supplying and fixing of G.I Wall bracket suitable bend for fixing floodlightings/ M.S Wall bracke for street lights and painting with zinc chrome primer and finished with 2 coats of aluminium paint etc., as required.	1.00	each			
8.3	Supplying and fixing street light luminaire with die cast aluminum housing and toughened glass cover with min IP65 protection , with the LED Type fixtures of following Wattage complete with all accessories and drivers, LN6 heat sink minimum 5kVA surge protection low power LEDs with driving current less than 350mA etc. on existing brackets on street light poles including connection & loop earthing with 3 core 1.5 sqmm flexible PVC insulated PVC round sheathed copper conductor cable from street light box to fitting, testing and commissioning etc. as required. (with 5 years manufacturer's warranty) (Make: Havells,Bajaj,Crompton Greaves, & philips etc)					
8.3.1	LED 45W white colour lamp.	1.00	each			
	Sub-Total					
9	MCCB,MCB&DB'S DSR 2012					

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
9.1	(2.3) 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)					
9.1.1	2 + 8 way, Double door (Make: Legrand IP 43)	4.00	each			
9.2	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)					
9.2.1	4 way (8 + 12), Double door	2.00	each			
9.3	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.					
9.3.1	Single pole	20.00	each			
9.3.2	Double pole	4.00	each			
9.3.3	Triple pole	2.00	each			
9.4	Supplying and fixing for following 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.(Make:Legrand/Siemens)					
9.4.1	Triple pole 40-63 amps MCB	6.00	each			
9.4.2	Four pole 40-63 Amps MCB	2.00	each			
9.5	Supplying and fixing TP sheet steel enclosure on surface/ recess along with following amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required. (Make:Legrand/Siemens)					
9.5.1	Four pole 6-32 Amps MCB with enclosure.	2.00	each			
9.5.2	Double pole 6-32 A MCB with enclosure	4.00	each			

ITEM	SUB-HEADS AND ITEM OF WORK	QUANTITY	UNIT	RATE (Rs)	RATE (In Words)	AMOUNT(Rs)
9.6	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 160 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 equired.) TPN DBs-DPX 160 MCCB DBs and ELM as Incomer.(Make: Legrand/Siemens)					
9.6.1	8 Way (DPX3 160+24), Double door (160A,IP 43)	1.00	each			
9.7	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.(Make:Legrand/Siemens)					
9.7.1	4 Pole MCCB 125A , 36KA	1.00	each			
	Sub-Total					
	Total					