



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT

CHENNAI – 600 036
Price Bid (Volume 2)

T. No 24/2013-14/Eldb

Name of the work : **Electrification to proposed building of Main, PC and
FTC building for National Centre for Combustion
Research & Development(NCCRD) at IIT Madras**

Date of Submission of

Technical & Price bid : 03.00 pm on 11/09/2013

Date of opening of : 03.10 pm on 11/09/2013

Technical bid

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 style="text-align: center;">TENDER DOCUMENT</p> <p style="text-align: center;">FOR</p> <p>Electrification to proposed building of Main, PC and FTC building for National Centre for Combustion Research & Development(NCCRD) at IIT Madras</p>
<p style="text-align: center;">VOLUME-2 (PRICE BID)</p>
<p style="text-align: center;">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

Name of work: Electrification to proposed building of Main, PC and FTC building for National centre for Combustion Research & Development (NCCRD) at IIT Madras.

Tender No. 24/2013-14/ELDB

Part – A - BILL OF QUANTITIES FOR MAIN BUILDING

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
I	LOW VOLTAGE SWITCHGEAR				
	Supply, Installation, testing & commissioning of following 415 volt switchboards including unloading & shifting, unpacking, physical inspection, assembly, site testing etc. at Electrical rooms. 415V, 3ph., 4wire floor mounting free standing cubicle type LT Switchboards, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel conforming to attached specification and drawing.				
1	MAIN LT PANEL - ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type MAIN LT PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	1000A TP ACB 50kA EDO with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 1000/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	1000 TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	3 Nos - 800A 25kA TP MCCB				
	2Nos - 200A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
2	EMERGENCY PANEL - FIRST FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type EMERGENCY PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	160A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	CHANGEOVER SWITCH:				
	160A 4P CHANGEOVER SWITCH TO RECEIVE DG & EB POWER WITH SINGLE FEED OUT GOING				

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	METERING:				
	Current transformer rated 160/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	160A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	4 Nos - 63A 25kA TP MCCB				
	2 Nos - 32A 25kA TP MCCB				
	2 Nos - 20A 25kA SP MCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
3	GROUND FLOOR PANEL - GROUND FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type GROUND FLOOR PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	200A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	CHANGEOVER SWITCH:				
	200A 4P CHANGEOVER SWITCH TO RECEIVE RM-1 & RM-2 POWER WITH SINGLE FEED OUT GOING				
	METERING:				
	Current transformer rated 200/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	200A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	1 Nos -100A 25kA TP MCCB				
	1 Nos -125A 25kA TP MCCB				
	3 Nos - 63A 25kA TP MCCB				
	1 Nos - 32A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
4	SECOND FLOOR PANEL - SECOND FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type SECOND FLOOR PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	INCOMER:				
	160A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	CHANGEOVER SWITCH:				
	160A 4P CHANGEOVER SWITCH TO RECEIVE RM-1 & RM-2 POWER WITH SINGLE FEED OUT GOING				
	METERING:				
	Current transformer rated 160/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	160A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	1 Nos -125A 25kA TP MCCB				
	3 Nos - 63A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
5	THIRD FLOOR PANEL - THIRD FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type THIRD FLOOR PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel conforming to technical specifications & SLD.				
	INCOMER:				
	315A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	CHANGEOVER SWITCH:				
	315A 4P CHANGEOVER SWITCH TO RECEIVE RM-1 & RM-2 POWER WITH SINGLE FEED OUT GOING				
	METERING:				
	Current transformer rated 315/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	315A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	2 Nos -125A 25kA TP MCCB				
	4 Nos - 63A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6	FOURTH FLOOR PANEL - FOURTH FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type FOURTH FLOOR PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	200A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	CHANGEOVER SWITCH:				
	200A 4P CHANGEOVER SWITCH TO RECEIVE RM-1 & RM-2 POWER WITH SINGLE FEED OUT GOING				
	METERING:				
	Current transformer rated 200/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	200A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	1Nos -100A 25kA TP MCCB				
	1Nos -125A 25kA TP MCCB				
	3 Nos - 63A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
7	LIFT PANEL - GROUND FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type LIFT PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	63A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 63/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	63A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	3 Nos - 32A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
8	UPS I/C PANEL - THIRD FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type UPS I/C PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	100A 4P MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 100/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	100A 4P Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	3 Nos - 63A 25kA 4P MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
9	UPS O/G PANEL - THIRD FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type UPS O/G PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	2 NOS-63A 4P MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 63/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	63A 4P Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	BUS COUPLER:				
	63A 4P MCCB with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	OUTGOING:				
	3 Nos - 63A 25kA 4P MCCB				
	3 Nos - 40A 25kA 4P MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10	AIR COMPRESSOR I/C BREAKER PANEL (INCLUDING STEEL SUPPORT)				
	Supply, Erection, Testing and Commissioning of Indoor type AIR COMPRESSOR I/C BREAKER PANEL, WALL mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	1 NO-800A TP MCCB 50kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 630/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	800A 4P Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	1 No - 400A 25kA TP MCCB				
	3 Nos-200A 25kA TP MCCB				
	1 NO-125A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
11	HVAC PANEL - 1 - OPEN TERRACE FLOOR ELECTRICAL ROOM				
	Supply, Erection, Testing and Commissioning of Indoor type HVAC PANEL-1, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	1 NO-400A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 400/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	400A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	3Nos -200A 25kA TP MCCB				
	3Nos -125 A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
II	LIGHTING, UPS, AC & POWER DISTRIBUTION BOARD				
12	Supply, installation, testing & commissioning of following 415V Distribution Board (Double Door) including unloading & assembly, fixing on wall /steel structure, aligning, leveling, grouting etc. including all labour and materials. ELCB / RCCB rated for 100mA. All MCB shall be suitable for motive power (Curve C)				
12.1	Lighting Distribution Board - 8 way 7 COMPARTMENT TPN double door type: I/C = 63A TPN MCB, PHASE SEGREGATION = 3 Nos. 40A DP RCCB (one in each phase) + O/G = 24 Nos. 6-10A SP MCB (Eight in each phase)	Nos.	2		
Rate in words Rupees					
12.2	Lighting Distribution Board - 6 way 7 COMPARTMENT TPN double door type: I/C = 63A TPN MCB, PHASE SEGREGATION = 3 Nos. 40A DP RCCB (one in each phase) + O/G = 18 Nos. 6-10A SP MCB (Six in each phase)	Nos.	2		
Rate in words Rupees					
12.3	Emergency Lighting Distribution Board - 4 way 7 COMPARTMENT TPN double door type: I/C = 40A TPN MCB, PHASE SEGREGATION = 3 Nos. 25A DP RCCB (one in each phase) + O/G = 12 Nos. 6-10A SP MCB (Four in each phase)	Nos.	1		
Rate in words Rupees					
12.4	RAW Power Distribution Board - 8 way TPN double door type: I/C = 63A TPN MCB, O/G = 24 Nos. 6-32A SP MCB (Eight in each phase)	Nos.	2		
Rate in words Rupees					
12.5	RAW Power Distribution Board - 6 way TPN double door type: I/C = 32A TPN MCB, O/G = 18 Nos. 6-32A SP MCB (Six in each phase)	Nos.	1		
Rate in words Rupees					
12.6	RAW Power distribution Board -4 way TPN double door type: I/C = 32A TPN MCB, O/G = 12 Nos. 6-32A SP MCB (Four in each phase)	Nos.	10		
Rate in words Rupees					
12.7	UPS Distribution Board - 6 way 7 COMPARTMENT TPN double door type: I/C = 63A TPN MCB, PHASE SEGREGATION = 3 Nos. 40A DP RCBO (one in each phase) + O/G = 18 Nos. 6-10A SP MCB (Six in each phase)	Nos.	1		
Rate in words Rupees					
12.8	UPS distribution Board -4 way 7 COMPARTMENT TPN double door type: I/C = 40A TPN MCB, PHASE SEGREGATION = 3 Nos. 25A DP RCBO (one in each phase) + O/G = 12 Nos. 6-10A SP MCB (Four in each phase)	Nos.	3		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
12.9	AC Distribution Board - 4 way TPN double door type: I/C = 63A TPN MCB, O/G = 12 Nos. 6-32A SP MCB (Eight in each phase)	Nos.	2		
Rate in words Rupees					
12.10	AC Distribution Board - 8 way TPN double door type: I/C = 125A, 25 KA TP MCCB, O/G = 5 Nos. 20-32A TP MCB & 9 Nos. 20-32A TP MCB.	Nos.	5		
Rate in words Rupees					
III	POWER & CONTROL CABLES				
13	Supply & Laying of cables of following sizes on cable trays, through Partition Wall, SS Pendants, structural supports & cable supports. The cost of laying inclusive of transportation from stores, shifting to site. Laying of cables excludes supply of cable trays, GI Pipes & MS supports which will be considered separately. The scope includes dressing and clamping of cables with supply of cable no., tags, PVC tying etc. as directed by the site in-charge. Laying of cables also includes clamping the cable on structural support up to motor terminal box/PBs. Cable tags shall be made of 3mm thick aluminum strip of size 75 mm x 20 mm with cable number & size engraved/punched on it. Cable tag shall be fixed at both end and for cable run above ground at all bends & route changes in the cable run.				
	Cable on Tray including tagging, dressing, binding and hardware which are applicable. Civil Work will be paid separately				
13.1	3.5C x 300 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	50		
Rate in words Rupees					
13.2	3.5C x 185 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	36		
Rate in words Rupees					
13.3	3.5C x 150 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	25		
Rate in words Rupees					
13.4	3.5C x 120 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	45		
Rate in words Rupees					
13.5	3.5C x 70 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	48		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
13.6	3.5C x 35 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	50		
Rate in words Rupees					
13.7	1Cx25 Sq. mm CU/XLPE/GI strips armoured & FRLS sheathed cable	Mtr.	120		
Rate in words Rupees					
13.8	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	580		
Rate in words Rupees					
13.9	4C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	300		
Rate in words Rupees					
13.10	3C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	611		
Rate in words Rupees					
13.11	4C x 10 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	110		
Rate in words Rupees					
13.12	4C x 2.5 sq.mm 2XWY(Cu.XLPE armoured)	Mtr.	150		
Rate in words Rupees					
IV	CABLE TERMINATION :				
14	Supply & Installation of Cable end termination of following sizes. The termination rate shall include drilling of gland plates and dressing of cables inside panel / terminal box with and crimping of tinned copper double barrel lugs of required size. Glands shall be with double seal cone grip arrangement and PVC rubber hood. Blind plug to be fixed where as required. Contractor shall check cable diameter under and over armoured, prior to supply of glands. Ferrule to be considered for each and every Power and control cable				
	1.1 KV Compression Cable Termination with Lugs				
14.1	3.5C x 300 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	4		
Rate in words Rupees					
14.2	3.5C x 185 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	4		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
14.3	3.5C x 150 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	2		
Rate in words Rupees					
14.4	3.5C x 120 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	6		
Rate in words Rupees					
14.5	3.5C x 70 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	4		
Rate in words Rupees					
14.6	3.5C x 35 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	4		
Rate in words Rupees					
14.7	1C x 25 Sq. mm Cu/XLPE/GI strips armoured & FRLS sheathed cable	NOS.	8		
Rate in words Rupees					
14.8	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	72		
Rate in words Rupees					
14.9	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	30		
Rate in words Rupees					
14.10	4C x 10 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	10		
Rate in words Rupees					
14.11	5C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	120		
Rate in words Rupees					
14.12	3C x 4 /4C x 2.5 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	38		
Rate in words Rupees					
V	CABLE TRAY & COVER				
	GI CABLE TRAY				
15	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
15.1	GI Perforated Tray : 600 width x 50 mm depth x 2.0mm thick	Mtr.	100		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
15.2	GI Perforated Tray : 300 width x 50 mm depth x 1.6mm thick	Mtr.	35		
Rate in words Rupees					
15.3	GI Perforated Tray : 100 width x 50 mm depth x 1.6mm thick	Mtr.	200		
Rate in words Rupees					
16	Supplying and installing following size of perforated pre-painted M.S. cable trays bends with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
16.1	GI Perforated Tray : 600 width x 50 mm depth x 2.0mm thick	Each	2		
Rate in words Rupees					
16.2	GI Perforated Tray : 300 width x 50 mm depth x 1.6mm thick	Each	2		
Rate in words Rupees					
16.3	GI Perforated Tray : 100 width x 50 mm depth x 1.6mm thick	Each	4		
Rate in words Rupees					
17	Supplying and installing following size of perforated pre-painted M.S. cable trays reducers with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
17.1	GI Perforated Tray : 600 width x 50 mm depth x 2.0mm thick	Each	2		
Rate in words Rupees					
17.2	GI Perforated Tray : 300 width x 50 mm depth x 1.6mm thick	Each	2		
Rate in words Rupees					
17.3	GI Perforated Tray : 100 width x 50 mm depth x 1.6mm thick	Each	4		
Rate in words Rupees					
18	Supplying and installing following size of perforated pre-painted M.S. cable trays Tee's with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
18.1	GI Perforated Tray : 600 width x 50 mm depth x 2.0mm thick	Each	2		
Rate in words Rupees					
18.2	GI Perforated Tray : 300 width x 50 mm depth x 1.6mm thick	Each	2		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
18.3	GI Perforated Tray : 100 width x 50 mm depth x 1.6mm thick	Each	4		
Rate in words Rupees					
VI	MISCELLANEOUS ITEMS				
19	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.				
19.1	250mm dia	Mtr.	100		
Rate in words Rupees					
20	Excavation for laying hume pipes General Excavation by mechanical means in all types of soil including dense soil including necessary manual excavation for dressing the edges & leveling, all leads and lifts. Rate to include disposing the excess earth and spreading in layers to the required levels within the site wherever specified, removal of slurry generated while excavation and keeping the area free of water, excavating loose pockets and compacting the same including providing required shoring, strutting etc to retain the side earth from sliding. Contractor shall get acquainted with site conditions, nature of soil and adopt adequate conventional dewatering system as deemed fit for the nature of soil and prevailing water table to get the surface reasonably dry for laying Hume pipes				
20.1	In soft rock soil	Cu.Mtr.	200		
Rate in words Rupees					
20.2	In soft rock	Cu.Mtr.	50		
Rate in words Rupees					
21	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.				
21.1	Up to 35 sq. mm	Mtr.	100		
Rate in words Rupees					
21.2	Above 35 sq. mm and up to 95 sq. mm	Mtr.	500		
Rate in words Rupees					
VII	CABLE TRUNKING/CABLE MANAGEMENT SYSTEM				
22	DOUBLE Compartment cable management system suitable to carry Electrical wires on one compartment & DATA/VOICE cables on other compartment : 100 x50 mm including cable divider for complete length including all specials such as Internal angles, external angles cable retainers end plate and couplings	Mtr.	365		

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
22.1	1-3 module mounting boxes	Each	100		
Rate in words Rupees					
22.2	4-5 module mounting boxes	Each	100		
Rate in words Rupees					
22.3	6 module mounting boxes	Each	30		
Rate in words Rupees					
VIII	GI CABLE TRAY -FRP COVER				
23	Shifting and installation of FRP cable tray cover with hardware and standard accessories. Material and accessories will be free issue to contractor. Cutting and bending of cable tray will be done as per site requirement				
23.1	Cover for - Tray 600 x 50 mm wide	Mtr.	100		
Rate in words Rupees					
23.2	Cover for - Tray 100 x 50 mm wide	Mtr.	35		
Rate in words Rupees					
23.3	Cover for - Tray 100x 50 mm wide	Mtr.	200		
Rate in words Rupees					
IX	BUS BAR TRUNKING/RISING MAINS				
	Sandwich type Copper 415Volts, 50Hz, 50kA Outdoor bus duct with IP 54 with earthing, flexible couplers & supports				
24	Supply, installation, testing and commissioning of rising main of reputed make, with 415V, 3-phase, 4-wire, sandwich type tinned copper bus bars with supports, jointing of bus bars, fire barriers at each level / floor, MS angle iron frames and brackets mounted on and grouted into the walls, tap off boxes at each level/ floor ,all complete specifications, drawings and / or as directed by the Engineer- in-charge.(Make: GE/Godrej) 800A Rising main Bus Bar Trunking Sandwich Type with external earthing of 2 runs of 50x6 Copper conductor IP 54 (Siemens, c&s, Group Schneider, Godrej, Legrand)	Mtr.	50		
Rate in words Rupees					
25	Supply, installation, testing and commissioning of rising main of reputed make, with 415V, 3-phase, 4-wire, sandwich type tinned copper bus bars with supports, jointing of bus bars, fire barriers at each level / floor, MS angle iron frames and brackets mounted on and grouted into the walls, tap off boxes at each level/ floor ,all complete specifications, drawings and / or as directed by the Engineer- in-charge.(Make: GE/Godrej)-250A Bus Bar Trunking air insulated type with external earthing of 2 runs of 15x5 Copper conductor (Siemens, c&s, Group Schneider, Godrej, Legrand)	Mtr.	215		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
25.1	250A Bus Bar Trunking- End cover	Nos.	8		
Rate in words Rupees					
25.2	250A Bus Bar Trunking end feed unit with - MCCB	Nos.	4		
Rate in words Rupees					
25.3	800A Bus Bar Trunking end feed unit with - MCCB	Nos.	2		
Rate in words Rupees					
25.4	800A Bus Bar Trunking- End cover	Nos.	2		
Rate in words Rupees					
26	TAP OF UNIT				
26.1	63A Tap of unit with 4P MCCB	Nos.	60		
Rate in words Rupees					
26.2	125A Tap of unit with 4P MCCB	Nos.	3		
Rate in words Rupees					
26.3	250A Tap of unit with 4P MCCB	Nos.	8		
Rate in words Rupees					
26.4	400A Tap of unit with 4P MCCB	Nos	2		
Rate in words Rupees					
X	LIGHT FITTINGS :				
27	Supply, storage, installation, testing & commissioning of Light fitting and lighting accessories including lamp. The cost of installation shall include Cost of all hardware such as nuts, bolts, screws, cleats, clamps, PVC insulated wire.				
27.1	CEILING SUSPENDED : Incl steel wire support & clamps *2x28W FTL MAKE:PHILIPS-TCS 150/TPS 814; THORN: JUPITER II JUPT2	Nos.	376		
Rate in words Rupees					
27.2	Surface Mounted : *1x28W FTL MAKE:PHILIPS - TWG 204; THORN: BRITE FTBS 128E	Nos.	23		
Rate in words Rupees					
27.3	Surface Mounted : *2x18W CFL MAKE:PHILIPS - FCS 518; THORN: LOUVRELUX CLOS218	Nos.	49		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
27.4	Surface Mounted : *1x18W CFL MAKE:PHILIPS - TWG 204; THORN:	Nos.	53		
Rate in words Rupees					
27.5	Surface Mounted : (Metal Steel Mesh Protection) *1x18W CFL BULKHEAD LIGHT FIXTURE MAKE:PHILIPS -DCP 711; THORN: C-BUS CBUS A 118E	Nos.	21		
Rate in words Rupees					
27.6	Surface Mounted :9W CFL BULKHEAD LIGHT FIXTURE MAKE:PHILIPS -DCP 711; THORN: C-BUS CBUS A 118E	Nos.	10		
Rate in words Rupees					
27.7	Street Light Fixture :Outdoor type lighting luminaire of Greenline Smart 25 watts LED luminaire(Philips BRP020) with driver on aluminium alloy powder coated in greyish black shade with heat resistance toughened glass complete including all accessories	Nos.	12		
Rate in words Rupees					
	<u>STREET LIGHT POLES</u>				
27.8	Supply and installation of METALCOAT/Type No.3612A of 60 mm diameter tubular MS street lighting pole of 4.0 metres height, pre-fabricated with a welded MS base plate, concealed junction box incorporating 16A 4-way terminal, 6A fuse and other accessories for loop in and loop out of cables, set of suitable length 32 mm dia GI pipes at the bottom for cable entry, 4 core 2.5 sq.mm. PVC flexible cable connection to the lighting fixture at top, 8 SWG copper coil earthing, 450 x 450 x 600 mm deep pedestal in plain cement concrete 1:2:4, complete including excavation and backfilling, fixing in position with approved hardware, etc., as per as per specifications and / or directed by the Engineer-in-charge.	Nos.	8		
Rate in words Rupees					
27.9	Supply and installation of wall bracket to mount street light made up 60 mm dia of 0.60 metres long of MS pipe pending to shape with necessary connection.	Nos.	4		
Rate in words Rupees					
XI	<u>CEILING FAN POINT:</u>				
28	Supply Installation, testing and commissioning of 1200mm sweep ceiling fan, including wiring the down rods of standard length (upto 45 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Nos.	12		
Rate in words Rupees					
29	Supply Installation of exhaust fan of 300 mm sweep medium duty(Metal blade) in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.	Nos	15		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
XII	Industrial Switch Socket with Switch				
30	32A , Three phase, 5 pin type socket with 32A TPN MCB & plug top enclosed in powder coated MS base Box. (Supply, Installation, testing and commissioning of Industrial metal clad socket and control MCB combination enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint. MCB and socket shall be wired up to outgoing terminals)	Nos.	36		
Rate in words Rupees					
31	63A , Three phase, 5 pin type socket with 63A TPN MCB & plug top enclosed in powder coated MS base Box . (Supply, Installation, testing and commissioning of Industrial metal clad socket and control MCB combination enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint. MCB and socket shall be wired up to outgoing terminals)	Nos.	8		
Rate in words Rupees					
32	32A TPN MCB TYPE ISOLATOR, Three phase, in powder coated MS base Box . (Supply, Installation, testing and commissioning of Isolator enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint.)	Nos.	8		
Rate in words Rupees					
33	63A TPN MCB TYPE ISOLATOR, Three phase, in powder coated MS base Box . (Supply, Installation, testing and commissioning of Isolator enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint.)	Nos.	2		
Rate in words Rupees					
34	Industrial junction boxes 4 way, 15A terminal block mounted inside with two external & one internal earth terminal, 4 Nos. 3/4" ET cable entries & Plug tops. (No. of terminals 6 Nos.) 'Enclosure - Polycarbonate. Size : 125x125 mm	Nos.	8		
Rate in words Rupees					
35	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Nos.	17		
Rate in words Rupees					
XIII	MODULAR SWITC & , SOCKET				
36	Supply and Installation of Modular switches, socket outlets, mounting of associated back box concealed in Partition Panel and front plate.				
36.1	6/16A switched socket with white colour front plate for RAW power	Nos	177		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
36.2	6/16A switched socket with Black colour front plate for UPS power	Nos	86		
Rate in words Rupees					
36.3	2 no 6/16A for UPS + 1 no 6/16A for RAW power switched socket for work stations	Nos	21		
Rate in words Rupees					
36.4	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required	Nos	200		
Rate in words Rupees					
XIV	MS / CHEQUERED PLATE WITH FRAME WORK IN ELECTRICAL SHAFT:				
37	Fabrication of ISI mark structural steel in form of MS Plates, MS angles, channels, flats etc. including drilling, welding grouting, chipping, bolting with consumables such as welding electrodes and gas cutting tools with consumables.	Kgs.	1000		
Rate in words Rupees					
XV	EARTHING				
	EARTHING STRIPS				
38	Supply, Unloading, shifting, storage, installation, testing & commissioning of hot dipped galvanized (GI) / Copper bare earth conductor bar / flexible wire rope / strip / cables of following sizes. The installation shall include drilling of holes, connection & supply of adequate hardware material, Welded joints shall be used for G.I. strips. Welded joints after welding shall be painted with anticorrosive black bitumen paint (include supply of bitumen paint). Excavation & refilling of soil for burying the strip shall be paid separately based on rates quoted separately. Contractor shall quote for installation of G.I. strips/conductors etc. wire rope supply includes straightening them if required and clamping them at suitable locations.				
38.1	50 x 6 mm GI. Strip	Mtrs.	700		
Rate in words Rupees					
38.2	25 x 6 mm GI. strip	Mtrs.	400		
Rate in words Rupees					
XVI	Earth Pit				
39	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick, 2 Nos. 25 x 5 mm thick copper flat conductor up to test link including accessories, and providing masonry enclosure with SFRC cover and watering pipe of medium class 38mm dia. of 2.7 metre long etc. with charcoal/ coke and salt all as per IS 3043 as required.	Nos	6		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
40	Earthing with copper earth plate 600 mm X 600 mm X 6 mm thick, 2 Nos. 25 x 5 mm thick copper flat conductor up to test link including accessories, and providing masonry enclosure with SFRC cover and watering pipe of medium class 38mm dia. of 2.7 metre long etc. with charcoal/ coke and salt,all as per IS 3043 as required.	Nos.	7		
Rate in words Rupees					
41	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ sub main wiring/ cable as required.	Mtr	750		
Rate in words Rupees					
XVII	LIGHTNING ARRESTER:				
42	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Mtr	200		
Rate in words Rupees					
43	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Mtr	100		
Rate in words Rupees					
44	Providing and fixing G.I. tape 50 mm X 6 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Mtr	50		
Rate in words Rupees					
45	Supply, fixing, testing and commissioning of test links for lightning protection system, inclusive of jointing and clamping, all complete as per specifications, drawings and / or as directed by the Engineer-in-charge	Nos	3		
Rate in words Rupees					
XVIII	CIRCUIT & POINT WIRING:				
	Lighting Circuit				
	(1) From DB to first Switch board will be termed as Circuit Wiring (2) From Switch board to first light/socket/fan will be termed as primary point (3) From primary point to subsequent loop point on the same circuit shall be termed as secondary point.				
46	Circuit Wiring using 3x2.5 sq.mm cu flexible cable on tray from the DB to the first switchboard and concealed in conduit up to 2.5 Meter height at switchboard side. Cost of PVC Pipe, Chipping work and installation of PVC Pipe to be considered.	Mtr.	1910		
Rate in words Rupees					
47	Circuit Wiring using 3x4 sq.mm cu flexible cable on tray from the DB to the first switchboard and concealed in conduit up to 2.5 Meter height at switchboard side. Cost of PVC Pipe, Chipping work and installation of PVC Pipe to be considered.	Mtr.	2000		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
48	Supply & Installation of conduit wiring for light/power consisting of a) Wiring in 2.0mm thick 25 MM PVC conduit on ceiling/concealed in wall complete with GI pull wire, conduit fittings, conduit accessories like saddles, spacers, bends, couplings, collars etc., junction / pull / inspection boxes, conduit supports, bushings lamp holders, ceiling rose, flexible conduit/ inspection L bends & terminations using tinned copper lugs of crimping type. Individual junction/inspection boxes shall be provided for each light fitting for the purpose of looping from fitting to fitting. No. of wires in conduit shall be limited as per relevant standard. 6A switch, front cover plate & Back boxes to be considered in the point wiring b) 1100V grade FRLS copper wires/flexible cable as specified. c) Job includes necessary chipping and including cost of civil finishes				
48.1	Primary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from switch to first point. Installation at normal height, up to 5 mtr.				
48.2	Length of Primary point to be considered as min.5 Meters	Nos.	124		
Rate in words Rupees					
48.3	Extra length of primary point to be considered per meter rate (for normal height installation)	mtr.	500		
Rate in words Rupees					
48.4	Same as above but two way point	Nos	30		
Rate in words Rupees					
48.5	Primary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from switch to first point. Installation at normal height, up to 5 mtr but including fan regulator & fan hook box	Nos	12		
Rate in words Rupees					
48.6	Secondary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from primary point to second point or so on				
48.7	Length of Secondary point to be considered as min. 3 Meters	Nos.	379		
Rate in words Rupees					
48.8	Extra length of secondary point to be considered per meter rate (for normal height installation)	Mtr.	300		
Rate in words Rupees					
	<u>Power (SP/TP) Circuit</u>				
49	Power Wiring using 3x2.5 sq.mm cu flexible cable on tray/CPVC from the DB to the first SP point and concealed in conduit up to 2.0 Meter height from switch board. Cost of PVC Pipe and installation of PVC Pipe will be considered separately.	Mtr.	3846		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
50	Power Wiring using 5x6 sq.mm cu flexible cable on tray/CPVC from the DB to the first TP point and concealed in conduit up to 2.0 Meter height from switch board. Cost of PVC Pipe and installation of PVC Pipe will be considered separately.	Mtr.	422		
Rate in words Rupees					
51	Power Wiring using 4x10 sq.mm cu flexible cable on tray from the DB to the first TP point and concealed in conduit up to 2.0 Meter height from switch board. Cost of PVC Pipe and installation of PVC Pipe will be considered separately.	Mtr.	200		
Rate in words Rupees					
52	Supply, Fixing, Erection of following size Pop UP type floor Junction box with 4nos 6/10/13A UPS Power sockets controlled by 1 switch, 1 no 6/10/13A RAW power socket controlled by 1 switch, provision to install 4No Data point), all hardware and accessories as required including all clamps and hardware for fixing the same. the unused side of the junction box to be covered with 14SWG sheet. 350 x 350 x 50mm	Nos	10		
Rate in words Rupees					
	PVC Conduit :				
53	Supply and Installation of following sizes of PVC heavy duty black/gray conduit, 2mm thick without any accessories like pull wire end check nuts, washers, couplings, smooth bends, junction boxes etc. for concealed wiring or exposed wiring. (Other than point wiring)				
53.1	25 mm conduit with accessories. Extra supply for circuit wiring, SP, TP and other application and installed open / concealed with Chipping work / Jarry work with Cutting tools per conduit per meter	Mtrs.	3000		
Rate in words Rupees					
54	Supply and Installation of following sizes of PVC heavy duty black/gray conduit, 2mm thick with all accessories like pull wire end check nuts, washers, couplings, smooth bends, junction boxes etc. for concealed wiring or exposed wiring.				
54.1	20 mm conduit with accessories. Extra supply for CCTV,FAP,ACS ,PAS and other application and installed open / concealed with Chipping work / Jarry work with Cutting tools per conduit per meter	Mts	1750		
Rate in words Rupees					
	MS Conduit :				
55	Supply and Installation of following sizes of MS black conduit, 1.6mm thick with any accessories like pull wire end check nuts, washers, couplings, smooth bends, junction boxes etc. for concealed wiring or exposed wiring.				
55.1	25 mm conduit with accessories. Extra supply for circuit wiring, SP, TP and other application and installed open / concealed with Chipping work / Jarry work with Cutting tools per conduit per meter	Mtrs.	2150		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
XIX	VOICE/DATA/Coaxial cables				
56	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing 25mm dia 2mm thick recessed PVC conduit as required.	Mtrs.	400		
Rate in words Rupees					
57	Supplying and drawing flowing 2 pair, 0.5 sq.mm FR PVC insulated copper conductor, unarmoured telephone cable in the existing PVC conduit/receways as required.	Mtrs.	2000		
Rate in words Rupees					
58	Supplying installation testing and commissioning of RJ 11 voice jack, shuttered white(colour shall be chosen including faceplate)	Nos.	25		
Rate in words Rupees					
59	Supply and laying of high quality CAT-6 UTP Ethernet 4 pair LAN cable preferably with FR PVC insulation to be laid in existing pvc/raceways with plastic cable tags, all complete as per specifications, drawings and / or as directed by the Engineer-in-charge.	Mts	5000		
Rate in words Rupees					
60	Supplying installation testing and commissioning of cat6 datagate jack, shuttered white(colour shall be chosen including faceplate)	Nos.	120		
Rate in words Rupees					
61	Supply, Installation, testing, commissioning and Fixing of Distribution boxes (MDF) of modular design having Krone type terminals, suitable for handling the direct Lines and Internal Extension lines. All MDF should be made of powder coated MS material of adequate thickness with an acrylic front door and have a proper locking arrangement. 20 Pair	Nos.	2		
Rate in words Rupees					
62	Supply, Installation, testing, commissioning and Fixing of Distribution boxes (MDF) of modular design having Krone type terminals, suitable for handling the direct Lines and Internal Extension lines. All MDF should be made of powder coated MS material of adequate thickness with an acrylic front door and have a proper locking arrangement. 50 Pair	Nos.	2		
Rate in words Rupees					
63	Supplying and laying of one run of 20-pair jelly filled armoured telephone cable in the existing cable in ground/tray/raceways, all complete as per specifications, drawings and / or as directed by the Engineer-in-charge.	Mtrs.	200		
Rate in words Rupees					
64	Supplying and laying of one run of 50-pair jelly filled armoured telephone cable in the existing cable in ground/tray/raceways, all complete as per specifications, drawings and / or as directed by the Engineer-in-charge.	Mtrs.	300		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
65	Supply installation testing and commissioning of CAT 6 datagate panel 24 port loaded with rear cable management tray.	Nos	10		
Rate in words Rupees					
66	Supply installation testing and commissioning of CAT 6 patch chord-2 mts long	Nos	120		
Rate in words Rupees					
67	Supply installation testing and commissioning of CAT 6 patch chord-1 mts long	Nos	120		
Rate in words Rupees					
68	Supply installation testing and commissioning of 25U closed bay rack	Nos	1		
Rate in words Rupees					
69	Supply installation testing and commissioning of 6U closed bay rack	Nos	2		
Rate in words Rupees					
70	Supply installation testing and commissioning of 1U Horizontal cable manager	Nos	12		
Rate in words Rupees					
71	Supply installation testing and commissioning of power distribution unit 6 socket horizontal 5 amps	Nos	4		
Rate in words Rupees					
XX	SAFETY EQUIPMENT :				
	All items shall be as per Safety standard & supplied as per plant Safety Engineer instructions. Fixing of support for safety equipment shall be included in rate quoted.				
72	1.1kV class-1 approved tested quality rubber mat of 6 mm thick and 900mm wide and 1800mm long, installed in front of the power distribution boards and other DBs.	Mtrs.	30		
Rate in words Rupees					
73	Supply and installation Shock treatment chart in English & local language as per Electricity board. Shock treatment chart to be printed and framed.	Nos.	4		
Rate in words Rupees					
74	Pair of 1.1kV class hand gloves.	Nos	2		
Rate in words Rupees					
75	A1 size drawing display board with laminated drawings.	Nos	1		
Rate in words Rupees					
76	440V class enameled danger board of 150x150mm size	Nos	20		
Rate in words Rupees					

S. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
77	First aid box complete with all standard first aid materials	Nos	2		
Rate in words Rupees					
78	Iron Sand buckets - 4 nos with angle frame & shade	Nos	1		
Rate in words Rupees					
	PART – A TOTAL				

Total Amount for PART-A in words Rupees

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PART – B - BILL OF QUANTITIES FOR ELECTRICAL WORK - For PC Building

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
I	LOW VOLTAGE SWITCHGEAR				
	Supply, Installation, testing & commissioning of following 415 volt switchboards including unloading & shifting, unpacking, physical inspection, assembly, site testing etc. at Electrical rooms. 415V, 3ph., 4wire floor mounting free standing cubicle type LT Switchboards, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel conforming to attached specification and drawing.				
1	MAIN PANEL - PC BUILDING GROUND FLOOR				
	Supply, Erection, Testing and Commissioning of Indoor type MAIN LT PANEL, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel confirming to technical specifications & SLD.				
	INCOMER:				
	100A TP MCCB 25kA with Micro processor based Earth Fault/Over Current/Short Circuit relays with Shunt trip coil. Aux contacts for BMS On/Off/Trip feedback.				
	METERING:				
	Current transformer rated 100/5A, 10VA/CI 1.0 for metering.				
	Digital Multi data Meter with RS 485				
	LED type RYB indication lamps, On/Off/Trip Indication Lamps with control MCBS/Circuits				
	BUS BAR:				
	100A TPN Copper Bus Bar				
	Current density should not exceed 1A per sq.mm. Heat shrinkable sleeves & SMC supports shall be provided to the bus bar.				
	OUTGOING:				
	1 Nos - 63A 25kA TP MCCB				
	3 Nos - 40A 25kA TP MCCB				
	3 Nos - 32A 25kA TP MCCB				
	Incoming and outgoing cables shall be of Top entry only.	No.	1		
Rate in words Rupees					
II	LIGHTING, POWER DISTRIBUTION BOARD : (INCLUDING STEEL SUPPORT)				
2	Supply, installation, testing & commissioning of following 415V Distribution Board (Double Door) including unloading & assembly, fixing on wall /steel structure, aligning, leveling, grouting etc. including all labour and materials. ELCB / RCCB rated for 100mA. All MCB shall be suitable for motive power (Curve C)				
2.1	Lighting Distribution Board - 4 way 7 COMPARTMENT TPN double door type: I/C = 40A TPN MCB, PHASE SEGREGATION = 3 Nos. 25A DP RCCB (one in each phase) + O/G = 12 Nos. 6-10A SP MCB (Four in each phase)	Nos.	2		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2.2	Emergency Lighting Distribution Board - 4 way 7 COMPARTMENT SPN double door type: I/C = 20A SPN MCB, PHASE SEGREGATION = 1 Nos. O/G = 4 Nos. 6-10A SP MCB (Four in each phase)	Nos.	1		
Rate in words Rupees					
2.3	RAW Power Distribution Board - 6 way TPN double door type: I/C = 32A TPN MCB, O/G = 18 Nos. 6-32A SP MCB (Six in each phase)	Nos.	1		
Rate in words Rupees					
2.4	RAW Power distribution Board -4 way TPN double door type: I/C = 32A TPN MCB, O/G = 12 Nos. 6-32A SP MCB (Four in each phase)	Nos.	1		
Rate in words Rupees					
III	POWER & CONTROL CABLES				
3	Supply & Laying of cables of following sizes on cable trays, through Partition Wall, SS Pendants, structural supports & cable supports. The cost of laying inclusive of transportation from stores, shifting to site. Laying of cables excludes supply of cable trays, GI Pipes & MS supports which will considered separately. The scope includes dressing and clamping of cables with supply of cable no., tags, PVC tying etc. as directed by the site in-charge. Laying of cables also includes clamping the cable on structural support up to motor terminal box/PBs. Cable tags shall be made of 3mm thick aluminum strip of size 75 mm x 20 mm with cable number & size engraved/punched on it. Cable tag shall be fixed at both end and for cable run above ground at all bends & route changes in the cable run.				
	Cable on Tray including tagging, dressing, binding and hardware which are applicable. Civil Work will be paid separately				
3.1	3.5C x50 Sq. mm A2XFY (Al. XLPE armoured)	Mtr.	100		
Rate in words Rupees					
3.2	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	58		
Rate in words Rupees					
3.3	4C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	108		
Rate in words Rupees					
3.4	3C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	100		
Rate in words Rupees					
3.5	4C x 10 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	11		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
IV	CABLE TERMINATION :				
	Supply & Installation of Cable end termination of following sizes. The termination rate shall include drilling of gland plates and dressing of cables inside panel / terminal box with and crimping of tinned copper double barrel lugs of required size. Glands shall be with double seal cone grip arrangement and PVC rubber hood. Blind plug to be fixed where as required. Contractor shall check cable diameter under and over armoured, prior to supply of glands. Ferrule to be considered for each and every Power and control cable				
4.1	1.1 KV compression Cable Termination with Lugs				
4.1	3.5C x50 Sq. mm A2XFY (Al. XLPE armoured)	NOS.	2		
Rate in words Rupees					
4.2	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	8		
Rate in words Rupees					
4.3	3C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	2		
Rate in words Rupees					
4.4	4C x 10 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	2		
Rate in words Rupees					
V	CABLE TRAY & COVER				
	GI CABLE TRAY				
5	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
5.1	GI Perforated Tray : 150 width x 50 mm depth x 1.6mm thick	Mtr.	25		
Rate in words Rupees					
VI	CABLE TRUNKING/CABLE MANAGEMENT SYSTEM				
6	DOUBLE Compartment cable management system suitable to carry Electrical wires on one compartment & DATA/VOICE cables on other compartment: 100 x50 mm including cable divider for complete length including specials such as Internal Angle External Angle Elbow Cable retainers couplers & end plate as required.	Mtr.	34		
Rate in words Rupees					
6.1	1-3 module mounting boxes	Nos	20		
Rate in words Rupees					
6.2	4-5 module mounting boxes	Nos	20		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.3	6 module mounting boxes	Nos	5		
Rate in words Rupees					
VII	GI CABLE TRAY -FRP COVER				
7	Shifting and installation of FRP cable tray cover with hardware and standard accessories. Material and accessories will be free issue to contractor. Cutting and bending of cable tray will be done as per site requirement				
7.1	Cover for - Tray 150 x 50 mm wide	Mtr.	25		
Rate in words Rupees					
VIII	LIGHT FITTINGS :				
8.0	Supply, storage, installation, testing & commissioning of Light fitting and lighting accessories including lamp. The cost of installation shall include Cost of all hardware such as nuts, bolts, screws, cleats, clamps, PVC insulated wire.				
8.1	CEILING SUSPENDED : Incl steel wire support & clamps *2x28W FTL MAKE:PHILIPS-TCS 150/TPS 814; THORN: JUPITER II JUPT2	Nos.	38		
Rate in words Rupees					
8.2	Surface Mounted : *1x28W FTL MAKE:PHILIPS - TWG 204; THORN: BRITE FTBS 128E	Nos.	3		
Rate in words Rupees					
8.4	Surface Mounted : *1x18W CFL MAKE:PHILIPS - TWG 204; THORN:	Nos.	1		
Rate in words Rupees					
IX	CEILING FAN POINT:				
9	Supply Installation, testing and commissioning of 1200mm sweep ceiling fan, including wiring the down rods of standard length (up to 45 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Nos.	8		
Rate in words Rupees					
X	Industrial Switch Socket with Switch				
10	20A , Single Phase, 3 pin type socket with 20A DP MCB & plug top enclosed in powder coated MS base enclosure (Supply, Installation, testing and commissioning of Industrial metal clad socket and control MCB combination enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint. MCB and socket shall be wired up to outgoing terminals)	Nos.	9		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
11	32A , Three phase, 5 pin type socket with 32A TPN MCB & plug top enclosed in powder coated MS_base Box. (Supply, Installation, testing and commissioning of Industrial metal clad socket and control MCB combination enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint. MCB and socket shall be wired up to outgoing terminals)	Nos.	4		
Rate in words Rupees					
XI	MODULAR SWITCH, SOCKET & TEL. OUTLETS :				
12	Supply and Installation of Modular switches, socket outlets, mounting of associated back box concealed in Partition Panel and front plate.				
12.1	6/16A switched socket with white colour front plate for RAW power	Nos	49		
Rate in words Rupees					
12.2	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Nos	20		
Rate in words Rupees					
XII	EARTHING				
13	Supply, Unloading, shifting, storage, installation, testing & commissioning of hot dipped galvanized (GI) / Copper bare earth conductor bar / flexible wire rope / strip / cables of following sizes. The installation shall include drilling of holes, connection & supply of adequate hardware material, Welded joints shall be used for G.I. strips. Welded joints after welding shall be painted with anticorrosive black bitumen paint (include supply of bitumen paint) . Excavation & refilling of soil for burying the strip shall be paid separately based on rates quoted separately. Contractor shall quote for installation of G.I. strips/conductors etc. wire rope supply includes straightening them if required and clamping them at suitable locations.				
13.1	25 x 3 mm GI. strip	Mtrs.	25		
Rate in words Rupees					
14	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick, 2 Nos. 25 x 5 mm thick copper flat conductor up to test link including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of medium class 38mm dia. of 2.7 metre long etc. with charcoal/ coke and salt as required	Nos	2		
Rate in words Rupees					
15	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ sub main wiring/ cable as required.	Mtr	200		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
XIII	CIRCUIT & POINT WIRING:				
	Lighting Circuit				
	(1) From DB to first Switch board will be termed as Circuit Wiring (2) From Switch board to first light/socket/fan will be termed as primary point (3) From primary point to subsequent loop point on the same circuit shall be termed as secondary point.				
16	Circuit Wiring using 3x2.5 sq.mm cu flexible cable on tray from the DB to the first switchboard and concealed in conduit up to 2.5 Meter height at switchboard side. Cost of PVC Pipe, Chipping work and installation of PVC Pipe to be considered.	Mtr.	209		
Rate in words Rupees					
17	Circuit Wiring using 3x4.0sq.mm cu flexible cable on tray from the DB to the first switchboard and concealed in conduit up to 2.5 Meter height at switchboard side. Cost of PVC Pipe, Chipping work and installation of PVC Pipe to be considered.	Mtr.	100		
Rate in words Rupees					
18	Supply & Installation of conduit wiring for light/power consisting of a) Wiring in 16SWG medium gauge 25 MM PVC conduit on ceiling/concealed in wall complete with GI pull wire, conduit fittings, conduit accessories like saddles, spacers, bends, couplings, collars etc., junction / pull / inspection boxes, conduit supports, bushings lamp holders, ceiling rose, flexible conduit/ inspection L bends & terminations using tinned copper lugs of crimping type. Individual junction/inspection boxes shall be provided for each light fitting for the purpose of looping from fitting to fitting. No. of wires in conduit shall be limited as per relevant standard. 6A switch, front cover plate & Back boxes to be considered in the point wiring b) 1100V grade FRLS copper wires/flexible cable as specified. c) Job includes necessary chipping and including cost of civil finishes				
	Primary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from switch to first point. Installation at normal height, up to 5 mtr.				
18.1	Length of Primary point to be considered as min.5 Meters	Nos.	27		
Rate in words Rupees					
18.2	Extra length of primary point to be considered per meter rate (for normal height installation)	mtr.	200		
Rate in words Rupees					
18.3	Same as above but two way point	Nos	8		
Rate in words Rupees					
18.4	Primary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from switch to first point. Installation at normal height, up to 5 mtr but incl fan regulator & fan hook box	Nos	8		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Secondary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from primary point to second point or so on				
18.5	Length of Secondary point to be considered as min. 3 Meters	Nos.	29		
Rate in words Rupees					
18.6	Extra length of secondary point to be considered per meter rate	Mtr.	100		
Rate in words Rupees					
	Power (SP/TP) Circuit				
19	Power Wiring using 3x4 sq.mm cu flexible cable on tray/CPVC from the DB to the first SP point and concealed in conduit up to 2.0 Meter height from switch board. Cost of PVC Pipe and installation of PVC Pipe will be considered separately.	Mtr.	454		
Rate in words Rupees					
20	Power Wiring using 5x4 sq.mm cu flexible cable on tray/CPVC from the DB to the first TP point and concealed in conduit up to 2.0 Meter height from switch board. Cost of PVC Pipe and installation of PVC Pipe will be considered separately.	Mtr.	81		
Rate in words Rupees					
21	Supply, Fixing, Erection of following size Pop UP type floor Junction box with 4nos 6/10/13A UPS Power sockets controlled by 1 switch, 1 no 6/10/13A RAW power socket controlled by 1 switch, provision to install 4No Data point), all hardware and accessories as required including all clamps and hardware for fixing the same. the unused side of the junction box to be covered with 14SWG sheet. 350 x 350 x 50mm	Nos	4		
Rate in words Rupees					
	PVC Conduit :				
22	Supply and Installation of following sizes of PVC heavy duty black conduit, 2mm thick without any accessories like pull wire end check nuts, washers, couplings, smooth bends, junction boxes etc. for concealed wiring or exposed wiring. (Other than point wiring)				
22.1	25 mm conduit with accessories. Extra supply for circuit wiring, SP, TP and other application and installed open / concealed with Chipping work / Jarry work with Cutting tools per conduit per meter	Mtrs.	500		
Rate in words Rupees					
23.0	SAFETY EQUIPMENT :				
	All items shall be as per Safety standard & supplied as per plant Safety Engineer instructions. Fixing of support for safety equipment shall be included in rate quoted.				

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
23.1	1.1kV class-1 approved tested quality rubber mat of 6 mm thick and 900mm wide and 1800mm long, installed in front of the power distribution boards and other DBs.	Mtrs.	5		
Rate in words Rupees					
23.2	Supply and installation Shock treatment chart in English & local language as per Electricity board. Shock treatment chart to be printed and framed.	Nos.	1		
Rate in words Rupees					
23.3	440V class enameled danger board of 150x150mm size	Nos	1		
Rate in words Rupees					
23.4	First aid box complete with all standard first aid materials	Nos	1		
Rate in words Rupees					
	PART – B TOTAL				

Total for PART – B in words Rupees

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PART – C - BILL OF QUANTITIES FOR ELECTRICAL WORK-For FTC building					
Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
I	LOW VOLTAGE SWITCHGEAR				
	Supply, Installation, testing & commissioning of following 415 volt switchboards including unloading & shifting, unpacking, physical inspection, assembly, site testing etc. at Electrical rooms. 415V, 3ph., 4wire floor mounting free standing cubicle type LT Switchboards, floor mounting type, dust and vermin proof by construction of 14 SWG CRCA sheets Compartmentalized, modular type IP 42 Protection with powder coated panel conforming to attached specification and drawing.				
1	LIGHTING, POWER DISTRIBUTION BOARD				
	Supply, installation, testing & commissioning of following 415V Distribution Board (Double Door) including unloading & assembly, fixing on wall /steel structure, aligning, leveling, grouting etc. including all labour and materials. ELCB / RCCB rated for 100mA. All MCB shall be suitable for motive power (Curve C)				
1.1	Lighting Distribution Board - 4 way 7 COMPARTMENT TPN double door type: I/C = 40A TPN MCB, PHASE SEGREGATION = 3 Nos. 25A DP RCCB (one in each phase) + O/G = 12 Nos. 6-10A SP MCB (Four in each phase)	Nos.	1		
Rate in words Rupees					
1.2	Emergency Lighting Distribution Board - 4 way 7 COMPARTMENT SPN double door type: I/C = 20A SPN MCB, PHASE SEGREGATION = 1 Nos. O/G = 4 Nos. 6-10A SP MCB (Four in each phase)	Nos.	1		
Rate in words Rupees					
1.3	RAW Power distribution Board -4 way TPN double door type: I/C = 32A TPN MCB, 6-32A SP MCB (Four in each phase)	Nos.	1		
Rate in words Rupees					
II	POWER & CONTROL CABLES				
2	Supply & Laying of cables of following sizes on cable trays, through Partition Wall, SS Pendants, structural supports & cable supports. The cost of laying inclusive of transportation from stores, shifting to site. Laying of cables excludes supply of cable trays, GI Pipes & MS supports which will considered separately. The scope includes dressing and clamping of cables with supply of cable no., tags, PVC tying etc. as directed by the site in-charge. Laying of cables also includes clamping the cable on structural support up to motor terminal box/PBs. Cable tags shall be made of 3mm thick aluminum strip of size 75 mm x 20 mm with cable number & size engraved/punched on it. Cable tag shall be fixed at both end and for cable run above ground at all bends & route changes in the cable run.				
	Cable on Tray including tagging, dressing, binding and hardware which are applicable. Civil Work will be paid separately				
2.1	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	200		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2.2	4C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	104		
Rate in words Rupees					
2.3	3C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	Mtr.	100		
Rate in words Rupees					
III	CABLE TERMINATION :				
3	Supply & Installation of Cable end termination of following sizes. The termination rate shall include drilling of gland plates and dressing of cables inside panel / terminal box with and crimping of tinned copper double barrel lugs of required size. Glands shall be with double seal cone grip arrangement and PVC rubber hood. Blind plug to be fixed where as required. Contractor shall check cable diameter under and over armoured, prior to supply of glands. Ferrule to be considered for each and every Power and control cable				
	1.1 KV Compression Cable Termination with Lugs				
3.1	4C x 6 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	4		
Rate in words Rupees					
3.2	3C x 4 Sq.mm 2XWY (Cu. XLPE armoured)	NOS.	2		
Rate in words Rupees					
IV	CABLE TRAY & COVER				
4	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required. The cost shall include necessary bends, tees if required as per the site condition.				
4.1	GI Perforated Tray : 150 width x 50 mm depth x 1.6mm thick	Mtr.	15		
Rate in words Rupees					
	GI CABLE TRAY -FRP COVER				
5	Shifting and installation of FRP cable tray cover with hardware and standard accessories. Material and accessories will be free issue to contractor. Cutting and bending of cable tray will be done as per site requirement				
5.1	GI Perforated Tray : 150 width x 50 mm depth x 1.6mm thick	Mtr.	15		
Rate in words Rupees					
V	LIGHT FITTINGS :				
6	Supply, storage, installation, testing & commissioning of Light fitting and lighting accessories including lamp. The cost of installation shall include Cost of all hardware such as nuts, bolts, screws, cleats, clamps, PVC insulated wire.				

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1	CEILING SUSPENDED : Incl steel wire support & clamps *2x28W FTL MAKE:PHILIPS-TCS 150/TPS 814; THORN: JUPITER II JUPT2	Nos.	10		
Rate in words Rupees					
VI	CEILING FAN POINT:				
7	Supply Installation, testing and commissioning of 1200mm sweep ceiling fan, including wiring the down rods of standard length (up to 45 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Nos.	2		
Rate in words Rupees					
VII	Industrial Switch Socket with Switch				
8	20A , Single Phase, 3 pin type socket with 20A DP MCB & plug top enclosed in powder coated MS base enclosure (Supply, Installation, testing and commissioning of Industrial metal clad socket and control MCB combination enclosed in weatherproof enclosure made out of 1.6 mm thick sheet steel enclosure, pretreated and painted with two coats of primer and two coats of epoxy paint. MCB and socket shall be wired up up to outgoing terminals)	Nos.	4		
Rate in words Rupees					
	MODULAR SWITCH, SOCKET & TEL. OUTLETS :				
9	Supply and Installation of Modular switches, socket outlets, mounting of associated back box concealed in Partition Panel and front plate.				
9.1	6/16A switched socket with white colour front plate for RAW power	Nos	16		
Rate in words Rupees					
9.2	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Nos	15		
Rate in words Rupees					
VIII	EARTHING				
10	Supply, Unloading, shifting, storage, installation, testing & commissioning of hot dipped galvanized (GI) / Copper bare earth conductor bar / flexible wire rope / strip / cables of following sizes. The installation shall include drilling of holes, connection & supply of adequate hardware material, Welded joints shall be used for G.I. strips. Welded joints after welding shall be painted with anticorrosive black bitumen paint (include supply of bitumen paint). Excavation & refilling of soil for burying the strip shall be paid separately based on rates quoted separately. Contractor shall quote for installation of G.I. strips/conductors etc. wire rope supply includes straightening them if required and clamping them at suitable locations.				
10.1	25 x 6 mm GI. strip	Mtrs.	15		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Earth Pit				
11	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick, 2 Nos. 25 x 5 mm thick copper flat conductor up to test link including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of medium class 38mm dia. of 2.7 metre long etc. with charcoal/ coke and salt as required	Nos.	2		
Rate in words Rupees					
12	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ sub main wiring/ cable as required.	Mtr	75		
Rate in words Rupees					
IX	CIRCUIT & POINT WIRING:				
	Lighting Circuit				
	(1) From DB to first Switch board will be termed as Circuit Wiring (2) From Switch board to first light/socket/fan will be termed as primary point (3) From primary point to subsequent loop point on the same circuit shall be termed as secondary point.				
13	Circuit Wiring using 3x2.5 sq.mm cu flexible cable on tray from the DB to the first switchboard and concealed in conduit up to 2.5 Meter height at switchboard side. Cost of PVC Pipe, Chipping work and installation of PVC Pipe to be considered.	Mtr.	162		
Rate in words Rupees					
14	Circuit Wiring using 3x4 sq.mm cu flexible cable on tray from the DB to the first switchboard and concealed in conduit up to 2.5 Meter height at switchboard side. Cost of PVC Pipe, Chipping work and installation of PVC Pipe to be considered.	Mtr.	100		
Rate in words Rupees					
15	Supply & Installation of conduit wiring for light/power consisting of Wiring in 16SWG medium gauge 25 MM PVC conduit on ceiling/concealed in wall complete with GI pull wire, conduit fittings, conduit accessories like saddles, spacers, bends, couplings, collars etc., junction / pull / inspection boxes, conduit supports, bushings lamp holders, ceiling rose, flexible conduit/ inspection L bends & terminations using tinned copper lugs of crimping type. Individual junction/inspection boxes shall be provided for each light fitting for the purpose of looping from fitting to fitting. No. of wires in conduit shall be limited as per relevant standard. 6A switch, front cover plate & Back boxes to be considered in the point wiringb) 1100V grade FRLS copper wires/flexible cable as specified.c) Job includes necessary chipping and including cost of civil finishes				
	Primary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from switch to first point. Installation at normal height, up to 5 mtr.				
15.1	Length of Primary point to be considered as min.5 Meters	Nos.	7		
Rate in words Rupees					

Sr. No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
15.2	Extra length of primary point to be considered per meter rate (for normal height installation)	mtr.	100		
Rate in words Rupees					
15.3	Same as above but two way point	Nos	2		
Rate in words Rupees					
15.4	Primary point wiring using 3 nos. 1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from switch to first point. Installation at normal height, up to 5 mtr but incl fan regulator & fan hook box	Nos	2		
Rate in words Rupees					
	Secondary point wiring using 3 nos.1.5 sq. mm flexible FRLS wire- in 25 mm PVC conduit from primary point to second point				
15.5	Length of Secondary point to be considered as min. 3 Meters	Nos.	5		
Rate in words Rupees					
15.6	Extra length of secondary point to be considered per meter rate (for normal height installation)	Mtr.	100		
Rate in words Rupees					
	Power (SP/TP) Circuit				
16	Power Wiring using 3x4 sq.mm cu flexible cable on tray/CPVC from the DB to the first SP point and concealed in conduit up to 2.0 Meter height from switch board. Cost of PVC Pipe and installation of PVC Pipe will be considered separately.	Mtr.	156		
Rate in words Rupees					
	PVC Conduit :				
17	Supply and Installation of following sizes of PVC heavy duty black conduit, 2mm thick without any accessories like pull wire end check nuts, washers, couplings, smooth bends, junction boxes etc. for concealed wiring or exposed wiring. (Other than point wiring)				
17.1	25 mm conduit with accessories. Extra supply for circuit wiring, SP, TP and other application and installed open / concealed with Chipping work / Jarry work with Cutting tools per conduit per meter	Mtrs.	200		
Rate in words Rupees					
	PART-C TOTAL				

Total for PART – C in words Rupees

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PART – A (Main Building)	Rs
PART – B (PC Building)	Rs
PART – C (FTC Building)	Rs.
GRAND TOTAL	Rs.

Grand Total Amount in words Rupees

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Signature of the Contractor

**-Sd-
Consultant (Elec)**

**-Sd-
Executive Engineer (Elect)**