

ESTIMATES ELECTRICAL WORKS OF DURGAPUR- RAIGANJ -SILIGURI					
Sl.No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	PART - A				
A.	MV PANELS & DISTRIBUTION BOARDS				
	MCB DISTRIBUTION BOARDS : ALL DOUBLE DOORS - ABB,SCHNIDERS,INDO ASIAN(OPTIPRO),HAVELLS,LEGRAND..ETC				
	Supply, installation, testing and commissioning of the following cubicle type 1.2 mm thick CRCA sheet steel enclosed powder coated with approved shade and partitions to segregate phase with approved covers, single / double door, factory made recessed in wall or surface mounted final distribution boards of the following description. All final DB's shall have outgoing with internal wiring brought upto terminal block for external cable connections.				
	NOTE : 1) Surface mounted DB's on walls shall be provided with suitable size frame work and neatly grouted on to wall and DB shall be fixed on to the frame work using bolts & nuts and other fixing				
	2) DB's conceald in wall shall include cut of necessary civil works and other fixing accessories.				
	3)The DB's shall be horizontal / vertical type as per configuration of incoming/outgoing feeders.				
	4)The DB's shall be factory made of approved make and necessary available higher size configured DB's				
1.1	Supply & installation of TPN front operated 125A, 16KA, 4P MCCB (adjustable overload and fixed short circuit) in factory fabricated, powder coat painted metal enclosure complete along with statutory caution board, earthing and having wall mounting hinges etc. The box must have sufficient space for Aluminium cable termination upto 50 sqmmx 3.5 core AL armoured cables	Nos.	1		
2	Supply and Installation,testing and commissioning of floor/wall mounted panel fabricated with 16SWG CRCA sheet. The panel shall be dust and vermin proof including internal connection with bus bar/cables up to the terminals duly painted with two coats of powder coated paint,danger board etc. and comprising of the following:- I) INCOMER(CESC/WB ELECTRICITY BOARD): a) 125 amp ,4P ,16/25KA MCCB with control fuses three LED's R,Y,B, along with ammeter & Voltmeters of relevant range and selector switch for EB supply b) FOR DG-SET INPUT -(1) : 63A amp 4P MCCB, 10 KA with three LED's with control fuse for R,Y,B indication along with ammeter & Voltmeters of relevant range & selector switch for DG set c) 63 A,4P, On load Changeover front handle rotating type ii) OUTGOING: a) 100 amp tinned copper busbar (Normal Supply busbar- without DG backup) & b) 01 no.-63A TP MCB and 2 Nos. 32/25 amp DP MCB iii) 1 no.63A 10KA 4P MCCB b) 100 amp tinned copper busbar (DG supply), i) 01 nos.63A + 2X 40AMPS, 4 POLE MCB ,10KA AND 2X 40A DP MCB for UPS I/P , C Series ii) 03 Nos. 32A SP MCB C series for critical loads ,	nos	1		
3	SUB DB'S for UPS/ATM				
3.1.1	12 ways -SPN MCB DB of approved makes				
	Incomer:				
	1 No.32A, 2P, RCCB (0-100mA)				
	Outgoing:				
	10 Nos. of 10/16/25A, SP, MCBs (C curve)	Set	1		
3.1.2	6way TPN DB for ATM for Mains /Raw Power/AC's				
	1 no x4 P- 40 Amps ,RCCB(300ma) as Incomer				
	2xDP MCB-25 Amps for AC's				
	2xSP MCB-10/16 A for Lighting				
	2x SP MCB's (spare)				
	1 Nos x Timer for Signages- Timer QT31 - 1 No. with 20 Amps Contactor & DP MCB 20 Amps	Set	1		
3.1.3	6 way SPN-ATM DB UPS & Lighting supplies.				
	1No's RCBO of 32 Amps , (300mA) as Incomer + 4No's SP MCB's of 16/25(6KA) for out goings	no	1		
3.2	LDB / RPDB FOR BRANCH				
	6 WAY ETPN MCB DB	Set	1		
	Incomer:RCBO				
	1 No.40A, 4P, MCB+RCCB (0-100mA)				
	Outgoing:				
	12 Nos. of 6/10/16A, SP, MCBs (C curve)				
3.3	ACDB/PDB				
	6 WAY ETPN DB'S	NO	1		
	Incomer:RCBO				
	1 No, 63A-4P MCB +(0-300MA) 4P RCCB				
	Outgoing:				
	12 Nos. of 25/32 A SP MCBs (D/C curve)				
4.0	Supply, installation, testing and commissioning following sizes Double door Master CONTROLS WITH 4 P MCB's within a 4 way TPN DB to accommodate 4 set of Armoured cables (for end terminations) of 25/16 Sqmm . The isolator shall be wall mounted using necessary brackets and fixing accessories and to have sufficient space to gland of all 4 set of In-Out Cables of above ratings .				
a)	1x 40 Amps & 1X63 AMPS , 4P MCB's for Branch Isolation to AC DB & LDB's for total Isolations of Branch	Set	1		
B	SITC OF standard SBI UPS Change Over panel with double Bus, P+N+ E and provision of 5 x 32 Amps DP MCB's	set	1		
5.0	Supply, installation, testing and commissioning following sizes MCB in metallic enclosure. The MCB shall be wall mounted using necessary brackets and fixing accessories.				
b)	Supply & fixing on wall industrial Plug & socket DB in metal enclosure with one 40 Amps industrial socket (P+N+E) but with 40Amps DP MCB (Leorand)duly inter connected	nos	4		
B.	LT CABLES:				
1.0	Supply & Laying of 1100V grade, XLPE/ PVC insulated, PVC sheathed, Aluminium / copper conductor, steel armoured cables. The cable shall be laid in exsiting trench, cable tray / clamped on to the walls using necessary fixing accessories. The cable shall be provided with cable identification tags made out of Aluminium strip, engraved with cable size and the routing. (Note : cost of cable tray, supports, excavation, sand cushioning, brick protection and back filling measured separately).				
1.1	3x1/2 core x35 sq.mm.	Mtrs	40		
1.3	4CX16 sq mm	Mtrs	40		

2.0	End connection of above cable with heavy duty nickle plated brass compression gland crimping type socket insulation tape etc. with all concern.				
2.1	3x1/2 c X 35 SQ MM	nos	4		
2.2	4 c X 16 SQ MM	nos	6		
C. POINT -WIRING SYSTEM					
1.0	"Distribution wiring(concealed) including new point wiring 660 volt grade 3x1.5 sq.mm. (cu) PVC flexible wire in 20 SWG Rigid PVC (ISI Marked medium grade) conduit along with Conduit accessories circular boxes, MS boxes, 6 Amps Modular Type switch with socket outlets 6 pin, all individual control switch etc. Conduit size & nos of wires in conduit as per code of practice with circuit wiring with (2x2.5 + 1X1.5) sq.mm. copper wire from MCB DB to respective sw board.N.B. (i)Earth & neutral may be looped but from the last point earth & Neutral has to be connected with sw board.(ii)Point wiring should be inclusive of continuous wire length up to the connection block of				
a)	Light point(one switch controls one light)	Nos	30		
b)	Light point(one switch control two lights)	Nos	25		
c)	Exhaust fan point	Nos.	8		
d)	Ceiling Fan point with REGULATORS	Nos	3		
e)	Call bell point with supply and fixing of call bell	Nos.	2		
f)	Wall Mounted Fan point with 6 amp 3 pin socket including wirings from sw boards till sockets	nos	10		
g)	Board plug point 3 pin 5 Amps with switch.	Nos.	10		
h	Supply & fixing 25 amp north-west motor starter with indicator type socket, legrand/Havells	No.	8		
i	Supply & fixing 16 amp plug top with indicator	No.	10		
k	Supply & fixing 3cx2.5 sq.mm. PVC insulated multistrand flexible cable	Mtr.	20		
m	Marking with printed stiker of electrical DBs,SFU,and individual circuit in UPS DB,LDB of switch board and UPS power etc.	LS.	1		
n	Light point(one switch control 3 lights)	nos	10		
D LIGHTING WIRING / SUB MAINS/POWER WIRING UPS WIRINGS ETC :					
	Supply & Drawing power wiring circuit /sub mains using flexible, copper conductor, FRLSHF wires of 1100V grade, PVC insulated wires drawn in 2mm thick suitable size FR PVC conduit. The rate shall also include running of PVC insulated copper conductor as earth wire. All circuits starting from the respected db should have ferrulling arrangements				
d1	3 x 1.5 sqmm Copper wires in 20 mm dia PVC conduit	Rmtr.	40		
d2	2 x 2.5 +1x1.5 sqmm Copper wires in 20 mm dia PVC conduit	Rmtr.	350		
d3	2x 4.0 +1X2.5sqmm Copper wires in 20 mm dia PVC conduit.	Rmtr.	250		
d4	2 x 6.0 +1X2.5sqmm Copper wires in 32 mm dia PVC conduit	Rmtr.	50		
d5	4x4 sqmm +1x4 sq mm Copper wires in 25 mm dia PVC conduit.	Rmtr.	30		
d6	4x6 sqmm +1x4 sq mm Copper wires in 25 mm dia PVC conduit.	Rmtr.	30		
d7	4 x 16.0 sq.mm + 1x6.0 sq.mm copper wires in 50mm dia PVC conduit.	Rmtr.	10		
E. POWER RECEPTACLES					
DOMESTIC TYPE:					
	Supply & fixing of 3/5 pin, commerial combination type socket outlet with indicator mounted on a outlet box with necessary interconnection. The box shall be flush mounted in brick/stone wall. The switches shall be of type Anchor roma make / equivalent. The rate shall also include cost of civil works involved in fixing of boxes, replastering of walls chased. All the switch / sockets shall have stickers for identification				
1 UPS- POWER SOCKET					
a)	"Supply & installation of MS Flush Metal box with front plate enclosing the following duly interconnected : a) 2 Nos 16 amp switch & 2 Nos 6 amps and 1 no. 6/16 amps socket outlet with indicatorb) 1 No. mounting box c) 1 No. front plate "	sets	18		
b)	Distribution wiring including new point wiring 660 volt grade 2x2.5+1x1.5 sq.mm. (copper) PVC insulated flexible wire in 20 mm dia. Rigid PVC (ISI Marked) conduit along with Conduit accessories circular boxes, MS boxes, 2x 6 Amps + 2x6Amps modular type switch and socket	set	10		
c)	Distribution wiring including new point wiring 660 volt grade 2x1.5+1x1.5 sq.mm. (copper) PVC insulated flexible wire in 20 mm dia Rigid PVC (ISI Marked) conduit along with Conduit accessories circular boxes, MS boxes, 1x 6 Amps + 1x6Amps modular type switch and socket	set	5		
d)	"Supply & installation of MS Flush metal box with front plate enclosing the following duly interconnected make:(Crabtree /Legrand/ Philips)a) 1 Nos 16 amp switch & 1 Nos 6/16 amps socket outlet with indicator	set	10		
F SUPPLY AND INSTALLATION OF LIGHT & FAN FIXTURES					
1.0	Supply, installation, testing and commissioning of following type light and fan fixtures with all necessary fixing accessories as required. The efficacy of the LED lamp shall be not less than 100lm/Watt				
1.1	1 x 20W, 5700K, 4 Feet LED tube, Surface/suspension light fixture with extruded Aluminium channel 4 feet with high translucent serrated milky white diffuser,robust and high performance batten. LED luminaire shall comprise of extruded channel in thermally conductive material. High translucent serrated milky white diffuser to get glare free and smooth light distribution. Efficacy = 125 lumen/watt similar to Crompton make cat no.CCS-100-20-65-HL2-DP-NWHL or equivalent MAKES HAVING matching specifications as per	Nos.	30		
1.2	1x 36W,5700K, 4 Feet LED tube, Surface/suspension light fixture with extruded Aluminium channel 4 feet with high translucent serrated milky white diffuser,robust and high performance batten. LED luminaire shall comprise of extruded channel in thermally conductive material. High translucent serrated milky white diffuser to get glare free and smooth light distribution. Efficacy : 100 lumen/watt similar to Crompton make cat no.LDL-36-CDL or equivalent matching specifications as per	Nos.	1		
1.4	15W LED Recess down Lighter Slim design ,recessed round /square Die-cast Aluminium housing finished in premium white Powder coating housing with superior light output and integral driver. Efficacy min 100-120lm/w similar to Crompton make Cat type LSCRM-15w-CDL or equivalent matching spec in NIT OF OTHER APPROVED MAKES: Philips/Havells /Wipro/Bajaj /Jaquar etc with surge protection of 2.5 Volts or eqv.Bajaj.BGSL O 15WH.RD or Wipro Havells ETC	Nos.	30		

1.5	6 W LED Recess down Lighter Slim design ,recessed round Die cast AL housing with superior light output and integral driver. Efficacy 100lm/w similar to Crompton make Cat type LSCRM--06-CDL or equivalent.	Nos.	20		
1.7	Supply of Green performance ,Sleek/Edge/backlit 600mmx600mm LED fixtures with surge protection of 2.5 KVolts ,full lit luminaire with glare free uniform illumination with longer life and less maintenance. 2X2 LED Backlite/Edge Luminaire in Recess Mounted Type comprises CRCA sheet metal body powder coated in white Efficacy : Min of 100-110 lumen/watt Make:- Crompton- LCTLRNE-36-FO-CDL for Backlit if space is available or TCR-145-36-65-SL-NWH OR or eqv Bajaj or Wipro , Havells	Nos.	40		
1.9	Supply and fixing of BLDC ceiling fan without fan regulator and without remotes and shall be of Crompton/Havells /Bajaj or equivalent.(Prior sample/ model approvals are required) Ex :Crompton make or equivalent Energon Nstar - 5 Star BEE, 1200mm sweep , Opal White , Model No-ENERGOS • BEE 5 STAR Rated fan(MAX 28-35w), Min 50-70% Savings on electricity costs) , Air Delivery(min 220CFM)	Nos.	3		
1.10	Supply and fixing of 400mm wall mounted fan of crompton /equivalent.WM S storm-2 Crompton make or equivalent, 5 Star BEE, Matt Silver Black • High Air Delivery with Low noise operation, • Thermal protection for long lasting motor , • Smooth oscillation , 90watt Power Inputs(Watts), Speed (rpm) 1350, Air delivery (100 CFM) Metal body only is acceptable of approved brands.	Nos.	10		
1.11	Supply and fixing of 200-225mm dia. single phase. MEDIUM DUTY exhaust fan with necessary angle iron bracket, double ball bearing wall mounted fan (metal body) Model BAHAR-225 of Bajaj or	Nos.	8		
1.12	Supply & fixing of Timer for UPS room 2 No's - Exhaust Fans/ 2 No's -AC of E-lobby areas /and All types of Signages of load upto 20Amps without contactors with electronic time delays Programmable timings (Microcontroller based Prog timers) , etc OF APPROVED MAKES:- CAMIPRO OR EQUIVALANTS , Model No- MSCMTV01, HAVING OUTPUT CONTACTS -25A-max with ontime	Nos.	2		
1.14	S & F Philips make LED tilttable COB Spot light(7w) or eqv. wipro/havells	Nos.	10		
1.15	Supply and fixing of Strip Lights Cat No: LSTGL 240OP-CDL/WW/NW/BLU OF 60w /5 MTRS, HAVING 240 LED'S WITH DRIVERS" LSTDREV-12V/5A-24W 830 IP20 5M OF CGL "LED flexi strip with driver." OR Eqv. make: of Bajaj/Havells/ wipro/philips but min 240 LED strips/ higher wattages / Driver of higher Amps equivalents above.(please note the STRIP lights should have high quality grade adhesives , with extra brightness, , Driver shall be having surge protection, Open & shaft ckt protections, wide range of voltage protections 140-350 V, Compact in size, surge protection upto 2.5KV, and min 2 years warrantee)	Set : 5mtrs LED+Driver	20		
1.16	Supply and fixing of bare Aluminium Profile of highest transperacy Acrylic sheets of Milky white shade with max out put from within laid Strip lights(cost not to be included in this materials) size 12.5 MM width to be used for recess applications	Mtrs	40		
1.17	Supply and fixing of bare Aluminium Profile of highest transperacy Acrylic sheets of Milky white shade with max out put from within laid Strip lights(cost not to be included in this materials) size 25 MM width to be used for recess applications	mtr	10		
1.18	Supply 2x2 Frame for LED Fittings(powder coated only)	nos	4		
H EARTHING SYSTEM					
1.0	Supply & installation of 38mm dia, 2.5 Mtr. long G.I.pipe electrode earthing station complete with manholes, brick masonry chamber, heavy duty CI covers, funnel etc., The cost shall also include providing of salt and charcoal layer by layer, excavation and back filling etc., all complete as required and shall confirm to IS - 3043.	Set	2		
2.0	Supply & installation of 300 x 300 x5 mm, copper plate earthing station complete with GI pipe, manholes, brick masonry chamber, heavy duty CI covers, funnel, etc., The cost shall also include providing of salt and charcoal layer by layer, excavation and back filling etc., all complete as required and shall confirm to IS - 3043.	Set	1		
3.0	Supply, installation & connecting of G.I.tape /wire being clamped to walls, cable trays, ladders, run in pipes with Sleeves etc , laid underground etc.,as required including interconnection between the earth stations etc.,all complete as required. (Note : The excavation and back filling is measured separately) .				
a)	3 core armoured cable of 3x2.5 sqmm Copper wires for earthing/Street Lightings	M	50		
b)	Supply and fixing of GI earth strip of size 25 mm x 3mm with insulator at 2 feet interval and all accessories nut bolts washer etc. as required connection complete	mtr	8		
K MISCELLANEOUS WORKS:					
1.0	Electrical safety - RUBBER mats of 1.1kV grade 1.8mx0.9m	Nos	1		
2.0	Supply and fixing : of 1nos First aid kit, Safety chart, Danger boards-2nos , No Admission boards-1nos	set	1		
3.0	Submitting electrical SLD for entire works	job	1		
TOTAL:- (A+B+C+D+E+F+G+H+I+J+K)					
GST AS APPLICABLE SHALL BE EXTRA					