

ELECTRICAL INSTALLATION WORKS OF STATE BANK OF INDIA BRANCH AT GUMMA (HP.)

BILL OF QUANTITIES

S.No.	Item	Quantity	Units	Rate	Amount
	SUB HEAD 1 (COMPUTER POINTS AND DISTRIBUTION)				
1	Supply all materials, receiving, storing, handling, fixing and laying 3 x 2.5 sq.mm PVC insulated copper conductor armoured cable and fixing of cable on wall with suitable size of clamps/saddles or laid in floor or recessed wall including cutting of floor/wall for computer points with suitable size GI Box with modular plate and cover in front including providing and fixing 3 no. 5/6 amp 5 pin modular sockets controlled by 1 no. 5 Amp switch with indicator, connection end terminations with suitable size of glands etc. complete as required. (Only two points can be connected in series with single cable)	15.00	Each		
	4 points for BM Cabin , 2 points for Networking Equipment's in Banking Hall and 2 per SWC				
2	As per item 1 above but with 2 no. 16 amp 5 pin modular sockets controlled by 1 no. 16 amp modular switch and 6 amp indicator Lamp including the cover plate.	4.00	Each		
	2 point to be provided in Banking Hall behind SWC Room and 4 points for ATM				
3	Point Wiring: (This includes circuit wiring as mentioned in 4 (a))				
	Wiring for light point / ceiling Fan point / exhaust fan point with 1.5sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit ISI mark, with 6Amp modular switch, modular plate, suitable GI junction & switch boxes & clip and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core etc. as required. (WiresMake: HAVELLS/ RR KABLES / KEI / FINOLEX) (SWITCHES : MAKE ANCHOR / CRABTREE / NORTH-WEST / MK)				
	(Rate includes 3 x 2.5 sq.mm FRLS copper conductor, single core cable in PVC conduit for circuit/sub main wiring along with earth wire)				
(a)	Single 6 Amp Swirch controlling 1 light point for T-5 , Exhaust Fan, Ceiling Fan and other separate room supply only	22.00	no.		
(b)	single 6Amp Switch controlling 4 no downlights / 4 no LED downlights/ 2no 2'-0" x 2'-0" 36 watt light fittings.	26.00	no.		
	2 - 36watt LED /or 4 - 15 watt LED / 1 exhaust fan /1 ceiling fan to be provided per point				
(c)	Single 6Amp socket controlling by 5Amp Modular switch in switch boards etc complete as required. (dependent points)	10.00	no.		
(d)	Supply and Installation of Points for Wiring for power plug point (heating point) 16A with 2 x 2.5 sq.mm + 1 x 1.5sq.mm copper conductors , including the modular switches, sockets and plates. Including the cost of 2mm thick PVC conduits. To be provided for water cooler , pantry , Banking Hall ,BM Cabin and rest for SWC. {One point to be provided per circuit.}	16.00	Each		
(e)	Single 6 Amp Switch from UPS controlling 1 no downlight in BM Cabin, Cash Cabin (1 No), Record Rm (1 No), Main Hall (2 No), ATM (1 No). All points on UPS	5.00	no.		
4	Extension of wall fans:				
	Extension of existing points with 2x1.5 sq.mm. PVC insulated copper conductor cable in suitable dia MS conduit in recess conduit wiring system for wall fan points with modular switches of 6 amp and 5 amp 5 pin modular sockets as per requirement and filling chassis etc complete as reqd.	12.00	no.		
5	Providing & laying following sizes of PVC insulated copper conductor cable of 1100 V in flexible/PVC conduit with accessories such as glands. bends etc.(as per requirement) including making necessary Inter connection etc complete as reqd.				
	2 x 6 sq.mm with 1 no. suitable PVC insulated earth wire	15.00	mtr.		
6	Supply Installation, testing & commissioning of factory fabricated distribution board rust inhibited, powder coated Sheet sheet fabricated comprising of incoming & outgoing isolator & MCB's neutral link or neutral bus,top and bottom detachable entry earthing bolts Interconnection and grouting bolts etc complete as require as per details below:-				

S.No.	Item	Quantity	Units	Rate	Amount
a)	12 way MCBDB (double door) comprising of 1 no. 63 amp DPMCB "C"Series and 10 no. 6/10amp SPMCB's "C" SERIES. (for the UPS points each DB to be connected to 12 UPS points i.e only two points shall be connected with one MCB)/ L&T DBSPN008DD / OR EQUAVILANT	1.00	each		
b)	6 way MCBDB (double door) comprising of 1 no. 40 amp DPMCB "C"Series and 4 no. 6/10amp SPMCB's "C" SERIES. (for the UPS points each DB to be connected to 12 UPS points i.e only two points shall be connected with one MCB)/ L&T DBSPN006DD / OR EQUAVILANT	1.00	each		
c)	4 way TPDB (double door) comprising of 1 no. 100 amp 4 pole ISOLATOR and 6no. 32 amp DPMCB (for Ac's). To be fixed in Banking Hall. DPMCB must be of C Series./ L&T DBTPN004DD / OR EQUAVILANT	1.00	Each		
d)	4 way TPDB (double door) comprising of 1 no. 63 Ampere TPNMCB C series and 12 nos. 16-20 amp SPMCB C Series. (For Heating Points)/L&T DBTPN004DD / OR EQUAVILANT	1.00	Each		
e)	4 way DB comprising of 1 no. 63 amp 4 pole TPN MCB (for UPS I/C) with Acrylic Window./L&T DBSPN004GD / OR EQUAVILANT	1.00	Each		
f)	4 way DB comprising of 2 no. 63 amp DPMCB (for UPS) "C " Series with Acrylic Window.L&T DBSPN004GD / OR EQUAVILANT	2.00	Each		
g)	4 way TPDB comprising of 1 no. 63 Ampere TPNMCB C series and 12 nos. 6/10 amp SPMCB C Series. (For the lighting circuit) / L&T DBTPN004DD / OR EQUAVILANT	1.00	each		
7	Supply, fixing and testing of following 3 pin metal clad industrial type plug & socket arrangement with plug top cap & chain controlled by 1 No. MCB				
a)	20/25 amp with 20/25 amp SPMCB (one for making the plug socket arrangement for the record room so that the supply is connected only when the plug is inserted in the socket outside the record room for fire safety) L&T DBMPS220SD OR EQUAVILANT	10.00	no.		
b)	32 amp with 63 amp DP	3.00	no.		
8	Providing & fixing suitable size of MS box fabricated with 16 S.W.G.M.S. sheet either In recess wall or on surface to accommodate dedicated earth from earth electrode and further distribution of earth to computer points including providing 5mm backalite sheet on base connector strip and painting of box etc complete as reqd.	1.00	job		
	TOTAL SUB-HEAD -1				
	SUB HEAD 2(PANELS & CABLES)				
1	Providing & fixing 3 No. 100 amp kit-kats (fuse carrier & base) with 1 no. neutral link on suitable size of backalite sheet of thickness not less than 6 mm etc. complete as reqd.	1.00	job		
	MAIN PANEL				
2a)	Supply at site installation, testing & commissioning of panel fabricated with 16 S.W.G.M.S. sheet. The panel shall be free standing type totally enclosed dust & vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, G.1. earth bus bar, bus bar chamber cable alleys interconnections with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of bus bars. The panel shall be painted with 2 coats of enamel paint (grey shade)over the primer and shall also be provided with designation of incoming & outgoing feeder as per details below-				
	INCOMING				
	1 no MCCB Breaking Capacity 36 KA 160 Amp 4P, DN Series				
	1 no 0 -500V digital Voltmeter in separate compartment and digital Amp meter and one set of CTs (3 Nos) with CT Ratio 150/5 A with LED type phase Indication Lamps with protection fuses in a separate compartment				
	1 set of 200 Amps TPN Aluminium bus bar chamber				
	OUTGOING				
	1 no. 160 amp 4 pole 36 KA MCCB, 2 No. 100 amp 3 pole MCCB , 6 No. 63 amp 3 pole MCCB. (MCCB'S WITH 25KA BREAKING CAPACITY at 415 Volts./ HIGHEST AVAILABLE). (For A.C , UPS , Lighting & Heating) / L&T DN SERIES or Equivalent	1.00	set		
3	Supply, installation, testing & commissioning of PVC insulated PVC sheathed armored cable of 1100 V (IS-1554 part I) and fixing of cable on wall with suitable size of clamps/ saddles or laid in floor/recess wall including cutting of floor/wall and making good the damages etc. complete as reed. of following sizes:-				

S.No.	Item	Quantity	Units	Rate	Amount
a)	3.5 x 25 sq.mm. aluminium conductor with 2 no. 8S.WG.G.1. wire (from the Meter to the Main panel)(from change over to the essential panel, from the main panel to the essential panel.)	40.00	per mtr.		
b)	3 x 2.5 sq.mm. copper conductor (for the Air-conditioning wiring) ARMORD CABLE	80.00	per mtr.		
c)	4 x 10 sq.mm. aluminium conductor with 2 no. 8S.WG.G.1. wire (from the main panel/essential panel to the AC DB	25.00	per mtr.		
d)	3 x 6 sq.mm copper conductor (for UPS DB)	20.00	per mtr.		
e)	4 X 16 sqmm aluminium conductor with 2 no. 8S.WG.G.1. wire: PBD+UPS ROOM	40.00	per mtr.		
4	End termination with Brass compression glands including providing lugs/ferruls and making necessary connections etc. complete as reqd. of following sizes:-				
a)	3.5 x 25 sq.mm. aluminium conductor	6.00	each		
b)	3 x 2.5 sq.mm. copper conductor	12.00	each		
c)	4 X 16 sqmm. aluminium conductor	4.00	each		
d)	4 X 10 sqmm aluminium conductor	4.00	each		
e)	3 x 6 sq.mm copper conductor	4.00	each		
5	Providing & fixing suitable size of angle iron frame suitable for installation on wall/floor including grouting of frame & painting etc. complete as reqd. comprising of the following:				
a)	1 NO.4 pole 160 amp capacity changeover switch of L&T make or Equivalent	1.00	job		
6	Providing & fixing 16 S.W.G. M.S. Sheet adapter box, and also base frame for installation of M.C.B. D.B.'s plug & socket arrangement and to cover cables in system room including painting etc. complete	1.00	job		
	TOTAL SUB-HEAD 2				
	SUB-HEAD 3 (EARTHING)				
1.1	Supply & fix copper plate earth station with 600x600x3mm thick copper plate including all accessories such as watering pipe & funnel and providing masonry enclosure at top with cover plate i/c excavation of pit supplying & filling of salt charcoal, refilling of pit etc complete as reqd as per IS 3043-1987. The voltage between neutral & earth must be below 1 volt, with signage board	1.00	set		
1.2	Supply & fix G.I. plate earth station with 600x600x6mm thick G.I. plate including all accessories such as watering pipe & funnel and providing masonry enclosure at top with cover plate i/c excavation of pit, supplying & filling of charcoal, refilling of pit etc complete as reqd as per IS 3043-1987 (for the neutral earthing from the point of neutral link beside the fuse connection and second for the body earthing connected to both panel body and the ups base panel) with signage board	2.00	set		
	NOTE: chamber for the earthing shall be available at site without it the earthing cost shall not be paid for all the Earthing You are also required to provide picture of earthing taken at the time of execution of the same.				
2.1	Supplying and laying 20mm X 3 mm copper strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required	5.00	mtr.		
2.2	Supplying, fixing & termination of 32 mm X 6 mm GI strip with earth station below ground level and on wall saddle etc complete as reqd.	10.00	mtr.		
3.1	Providing & fixing 8 S.W.G G.I. Cu earth wire on surface or in recess for loop earthing etc. as reqd.	15.00	mtr.		
3.2	Providing & fixing 8 S.W.G G.I. earth wire on surface or in recess for loop earthing etc. as reqd.	30.00	mtr.		
4	Supply & laying following dia 2 mm in thickness PVC pipe under floor or in recessed walls from earth electrode to UPS room for computer dedicated earthing, for data cabling, electrical cabling etc. including providing 1 no. G.I. pull wire for data cabling making good the damages etc. wherever reqd.				
a)	25mm	50.00	mtr.		
	TOTAL SUB-HEAD -3				

S.No.	Item	Quantity	Units	Rate	Amount
	SUB HEAD 4 (NETWORKING)				
1	Wiring for computer networking starting from mounting rack with UTP CAT-6 cable in 2 mm thick 25mm dia ISI mark PVC conduit with accessories such as bends, junction boxes including providing and fixing I/O plates and SMB complete with all networking accessories etc complete as reqd.	20.00	no.		
2	Installation, testing and commissioning of 24-port unmanaged switch 10/100 full duplex complete as reqd. (to be supplied by the bank)	1.00	no.		
3	Supply, installation, testing and commissioning of 24-port Patch Panel	1.00	no.		
4	Supply installation. testing and commissioning of mounted rack 15" height made of powder coated MS sheet.	1.00	no.		
5	Supply, fixing and commissioning of patch cable Cat-6 complete with 2 no. connectors etc. complete as reqd.				
a)	1m long	20.00	no.		
b)	2m long	10.00	no.		
	Supply, fixing and commissioning of cable Cat-6 complete with 2 no. connectors or as required etc. complete as reqd including upvc 19mm dia. pipe conduit of heavy duty.				
c)	25mm	80.00	mtr.		
6	Wiring for telephone points with 0.6 mm dia 2 pair insulated annealed tinned electrolytic copper conductor in 2 mm thick 25 mm dia ISI marked PVC conduit complete with accessories such as bends, junction boxes etc. with suitable size of G.I. box modular plate and cover in front on surface or in recess including providing and fixing modular type telephone socket outlet and making necessary connections etc. complete as reqd.	5.00	no.		
7	Supply, fixing and commissioning of 20 pair tag block for telephone points. (box and strips Krone make)	1.00	no.		
	TOTAL SUB -HEAD 4				
	SUB-HEAD 5 (AIR CONDITIONING PIPING WORK)				
1	Supplying & Laying of following COPPER REFRIGERANT PIPING Thickness 22 SWG For Hi-wall Split AC complete with fittings Suction / Discharge line insulated with 12 mm SUPERLON / ARMAFLEX suction line. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement.				
	1/4" + 1/2" Refrigerant piping - For Hi wall Split AC's	80.00	per mtr.		
2	Supply and laying following dia 3.38mm (confirming to ASTM D1785 standard) in thickness, heavy duty PVC pipe under floor or recessed in walls for AC drains, (To nearest To including bends. Tees etc as required complete in all respect	50.00	per mtr.		
3	Electrical flexible cable of 3 x 2.5sq.mm FRLS Cu cable multi strand suitable for 2 Tr H.W Split & 1.5 Tr H.W Split. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement.	120.00	per mtr.		
	TOTAL SUB-HEAD 5				
	SUB HEAD 6 (INSTALLATION OF FANS AND FIXTURES.				
1	Installation of 36 watt. LED fitting crompton greaves (or equivalent) LCTLR-36-FD-CDL complete as required. (including the cost of earthing connection)	17.00	no.		
2	Installation of 15 watt. LED fitting crompton greaves (or equivalent) LCDD-15-CDL complete as required	35.00	no.		
3	Installation, testing and commissioning of wall fans including making necessary arrangement for fixing on wall complete as reqd.	12.00	no.		
4	Installation, testing and commissioning of T5 fixtures directly on ceiling / wall including making necessary connections with suitable size of PVC insulated copper conductor wire etc. complete as reqd.	4.00	no.		
6	Installation, testing and commissioning of exhaust fans including making connection with adjacent point etc. complete as reqd.	6.00	no.		
	TOTAL SUB-HEAD 6				

S.No.	Item	Quantity	Units	Rate	Amount
	SUB HEAD 7 (SUPPLY OF FANS & FIXTURES)				
1	Supply of 36 watt. LED fitting crompton greaves (or equivalent) LCTLRN-36-FO-CDL complete as required	17.00	no.		
2	Supply of 15 watt. LED fitting crompton greaves (or equivalent) LSDRMN-15 W-CDL complete as required	35.00	no.		
3	Supply of 450 mm sweep metal body and metal blades crompton greaves or equivalent SDX BLACK GOLD wall fan etc.1325 sqm high flow complete as reqd. (M/s Crompton or equivalent of USHA/ Bajaj/ ORIENT TORNADO WALL II)	12.00	no.		
4	Supply of 4.5/5 Watt LED strip light for cove with Driver (M/s. Philips Wipro / Bajaj) Complete in all respects required shade warm white/ blue as per requirement.	40.00	MTR.		
5	Supply of following Batten type LED fittings complete as reqd.				
a)	LED T5 fitting 18 watt LCTL-18-CDL OF CROMPTON OR EQUIVALENT OF	4.00	no.		
7	Supply of 200 mm Only metal frame and body (sweep) exhaust fans complete with self opening louvers/shutters etc. complete as reqd. (M/s Crompton cross air or equivalent of USHA / Bajaj)	6.00	no.		
	TOTAL SUB - HEAD 7				
	TOTAL SUB-HEAD-1				
	TOTAL SUB-HEAD-2				
	TOTAL SUB-HEAD-3				
	TOTAL SUB-HEAD-4				
	TOTAL SUB-HEAD-5				
	TOTAL SUB-HEAD-6				
	TOTAL SUB-HEAD-7				
	TOTAL OF THE SUB-HEADS-(1-6) B				
	TOTAL OF THE SUB-HEADS-(7) C				
	TOTAL (A= B+C)				
	DISCOUNT IF ANY				
	NET COST OF ELECTRICAL WORKS				
	Add GST @ 18% on Total as applicable				
	IN WORDS (RS)				
	SIGNATURE OF CONTRACTOR				
	NAME OF CONTRACTOR				
	ADDRESS OF CONTRACTOR				
	IMPORTANT NOTE: ALL WIRES USED AT SITE SHALL BE FRLS ONLY (FLAME RETARDANT LOW SMOKE WIRES ONLY)				