

BOQ FOR ELECTRICAL WORKS OF STATE BANK OF INDIA, BRANCH AT CHOGAWAN (7554), DISTT. AMRITSAR.

BILL OF QUANTITIES (ELECTRICAL INSTALLATION)

S. No.	Item	Quantity	Units	Rate	Amount
1	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 amp 5 pin modular sockets controlled by 1 no. 5Amp 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) (note: 5amp switch and indicator to be fixed on top of table and sockets to be fixed under the table, complete as required)	18.00	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.	5.00	Each		
	As per item 1 above but with 1 no. 16 amp 5 pin modular sockets controlled by 1 no. 16 amp modular switch and 6 amp indicator Lamp including the cover plate.	0.00	Each		
3	Wiring for lightpoints/ceiling points/ Exhaust Fans point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class pvc conduit with modular switch, modular plate suitable gi box and earthing the point with 1.5 sq mm FRLS PVC insulated copper conductor single core cable etc. including circuit wiring with 2 X 2.5 sq. mm +1 x 2.5 sq. mm earth wire as required (HT upto 4.5 m from floor)				
(a)	1 no light controlled by 1 no switch	30.00	Each		
(b)	2 no light controlled by 1 no switch	15.00	Each		
(c)	5/6 pin 6 amp plug point with 6 amp switch	10.00	Each		
(d)	Providing & Fixing of point wiring for inverter in 1.5 sq.mm wires & earth wire. (M/s Havells/Anchor /North West) (New Wiring).	5.00	no.		
€	UPS supply to tube lights point wiring/ circuit wiring with 1.5mm sq. fire retardant PVC insulated copper wire flame guard multi-strand copper conductor from D/B to switches & fittings multi strand PVC copper wire including plate switches, sockets, etc. (for payment no. of switches shall be counted).	5.00	no.		
(f)	Signage wiring (material & labour)- P&F of 2x4mm and 1x1mm copper fire retardant PVC insulated copper wire flame guard multi-strand copper conductor PVC conducting of ISI make complete with all accessories like Saddles, Bends modular switches etc.	1.00	no.		
(g)	Power point:- 15Amp wiring with 2.5mm sq. fire retardant PVC insulated copper wire flame guard multi-strand copper conductor & metal clad enclosure socket etc.	10.00	no.		
4	wall fans & Exhaust fan wiring:				
	Wall fans & exhaust fan 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.	16.00	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	25.00	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:-				
a)	12 way MCBDB 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)	1.00	each		

b)	6 way MCBDB comprising of 1 no. 63 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)	1.00	each		
c)	4 way TPDB comprising of 1 no. 100 amp 4 pole isolator and 6 no. 25 amp DPMCB (for Ac's). To be fixed in Banking Hall. DPMCB must be of C Series. (For lighting circuit & powe circuit)	2.00	Each		
d)	4 way TPDB comprising of 1 no. 100 amp 4 pole isolator and 3 no. 32 amp TPNMCB (for Ac's). To be fixed in Banking Hall. DPMCB must be of C Series.	0.00	Each		
e)	4 way DB comprising of 1 no. 63 amp 4 pole TPNMCB (for UPS I/C).	1.00	Each		
f)	4 way DB comprising of 2 no. 32 amp DPMCB (for UPS) "C " Series	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, power circuit & AC's)	2.00	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)	10.00	no.		
b)	30 amp with 32 amp SPMCB	0.00	no.		
c)	30 amp with 32 amp TPNMCB	0.00	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.	0.00	job		
TOTAL SUB-HEAD -1					
SUB HEAD 2(PANELS & CABLES)					
1	Providing & fixing 3 No.200 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 (For Branch & ATM)					
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					
a)	1no. 160 amp MCCB 4 pole with 36 KA breaking capacity at 415 Volts/ HIGHEST AVAILABLE.				
b)	1 set of 300 amp TPN aluminium bus-bar chamber				
c)	1 no. 0-500 V Voltmeter with selector switch in a separate compartment and amp meter with selector switch and one set of CT's (3 no.) with CT ratio 250/5 with LED type indication lamps with protection fuses in a separate compartment				
OUTGOING					
a)	5 nos 63 AMP 3 pole MCCB (MCCB'S WITH 25KA BREAKING CAPACITY at 415 Volts. / HIGHEST AVAILABLE).	1.00	set		
b)	2 nos 100 AMP 3 pole MCCB (MCCB'S WITH 25KA BREAKING CAPACITY at 415 Volts. / HIGHEST AVAILABLE).				
b)	1 nos 125 AMP 3 pole MCCB (MCCB'S WITH 36KA BREAKING CAPACITY at 415 Volts. / HIGHEST AVAILABLE).				
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:-				
a)	3.5 x 50 sq.mm. aluminium conductor with 2 no. 8S.W.G.G.1. wire (from the Meter to the Main panel)(from the Genset to the Change over and from change over to the essential panel, from the main panel to the essential panel.)	25.00	per mtr.		

c)	3.5 x 35 sq.mm. aluminium conductor with 2 no. 8S.WG.G.1. wire (from kitkat/essential panel to UPS I/C)	25.00	per mtr.		
d)	4 x 10 sq.mm. aluminium conductor with 1 no. 8 S.WG. G.1. wire (from the essential panel to the Lighting DB, UPS panel and ACDB)	0.00	per mtr.		
e)	3 x 6 sq.mm copper conductor (for UPS DB)	0.00	per mtr.		
F)	4 x 4 sq.mm copper conductor (for AC)	0.00	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 50sq.mm. aluminium conductor	4.00	each		
b)	3 x 2.5 sq.mm. copper conductor	12.00	each		
c)	3.5 x 25 sq.mm. aluminium conductor with 2 no. 8S.WG.G.1. wire	8.00	each		
d)	4 x 10sq.mm. aluminium conductor	6.00	each		
e)	3 x 6/ 4 X 4 sq.mm copper conductor	0.00	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 125 amp capacity changeover switch	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	sqmt.		
ESSENTIAL MAIN PANEL (EMP)					
2b)	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					
a)	125 amp MCCB 4 pole WITH 36 KA breaking capacity AT 415 VOLTS.				
b)	1 set of 200 amp TPN aluminium bus-bar chamber				
c)	1 no. 0-500 V Voltmeter with selector switch in a separate compartment and amp meter with selector switch and one set of CT's (3 no.) with CT ratio 160/5 A with LED type indication lamps with protection fuses in a separate compartment				
OUTGOING					
a)	1 NO. 100 amp 3 pole MCCB , 4 -63 AMP 3 pole MCCB and 1 No. Space for 100amp switch with separate neutral link. (MCCB'S WITH 25KA BREAKING CAPACITY at 415 Volts.)	1.00	set		
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.	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)	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	Supplying and laying 20 mm 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	3.00	mtr.		
	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.	6.00	mtr.		
3	Providing & fixing 8 S.W.G. Cu earth wire on surface or in recess for loop earthing etc. as reqd.	25.00	mtr.		

	Providing & fixing 6 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	90.00	mtr.		
	TOTAL SUB-HEAD -3				
	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 ferruling & all networking accessories etc complete as reqd.	18.00	no.		
2	Installation, testing and commissioning of 24-port unmanaged switch 10/100 full duplex complete as reqd. (to be supplied by the bank)	0.00	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	18.00	no.		
b)	2m long	10.00	no.		
c)	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.	0.00	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.	9.00	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 1/ 1.5 ton Hi wall Split AC's	130.00	per mtr.		
	5/8 " + 3/8" for 2 /3 ton HWS /CASSETTE AC	0.00	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	110.00	per mtr.		
3	Electrical flexible cable of 4 x 2.5sq.mm FRLS Cu cable multi strand suitable for 2 Tr Cassatte & 3 Tr Cassatte AC.	120.00	per mtr.		
4	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.	60.00	per mtr.		
	Electrical flexible cable of 4 x 4 sq.mm FRLS Cu cable multi strand suitable for 2 Tr H.W Split & 1.5 Tr H.W Split.	0.00	per mtr.		
	TOTAL SUB-HEAD 5				
	SUB HEAD 6 (SUPPLY OF FANS & FIXTURES)				
1	Supply and Installation of 36 watt. LED fitting crompton greaves (or equivalent) LCTLRN-36-FO-CDL complete as required	23.00	no.		
2	Supply and Installation of 15 watt. LED fitting crompton greaves (or equivalent) LSDRMN-15 W-CDL complete as required	29.00	no.		
3	Supply and Installation of 450 mm sweep metal body and metal blades Turbo 180, USHA make or equilaent Crompton/Havells	12.00	no.		
4	Supply and Installation 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 and Installation of following Batten type LED fitting 18 watt LCTL-18-CDL OF CROMPTON OR EQUIVALENT OF PHILIPS/WIPRO	6.00	no.		
6	Supply and Installation of 56" sweep ceiling fans complete with regulator, hanging shackle & suitable down rod as per site conditioning complete as reqd. (M/s Crompton high breeze or equivalent of USHA / Bajaj)	1.00	no.		
7	Supply and Installation of 250 mm (sweep) metal body exhaust fans complete with self opening louvers/shutters etc. complete as reqd. (M/s Crompton or equivalent of USHA / Havells)	4.00	no.		
8	SITC of 30 watt street light/flood light for lighting the front side of the branch (with jounction box complete as required) (M/s Crompton Cat No. LSTS-30-CDL or equivalent of Philips/Wipro.	2.00	no.		
	TOTAL SUB - HEAD 6				
	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 OF THE SUB-HEADS-(1-5) A				
	TOTAL OF THE SUB-HEADS-(6) B				
	SUB TOTAL(A+B)				
	NOTE: GST SHALL BE PAID EXTRA				