

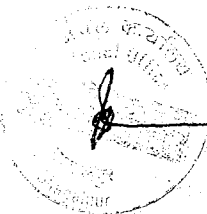
ELECTRICAL SUMMARY OF COST**IMPORTANT NOTE :**

- i) Megger test of the newly installed electrical system shall be mandatory.
- ii) Bidders shall make themselves familiar with actual site conditions before submitting their rates.
- iii) The successful bidder assigned to execute the work shall make necessary arrangements to dismantle the existing wiring system, electrical fittings, A.C. wirings, UPS & LAN in a phased manner and also temporarily re-install the same to facilitate normal functioning of the Branch/Office according to actual site conditions. The quoted rates shall have to be accordingly worked out by the bidders and no separate claims on these accounts shall be entertained.
- iv) During the execution period, the contractors shall ensure presence of a competent electrician in order to maintain normal office activities.

SECTION NO.	DESCRIPTION	FOLIO NO.	AMOUNT Rs.
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A	DB'S, CABLING AND WIRING WORK	SCH-E/6	
B	SUPPLY & INSTALLATION OF LIGHT FITTINGS	SCH-E/7	
C	COMPUTER POWER WIRING	SCH-E/9	
D	TELEPHONE SYSTEM	SCH-E/10	

TOTAL CARRIED TO GENERAL SUMMARY :



SCH-E/1

A. DB's, CABLING AND WIRING WORK

SL. NO.	ITEM DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
1.1	<u>MAIN SWITCH</u> Supply and fixing of Switch Fuse Unit (SFU) with HRC fuse in sheet steel enclosure on M.S. angle frame / M.S. legs on wall complete with interconnection, mending good damages to original finish, painting, etc. as required.				
	i) 100 A TPN SFU with HRC fuses.	Each.	1		
	ii) 63 A TPN SFU with HRC fuses.	Each.	1		
1.2	<u>CHANGE OVER SWITCH (COS)</u> Supply, installation, testing and commissioning of 63A 4P On load front operated change over switch in sheet steel enclosure on M.S legs on wall complete with interconnection, mending good damages to original finish, painting etc. as required.	Each	1		
1.3	<u>MCB DISTRIBUTION BOARD</u> Supply, installation, testing and commissioning of following MCB Distribution Board in sheet steel enclosure with double door and suitable for mounting on wall by chase cutting and flushed with finished level to the position shown in the Electrical Layout complete in all respect, mending good all damages to the original finish, painting, interconnection, etc. as required. Short circuit I.C. of all MCBs should be 10 KA (minimum) and RCBO should have earth leakage, overload and short circuit protection. Name plate of DB's to be fixed / written on front door alongwith switch board numbers / DB's at the outgoing.				
a)	<u>MAIN DISTRIBUTION BOARD (MDB)</u> TPN 6 way vertical type MCB DB complete with busbar and the following MCBs : <u>Incoming</u> 1 no. : 63A 4P MCB Iso. <u>Outgoing :</u> 1 no. : 415V, 32A TP, MCB 6 nos. : 240V, 20-25A SP MCB 3 nos. : 240V, 16A SP MCB Complete board as above	Each.	1		
b)	<u>Lighting Distribution Board (LDB)</u> TPN 4 way vertical type MCB DB complete with busbar and the following MCBs : <u>Incoming</u> 1 no. : 40A FP MCB				
CARRIED OVER :					

SL. NO.	ITEM DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
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BROUGHT FORWARD :

c) Contd...

Outgoing :3 Nos. : 25A TP MCB
2X32A DPMCB

Complete board as above

Each. 1

d) 12 way Horizontal type SPN DB

Incoming :

1 No. 32 A DB MCB (20 KA)

Outgoing :

10x6/10a SPMCB

Each 1

e) MCB FOR GLOW SIGN BOARD

Supply and fixing of 20A SPN MCB & 20A timmer with 40A DP contractor suitable enclosure on wall for enclosure on wall for Glow Sign board connection.

Each. 1

1.4 DISTRIBUTION CABLE :a) SUPPLYING OF CABLE :

Supplying of 1.1 KV grade following PVC insulated and PVC sheathed armoured aluminium conductor cables conforming of IS:1554 (Part-I) :

i) 3.5 core 35 Sq.mm.

Mtr. 45.00

ii) 4 core 16 Sq.mm.

Mtr. 50.00

b) LAYING OF CABLE

Laying of above cable from metre to MDB on wall/column/as per side condition including supply and fixing of M.S. clamps/galvanised bar saddles @ 300 mm apart, making holes and mending good damages or partly through pre-laid pipe.

i) 3.5 core 35 Sq.mm.

Mtr. 45.00

ii) 4 core 16 Sq.mm.

Mtr. 50.00

c) CABLE GLAND AND FINISHING THE END

Supplying and fixing of compression type brass cable gland alongwith rubber rings for dust and moisture proof entry of following 1.1 KV grade aluminium conductor PVC insulated and PVC sheathed armoured cable and finishing the end by crimping method including supply and fixing of "Dowell" make solderless socket, tapes and jointing materials as required to be completed in all respect.

i) 3.5 core 35 Sq.mm.

Set 2

ii) 4 core 16 Sq.mm.

Set 6

CARRIED OVER :



SL. NO.	ITEM DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
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BROUGHT FORWARD :**1.5 SUBMAIN WIRING**

Submain wiring with following sizes 1100 V grade, single core, PVC insulated flexible FRLS copper conductor wire (IS:694) through suitable size PVC. conduit (ISI marked embossed on conduit surface)/ flexible PVC conduit complete with junction box, circular box, elbows, bends and other accessories on surface above false ceiling or concealed by chase cutting on wall/in wooden furnitures, as per site condition, mending good all damages to original finish, interconnection, painting etc. as required to be completed in all respect. All connections of wires to be done by means of "Wago" type connectors:

- i) With 2 Nos. 6 Sq. mm + 1 No. 2.5 Sq. mm (green colour for earth) PVC insulated Copper wire.(For Glow Sign Board) Mtr. 100.00

1.6 AC POINT WIRING (UPTO 2.0 TON)

- i) A.C. power point wiring from Main DB to A.C. Power points with 1100 volt grade following rating (Green colour for earthing) PVC insulated flexible FR copper conductor cable through suitable size PVC conduit (ISI marked embossed on conduit surface) complete with junction box, circular box, elbows, bends, couplers and other accessories surfaced on wall above false ceiling or concealed by chase cutting on brick / wooden wall. The work includes supply & fixing by chase cutting on wall, 'North-West' make A.C. power unit having suitable rating socket with plug,plug-top & starter in sheet steel enclosure complete with interconnection, mending good all damages to original finish, painting etc. as required. All connections of wires to be done by means of 'Wago' type connectors.

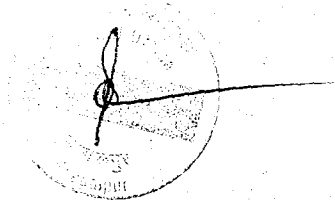
With 2 nos. 4 sq.mm. + 1 no. 2.5 sq.mm. (green colour for earth) PVC insulated copper wire in 25 mm dia PVC conduit / casing caping. (for AC unit) Each. 8

1.7 6/16A SOCKET OUTLET POINT WIRING

Power point wiring for 6 pin 6/16 A shuttered socket outle wiring with controlling switch from DB with 1100 volt grade 2 Nos. single core 2.5 sq.mm. + 1 No. 1.5 sq.mm. (Green colour for earthing) PVC insulated flexible FRLS copper conductor wire (IS:694) through suitable size PVC. conduit (ISI marked embossed on conduit surface) complete with junction box, circular box, elbows, bends, couplers and other accessories on surface above false ceiling or concealed by chase cutting on wall. The work includes supply & fixing of modular type 6/16A 6 pin shuttered socket outlet with controlling switch, suitable size mounting box and front plate for socket outlet flushed with finished wall, mending good all damages to original finish, interconnection, painting, etc. as required to be completed in all respect. All connections of wires to be done by means of 'Wago' type connectors.

Each 4

CARRIED OVER :



SL. NO.	ITEM DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
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BROUGHT FORWARD :

1.8 POINT WIRING

Point wiring with 1100 V grade 3 nos. single core 1.5 sq.mm. (1 for phase, 1 (black colour) for common neutral by looping method and 1 (green colour) for common earth by looping method) PVC insulated flexible FRLS copper conductor cable (IS:694) through suitable size PVC. conduit (ISI marked embossed on conduit surface) complete with junction box, circular box, elbows, bends, couplers and other accessories on surface above false ceiling or concealed by chase cutting on wall from light & fan switch board to light, fan & 6A socket outlet on the same switch board or separately mounted switch board. The work includes supply and fixing of all materials such as modular type 6A switch for each light and fan point, 6A 2/3 pin shuttered socket outlet with switch, 3 plate ceiling rose / angle or batten holder etc. as required.

The point wiring also includes circuit wiring with 1100 V grade 2 nos. single core 2.5 sq.mm. (1 for phase and 1 (Black colour) for neutral) + 1 no. single core 1.5 sq.mm. (Green colour for earth) PVC insulated flexible (FRLS) copper conductor cable (IS:694) through suitable size PVC. conduit as described above from DB to switch board, interconnection, mending good all damages to original finish, painting etc. as required to be completed in all respect. All connections of wires to be done by means of "Wago" type connectors. (All wiring in strong room, locker room, records & stationery room will be of surface conduit type).

i)	1 light control by 1 switch.	Each	34		
ii)	2 light control by 1 switch.	Each	18		
iii)	Wall Bracket fan point with 2/3 pin socket to be installed at fan height and switch at the switch board	Each.	17		
iv)	Exhaust fan point	Each	3		
v)	Call bell point with bell push	Each	1		
vi)	Red light & incandescent light point	Each	1		
vii)	1x6A 2/3 pin shuttered socket with switch on separate switch board other than light / fan switch board	Each	20		
viii)	2/3 pin 6A switch shuttered socket outlet with switch on light and fan switch board.	Each	8		
ix)	Ceiling fan point with supply and fixing of 2 module step Regulator 280 W min	Each	2		
x)	UPS power point	Each	3		

CARRIED OVER :

SL. NO.	ITEM DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
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BROUGHT FORWARD :

1.9	Connecting the main switch to MCB DB by supply and fixing of 6 SWG G.I. wire along the cable with G.I. staples, bolts, nuts, washers, etc. and mending good all damages to original finish.	Mtr.	60.00		
1.10	Supply and fixing of 16A modular type master controlling switch with indicator in mounting box and front plate on wall for controlling external light fittings including interconnection, etc. as required.	Each	1		
1.11	<u>Earthing (General)</u> Earthing the installation as per I.E Rules conforming to I.S : 3043 - 1987 or its latest ammendment by making earth sation with 3 meter long 50 mm dia G.I earth Pipe (Partly Perforated) to be installed such that its top end shall be at 300 mm below ground level after preparation of ground with charcoal & Salt and connecting with 25 mm x 6 mm G.I earth lead-in-strip upto 10 metre length by bolting and then brazing, complete with nut, bolt, washer etc. as required. The earthing station shall be provided with 300 mm x 300 mm x 300 mm inside dimension masonry inspection Pit with C.I. hinged cover.	Each	2		
1.12	Extra for earth lead-in-strip exceeding 10 meter as mentioned in above Item with supply and fixing of 25mm x 6mm G.I Strip to be fixed on wall or directly buried in ground including connection complete.	Mtr	20.00		
1.13	Supplying and fixing of 16 A plug top with 1100 V grade 3 core 2.5 sq. mm PVC insulated copper cable of 1.5 mtr. length one metre to be permanently fixed to the Switch Board of Locker Room, complete in all respects.	Each	1		
1.14	Supply & fixing of 415V,40A 4P MCB in suitable size M.S. Box same for Light cut off switch in Main Gate.	Each	1		

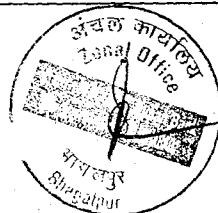
TOTAL CARRIED TO ELECTRICAL SUMMARY :

B SUPPLY AND INSTANTIONAL OF LIGHT FITTINGS & FANS

SL. NO.	ITEM DESCRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
2.1	Supply of light and electrical fittings including lamp and all necessary accessories :				
2.1.1	<u>Surface mounted / Suspended luminaries</u>				
i)	1x22 watt Led Light fittings including lamp (Philips or similar approved make).	Each	17		
2.1.2	<u>Recessed mounted luminaries</u>				
i)	LED based luminaries 1x34 watt LED based square light fittings (Philips Cirrus, RC 366 B LED 33-5000 ODWH) or equivalent approved make) with lamp.	Each	11		
ii)	Down lighter 1x15 W LED down lighter fittings (Philips Green LED BBS 170 1X 15 W DELED). (Philips or similar approved make).	Each	40		
iii)	1X15W PL light Philips with lamp(Philips or similar approved make) or equivalent approved make. (for cash counter)	Each	2		
2.3	Supply of fan fittings with all necessary accessories, but except regulator.				
i)	<u>Ceiling fan</u> 1200mm dia.	Each	2		
ii)	<u>Wall bracket fan</u> 400 mm dia.	Each	17		
iii)	<u>Exhaust Fan</u> 300 mm dia without mounting ring & louvre complete	Each	2		
2.4	<u>SUPPLY & FIXING OF CALL BELLS</u>				
	Supplying and fixing on wall call bell buzzer (approved by Consultant) suitable for 240 volt single phase A.C. supply including interconnection, etc. as required.	Each.	1		

TOTAL CARRIED TO ELECTRICAL SUNMMARY :

SCH-E/7

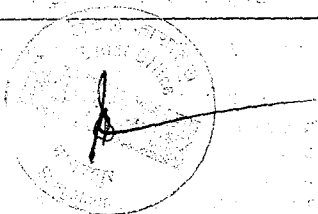


C. COMPUTER POWER WIRING

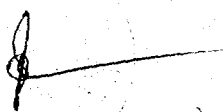
SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
3.1	INDUSTRIAL TYPE SOCKET AND PLUG DB Supply and installation of following Legrand make universal mounting DB with industrial type socket and match plug for UPS incoming & outgoing only :				
i)	32A, 3P+N+E, 5 pin industrial type socket with matching plug and 25A, TP MCB control including interconnection.(for UPS incoming)	Each	2		
ii)	32A, 2P+E, 3 pin industrial type socket with matching plug and 25A, DP MCB control including interconnection.(for UPS outgoing)	Each	2		
iii)	Supply and installation of 2 no 32A 4P on load change over switch, 100A copper busbar, 2 nos 32A SP MCBs etc. in sheet steel enclosure for computer distribution system.	Each	1		
3.2	COMPUTER DISTRIBUTION BOARD (CDB) Supply and installation of following MDS make metallic double door MCB Distribution Board with MCB having short circuit breaking capacity of 10 KA (minimum) and RCBO of 300 mA sensitivity having overload, short circuit and earth leakage protection complete with busbar, interconnection, mounted on flat iron frame on wall/flushed with finished wall by chase cutting, mending good to original finish, painting, etc. as required. Name plate of DB is to be fixed up on front door of DB for its identification. SPN 12 way SPN MCB DB complete with busbar and the following MCBs./ RCBO : <u>INCOMING</u> : 1 No. 240 V 25A DP MCB <u>OUTGOING</u> : 10 Nos. 240 V 6A SP MCB				
		Each	2		
3.3	COMPUTER SOCKET OUTLET CLUSTER POINT WIRING Computer socket outlet cluster point wiring with 1100 V grade 3 nos. single core (1 for earth, green colour) 2.5 sq.mm. PVC insulated flexible FRLS copper conductor cable conforming to IS : 694 through suitable size PVC conduit (ISI mark embossed on conduit surface) and conduit accessories partly concealed in wall/ embedded in floor, partly on surface above false ceiling and partly through partition or through flexible conduit from DB to computer socket outlet cluster as detailed below and upto connection of 2 nos. socket clusters in 1 (one) circuit connecting by looping method. The work includes supply and fixing of socket outlet clusters component/ sets as detailed below :				
i)	Each computer socket outlet cluster comprising the following : 2 nos. 6A 5 pin modular type shuttered socket. (below table) 2 no. 6/16A 6 pin modular type shuttered socket. (below table) 2 no. 16A modular type controlling switch with indicator. (above table) 1 no. Front Plate of suitable size. 1 no. Mounting box of suitable size.	Each	20		

CARRIED OVER :

SCH-E/8



SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
BROUGHT FORWARD :					
3.4	<u>SUBMAIN WIRING :</u>				
	Submain wiring with following size 1100 V grade, single core, PVC insulated flexible copper conductor cable conforming to IS : 694 through PVC.conduit (ISI mark embossed on conduit surface) and conduit accessories partly on surface (above false ceiling) with M.S. bar saddles, partly through partition and partly concealed in wall / embedded in floor by chase cutting, mending good all damages, painting, etc. as required to be completed in all respect.				
	i) From Main DB to UPS Incoming and UPS outgoing to CDB with 2 nos. 6 Sq.mm. + 1 no. 2.5 Sq.mm. (Green colour for earth) PVC insulated flexible copper conductor cable in 25 mm dia. M.S.conduit	Mtr	120.00		
	ii) With 2 nos. 2.5 sq.mm. + 1 no. 1.5 sq.mm. (green colour for earth) PVC insulated copper wire in 20 mm dia PVC conduit / casing caping. (for each computer power point)	Mtr	250.00		
3.5	<u>EARTHING (COMPUTER)</u>				
	Earthing the installation as per I.E. rules conforming to IS:3043-1987 or its latest amendment by making earth station with 450mm x 450mm x 6mm (minimum) thick copper plate electrode to be installed such that its top edge shall be at a minimum depth of 3.0 metre below ground level after preparation of ground with charcoal and salt and connecting the earth lead-in-wire by bolting and then brazing to the copper plate complete with copper bolts of suitable length double nuts and washers, copper lugs including supply and fixing of 50mm dia. partly perforated G.I. pipe with funnel for watering arrangement.				
	i) The earthing installation should be provided with 300mm x 300mm and 300mm depth inside dimension masonry inspection pit with C.I. hinged cover having locking arrangement and restoring the surfaces duly rammed.	Each	1		
	ii) Supplying and fixing of 1 x 10 Sq.mm PVC insulated copper wire through suitable size PVC conduit to be fixed on wall surface with bar saddles / clamps at an interval of 300mm etc. as required to be completed in all respect. The underground portion of earth lead-in-wire to be laid at an average depth of 500 mm below ground level.	Mtr.	15.00		
3.6	<u>COMPUTER DATA SOCKET</u>				
	Supply and fixing on wall / furniture / partition recessed type D - Link make Computer data socket (RJ 45) with mounting box & front plate as shown in the drawing complete with chase cutting, mending good etc. as required.	Each	20		
3.7	<u>COMPUTER DATA WIRING</u>				
	Supplying and laying of CAT - 6 cables through pre-laid rigid PVC conduit as shown in the drawing or otherwise as directed by the consultant from server to Computer Data Socket (through HUB, if required) including interconnection mending good, etc. as required to be completed in all respect.	Mtr.	450.00		
TOTAL CARRIED TO ELECTRICAL SUMMARY :					



D. TELEPHONE SYSTEM

SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)
4.1	<u>SUPPLYING AND LAYING OF P.V.C. CONDUIT</u> Supplying and laying of 25mm dia heavy duty rigid PVC conduit (ISI marked embossed on every metre) complete with junction box, circular box, elbows, bends, couplers and other accessories as required by chase cutting on wall embedded in floor or on surface or through partition. The work includes making good all damages to original finish, painting etc. as required.	Mtr.	125.00		
4.2	<u>TELEPHONE SOCKET</u> Supply and fixing on wall / furniture / partition recessed type MDS/North-West /Anchor woods make Telephone socket outlet (RJ 11) with mounting box & front plate as shown in the drawing complete with chase cutting, mending good etc. as required.	Each	4		
4.3	<u>TELEPHONE JUNCTION BOX</u> Supply and fixing of 10 pair telephone junction box "Krone" make on wall /furniture/partition with hinged cover and screwed type tag strips complete with chase cutting, mending good, painting etc. as required.	Each	1		
4.4	<u>TELEPHONE WIRING</u> Supplying and laying of 2 pair 0.50 mm dia. unarmoured telephone cable through prelaidd rigid PVC conduit as shown in the drawing or otherwise as directed by the consultant from Telephone Junction box to Telephone Socket outlet including interconnection, etc. as required.	Mtr.	100.00		

TOTAL CARRIED TO ELECTRICAL SUMMARY :
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SCH-E/10

