

E BILL OF QUANTITIES FOR ELECTRICAL AND ALLIED WORKS					
S.N.	PARTICULARS	QTY	UNIT	RATE	AMOUNT (Rs.)
A	MAIN LT PANEL / DB'S				
1	Supply, installation, testing & commissioning of 100A IC TPN SFU with 100A HRC fuses 415 V 3 phase & neutral 50 c/s AC23 duty on MS angle iron frame fabricated out of 40 mm. x 40 mm. x 5 mm MS angle duly painted with cable end boxes, earthing, name plate danger board fixing accessories etc.	1	Set		
2	Suply and installation of 6-way, VTPN, Double door, (MCCB DB) Main Distribution Board (MDB), having vertical fishbone busbar type, factory assembled wall mounted, sheet metal fabricated, fully powder coated, having dust proof & vermin proof hinged door with all internals such as DIN channels, neutral link, internal wiring complete with double earthing lugs including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, etc. housing following switchgears. (Schneider / Hager / Legrand / Siemens / L&T make)				
a	INCOMER				
	1 No. 100A, FP, 36kA / 25kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 25kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
b	OUTGOING				
	4 Nos., 63/40A, TP, MCB, "C" curve type as outgoing (LDB - 1 No, AC + RPDB - 1 No, APFC Panel - 1 No., Spare - 1 no)				
	6 nos, 20/25/32A, SP, MCB, "C" curve type as outgoing.(Outdoor LDB - 1 No, UPS Input - 1 no, Spare - 4 nos)				
	Full Set as above	1	Nos		
3	APFC PANEL - Supply, Installation, Testing and Commissioning of Automatic Power Factor Control Panel (APFC Panel) including transport to site with propoer required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS class-2 conductor grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	APFC PANEL - With inbuilt solid state automatic power factor correction arrangement having microprocessor based control circuit and contactor switching power circuit having a required capacity of 25 KVAR having capacitor bank in steps of [(1 x 10 KVAR) + (2 x 5 KVAR) + (1 x 3 KVAR) + (1 x 2 KVAR)], including main MCCB, MCB's, APFC relay, contactors, capacitors, indicating lamps, etc. complete with all necessary hardware & accessories as mentioned below :-				
a	INCOMER				
	1 No. 63A, TPN, Isolator switch (Switch disconnecter/ Isolator). The Breaker shall be suitable for 415 Volts, 50 Hz., AC supply. (For APFC Panel Main Incomer - 1 no.) (Schneider / Hager / Legrand / Siemens / L&T make)				
b	BUSBARS				
	1 Set of 100 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 100 Amps.				
	1 Set of 25 x 5 mm copper busbars of high conductivity electrolytic quality shall be provided throught out the panel for its earthing.				

c	INSTRUMENTS				
	1 no. 0-500V Digital Voltmeter of suitable size & 1 no. suitable size Digital Ammeter				
	1 Set of phase indicating lamps, LED type, RYB.				
	1 Set of 2A 10kA C curve SP control MCB				
	1 no. 5 stage microprocessor based digital type APFC relay				
	1 set overvoltage, undervoltage, phase protection relay.				
	5 set On, Off push button, auto manual selector switch.				
	5 set On, Off LED type indication lamp				
d	OUTGOING				
	1 Nos. 40A, TP, D curve, MCB				
	4 Nos. 20A, TP, D curve, MCB				
	1 No. 2 kVAR MPP heavy duty capacitor with capacitor duty contactor				
	1 No. 3 kVAR MPP heavy duty capacitor with capacitor duty contactor				
	2 No. 5 kVAR MPP heavy duty capacitor with capacitor duty contactor				
	1 No. 10 kVAR MPP heavy duty capacitor with capacitor duty contactor				
	The panel shall be provided with required nos of louvers in the capacitor chamber for its cooling. Also required nos of ventilation fans with auto sensing thermostat shall be provided in the panel to improve capacitor life & ventilation fans.				
	Full Set as above	1	Nos		
4	Suply and installation of 4-way, PPI TPN, Double Door, Metal type, with Plain / Transperant Door (As approved by client / consultant / architect), Lighting Distribution Board (LDB) , surface / flush mounted on wall , interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
	(Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.)				
a	1 no., 32A, FP MCB, "C" curve type as incomer				
b	3 no.s, 25A, DP RCCB with sensitivity of 100mA, as sub-incomer.				
c	12 nos, 10/16A, SP, MCB, "C" curve type as outgoing.				
	Full Set as above	1	Nos		
5	Suply and installation of 4-way, TPN, Double Door, Metal type, with Plain / Transperant Door (As approved by client / consultant / architect), AC & Raw Power (AC +RPDB) , surface / flush mounted on wall , interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
	(Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.)				
a	1 no., 40A, FP MCB, "C" curve type as incomer				
b	12 nos, 10/16/20/25A, SP, MCB, "C" curve type as outgoing.				
	Full Set as above	1	Nos		
6	Suply and installation of 8-way, SPN, Double Door, Metal type, with Plain / Transperant Door (As approved by client / consultant / architect), Outdoor Lighting Distribution Board (LDB), surface / flush mounted on wall , interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
a	1 no., 25A, DP ELCB, 100 Ma as incomer				
b	6 nos, 10A, SP, MCB, "C" curve type as outgoing				
	Full Set as above	1	Nos		

7	Supply and installation of 8-way, SPN, Double Door, Metal type, with Plain / Transperant Door (As approved by client / consultant / architect), UPS Power Distribution Board (UPSDB) , surface / flush mounted on wall, interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
a	1 no., 32A, DP MCB, "D" curve type as incomer				
b	6 nos, 16/20A, SP, MCB, "D" curve type as outgoing				
	Full Set as above	1	Nos		
8	Supply & Installation of 20/32A, DP, MCB, box with 20A, metal clad / modular plug-socket including power circuit of (2x4 + 1x2.5) sq. mm FRLS copper flexible wires directly taken from the relevant DB through PVC conduits for room A/C including all necessary hardware & accessories, etc. (Schneider / Hager / Legrand / Siemens / L&T make)	5	Nos		
9	Supply & Installation of 20A, timer switch with 2 no.s of 20A DP MCB's alongwith suitable size enclosure box for switching of A.C.'s, etc. alongwith 2NO 25A 1M contactor in the same enclosure box for controlling 2 no.s of AC power circuit through Timer including power circuits of (2x4 + 1x2.5) sq. mm FRLS copper flexible wires directly taken from the relevant DB through PVC conduits for room A/C's through timer & contactor including all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make)	1	Nos		
10	Supply & Installation of 16A AC1, Digital Timer Switch alongwith 1 no. 2NO 25A 1M contactor alongwith suitable size enclosure box for signage, etc. including power circuit wiring of (2x4 + 1x2.5 Sq.mm) FRLS flexible wires laid through PVC conduit directly taken from DB including all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make)	1	Nos		
11	Supply & Installation of 20/32A, DP, MCB, box with 20A, metal clad plug-socket including power circuit of (2x4 + 1x2.5) sq. mm FRLS copper flexible wires directly taken from the relevant DB through PVC conduits for termination of strong room main electrical power supply into 20A metal clad plug socket mounted / installed outside near strong room entrance door alongwith 3C x 4 Sq.mm Cu. flexible cable laid through flexible metal conduit for connection into the strong room main switch board / DB including all necessary hardware & accessories, etc. (Schneider / Hager / Legrand / Siemens / L&T make)	1	Nos		
12	Supply & Installation of 25/32A, TPN MCB with Enclosure for terminating supply to UPS i/p - o/p alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make)	1	Nos		
13	Supply & Installation of 32/25A, TPN MCB with weatherproof box for terminating supply to AC's, Pump machines , etc. alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make)	1	Nos		
14	Supply & Installation of 25/32A, DP MCB with suitable enclosure for terminating supply to UPS i/p - o/p alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make)	2	Nos		
15	Lumpsum charges for arranging temporary power supply and lighting for all the contractor at site including the required number of tubelight fittings, sufficient number of plug points with plug tops, providing temporary supply arrangements for temporary workstations and including all the necessary safety devices like ELCB etc. to ensure SAFE & CONTINUED supply at site. Also removing of all type of existing electrical installations including light fittings, conduits, switch, socket, casing-capping, DB's MCB's, etc. complete as directed by the client / consultant at site & handing over to the client / Branch Manager at site.		LS		

TOTAL of SECTION (A)					
B	CABELS / MAINS				
1	Supply & Installation of 1100V grade armoured cable having sector / circular shaped aluminium / copper conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed conforming to IS: 1554, laid on wall / ceiling using GI clamps & spacers as per route shown at site and further as directed by Consultant at site in the following sizes :- (Make - Polycab / Finolex / CCI / RR / Havells)				
	NOTE :- All Armoured cables shall be provided with temporary labelling at every 5mtrs & then finally with metal identification tags showing the size & the location from/to the respective Panel / DB, at both the ends.				
1.1	3 1/2 C x 35 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire (From Meter Room to Main SFU to Main MCCB in Main Electrical DB, location as approved in the proposed premises)	45	Mtrs		
1.2	4C x 10 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire (Main DB to APFC Panel & AC+RPDB)	20	Mtrs		
1.3	4C x 6 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire (Main DB to LDB).	10	Mtrs		
1.4	2C x 6 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire (Main UPS In-put / Output)	25	Mtrs		
1.5	2C x 4 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire (Main DB to Outdoor LDB)	20	Mtrs		
1.6	2C x 1.5 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire (Outdoor LDB to Outdoor Lighting)	100	Mtrs		
1.7	1C x 6 Sq.mm Copper flexible lead wire through flexible PVC conduits (UPS i/p, o/p connections, etc.)	20	Mtrs		
1.8	1C x 10 Sq.mm Copper flexible lead wire through flexible PVC conduits (UPS i/p, o/p connections, etc.)	5	Mtrs		
2	GLANDING & TERMINATION :- Supply & Installation of end termination of above mentioned cables including compressed type brass glands , crimping type copper lugs, insulation tape etc. as required complete with earthing of glands in following sizes :-				
2.1	3 1/2 C x 35 Sq.mm Aluminium Armoured cable	4	Nos		
2.2	4C x 10 Sq.mm Copper Armoured cable	4	Nos		
2.3	4C x 6 Sq.mm Copper Armoured cable	2	Nos		
2.4	2C x 6 Sq.mm Copper Armoured cable	4	Nos		
2.5	2C x 4 Sq.mm Copper Armoured cable	2	Nos		
2.6	2C x 1.5 Sq.mm Copper Armoured cable	18	Nos		
2.7	1C x 6 Sq.mm Copper flexible lead wire through flexible PVC conduits (UPS i/p, o/p connections, etc.)	4	Nos		
2.8	1C x 10 Sq.mm Copper flexible lead wire through flexible PVC conduits (UPS i/p, o/p connections, etc.)	1	Nos		

TOTAL of SECTION (B)				
C	EARTHING (GENERAL / DEDICATED)			
1	Supply & Installation of earth pit comprising of 300mm x 300mm x 6mm thick copper plate buried at a minimum depth of 1.5 meter including necessary materials like charcoal, salt etc. as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement. (Earth Pit - 1) (Dedicated UPS Earthing Pit)	1	Nos	
2	Supply & Installation of earth pit comprising of 600mm x 600mm x 6mm thick GI plate buried at a minimum depth of 1.5 meter including necessary materials like charcoal, salt etc. as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement. (Earth Pit - 2) (Electrical Earthing Pit)	1	Nos	
3	Supply & Installation of copper /GI earthing wires/strips in following sizes including all necessary hardware & accessories, etc.:-			
3.1	25 x 3 GI. Strip through PVC sleeve (Electrical Earthing) (From Electrical Earthing Pit to Main Electrical Earthing Busbar)	75	Mtrs	
3.2	1C x 6 sq.mm flexible Cu. Wire through heavy guage PVC conduit in case of wall / ceiling surface / concealed run & through heavy guage M.S. conduit in case of underground run including all necessary hardware & accessories, etc. complete as required. (Dedicated UPS Earthing)	75	Mtrs	
3.3	1C x 10 sq.mm flexible Cu. Wire through heavy guage PVC conduit in case of wall / ceiling surface / concealed run & through heavy guage M.S. conduit in case of underground run including all necessary hardware & accessories, etc. complete as required. (Dedicated UPS Earthing)	5	Mtrs	
4	Supply & Installation of (32 x 3)mm of 300mm length Cu. earthing bus with encloser with sufficient no. of hole for connecting earthing wire with necessary accessories, hardware, etc. (UPS Earthing BUS)	1	Nos	
5	Supply & Installation of (32 x 6)mm of 300mm length GI. earthing bus with encloser with sufficient no. of hole for connecting earthing wire with necessary accessories, hardware, etc. (General Electrical Earthing BUS)	1	Nos	
TOTAL of SECTION (C)				

D	INTERNAL LIGHTING & POWER WIRING			
1	Supply & Installation of concealed / resessed / surface light point / fan point / call bell point wiring using 600V FRLS grade 3R (P+N+E) x 1.5 Sq.mm copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through heavy gauge PVC conduits laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling including 3R (P+N+E) x 2.5 Sq.mm circuit wires from the relevant DB and also including 2.5 sqmm green color copper earth wire and approved make modular type switch plate, switches, MS concealed back box, etc. as required & as approved by the consultant. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.) <u>(The item rate shall include Lighting / Raw / UPS Power Circuit wiring from relevent DB to the switch board with 3Rx2.5 Sq.mm FRLS wires & from switch board to next switch board OR to the first light point / primary point / full point)</u>			
	NOTE :- 1. Only FRLS wire shall be used; 2. Conduit carrying circuit wiring should not carry point wiring and Conduit carrying point wiring should not carry submain/circuit wiring; 3. Flexible conduits & Elbows are not allowed; 4. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adaptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 5. Proper ferrules, lugs, must be used in all cabling and wiring on both load / source end; 6. Each switch board must be provided with respective ferrules representing the respective DB, Phase & Circuit numbers; 7. Looping of Neutral / Earth wire between two seperate Primary / Full Points is strictly not allowed; 8. Looping of Neutral / Earth wire between two seperate circuits on similar or other phase is strictly not allowed; 9. Ferulling / numbering / tagging to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends.			
1.1	Primary light points including the cost of 5A switch	29	Nos	
1.2	Secondary light points looped from the above point	34	Nos	
1.3	Two way light point including the cost of 5A two way switch	2	Nos	

1.4	Fan Point including 120W Electronic type step regulator, anchor fastner & 'S' type fan hook in ceiling to suspend ceiling fan by cutting / chiesling / painting as required	4	Nos		
1.5	Bell point comprising of wiring as above including G-Magic Wireless Door Bell 4061 with Remote, 32-Melodies & Flashing Light.	1	Nos		
1.6	5A plug point as primary point independent mounted on wall / partition / on work station, etc. (UPS / RAW Power) (Only five workstations / independent mounted raw power points shall be looped in one raw power circuit. Whereas in measurements out of five workstations / independent mounted, four no.s of 5A s/s raw points will be considered as secondary points & 1 no. of 5A s/s raw point will be considered as primary point.)	8	Nos		
1.7	Secondary 5A Plug point on switch board or looped from above 5A primary point (UPS / RAW Power) (Only five workstations / independent mounted raw power points shall be looped in one raw power circuit. Whereas in measurements out of five workstations / independent mounted, four no.s of 5A s/s raw points will be considered as secondary points & 1 no. of 5A s/s raw point will be considered as primary point.)	17	Nos		
1.8	Exhaust fan point consisting of 5A socket near fan and switch on light switch board	3	Nos		
2	Supply & installation of 5/15A Plug Point directly taken from DB for Pantry / geyser / zerox / printer / fridge, etc. including 2 x 2.5 sqmm FRLS grade circuit wires directly taken from the relevant DB and also including 2.5 sqmm green color copper earth wire all laid through PVC conduit with all necessary hardware& accessories, etc. (UPS / Raw Power)	6	Nos		

3	Supply & Installation of point wiring for UPS or stabilized power plug points on workstations / table for computers using 3C X2.5 Sqmm FRLS grade copper conductor PVC sheathed white color flexible cable pulled through already laid floor raceways and taken upto table top using PVC rigid or flexible conduits run within wooden/metal partitions. Each point consisting of 3 nos of 5A , 2/3 pin sockets below table top & 1 No., 15A Switch above table top, wired together forming one point. The earth wire of 3 core flexible cable to be of yellow-green color only. (ONLY FOUR tables served by one circuit from DB)	9	Nos		
4	Supply & Installation of point wiring for UPS or stabilized power plug points on workstations / table for computers using 3C X2.5 Sqmm FRLS grade copper conductor PVC sheathed white color flexible cable pulled through already laid floor raceways and taken upto table top using PVC rigid or flexible conduits run within wooden/metal partitions. Each point consisting of 2 nos of 5A , 2/3 pin sockets & 1 No., 15A Switch , wired together forming one point. The earth wire of 3 core flexible cable to be of yellow-green color only. (ONLY FOUR tables served by one circuit from DB)	1	Nos		
5	Supply & Installation of TV socket outlet point including approved make modular switchboard / in the existing switch board including all the necessary hardware & accessories, etc.	1	Nos		
6	Supply & Installation of RG6 TV cable through heavy guage PVC conduit to be laid surface / cancelled including all necessary hardware & accessories, etc.	40	Rmt.		
TOTAL of SECTION (D)					

E	TRENCHING / FLOOR -RACEWAYS				
1	Supply and laying Raceways / Conduits (for under floor trenches / On trays) on existing flooring. Raceways / conduits shall be fixed to the flooring with GI clamps for finished levels as per the site conditions or through partitions with all accessories. The rate shall include preparation of trenches of required sizes by carefully removing the malwa on existing floor for laying Raceways/conduits for power, data, telephone cables etc. The depth of the trenches shall be at least 2 inches from the finished floor level or upto RCC of the slab. The rate shall include the cost of the Raceways/conduits. The rate shall also include the activity of clearing the debris generated from the preparation of trenches & filling the same with PCC. (FOR THE PORTION WITHOUT FALSE FLOORING)				
1.1	32 mm heavy guage PVC conduit to be laid cancelled / surface in / on wall / floor as required as per the above mentioned specifications	75	Mtrs		
1.2	25 mm heavy guage PVC conduit to be laid cancelled / surface in / on wall / floor as required as per the above mentioned specifications	100	Mtrs		
2	Supply & Installation of floor junction boxes without top cover for above raceways, of following sizes , fabricated out of M.S. sheets, fully powder coated with provision for removable M.S. / S.S. screwed cover plates on all four sides for blocking the entry into the junction box. All the junction boxes to be (with stud) 'properly earth - bonded with the raceways pipe using 12 SWG Copper bare wire as directed at site.				
2.1	Junction Box of size (250mm x 250mm x 50mm x 2.5mm thick)	8	Nos		
2.2	Junction Box of size (300mm x 300mm x 50mm x 2.5mm thick)	1	Nos		
3	Supply & Installation of suitable sizes 2mm thick removable cover plate screwed on all four sides of M.S. sheet, fully powder coated, for blocking the entry into the floor junction box for following sizes of junction boxes with rounded corners as per the instruction given & sample approved by the client / architect / consultant at site. Cover plate shall have required no.s of 1' dia knockouts for flexible conduit outlets as per the requirement.				
3.1	for Junction Box of size (250mm x 250mm x 50mm x 2.5mm thick)	8	Nos		
3.2	for Junction Box of size (300mm x 300mm x 50mm x 2.5mm thick)	1	Nos		
TOTAL of SECTION (E)					

F	VOICE NETWORKING				
1	Supply & Installation of RJ-11 telephone socket outlet point alongwith PVC back box including 2 pair telephone cable from Telephone MDF upto individual Telephone socket outlet through already laid trenches / raceways / conduits including all necessary hardware & accessories, etc. complete as required.	9	Nos.		
2	Supply, installation, testing and commissioning of indoor type telephone Main Distribution Frame (MDF) / Box with suitable S.S. frame for mounting tag module, cable, wires and incorporated in 16 SWG MS box with proper lockable cover. The box should be fixed on wall with suitable fasteners including painting & earthing. This also includes fixing the cable, distribution chart sufficient space for the cables, wires etc.to be provided in the box for :-				
2.1	Supply & Installation of 20 pair MDF with Krone module including all hardware & accessorial , etc. complete as required.	1	Nos.		
3	Supply & Installation of Data point outlet PVC back box	9	Nos.		
4	Termination, Testing and Documentation of Telephone Points	9	Nos.		
5	Supply & Laying of 5 pair telephone cable through heavy guage pvc conduit including all necessary hardware & accessories, etc.	45	Rmt		
	TOTAL of SECTION (G)				

G	MUSIC CUM PUBLIC ADDRESS SYSTEM				
1	Supply, Installation, Testing, Commisioning of point wiring for music - cum PA system comprising of 2x 1.0 sqmm stranded , copper conductor , flexible PVC insulated and PVC Sheathed wire pulled through 20 mm dia. PVC heavy gauge conduits and looped from one speaker to other and to the volume control switch wherever applicable and finally terminated an tagblock.	6	Nos		
2	Supply, Installation, Testing, Commisioning of of 6" dia music speakers to be flushed mounted on false ceiling similar to BOSCH / approved equivalent make. All speakers to be equipped with matching transformer for direct connection to 100v output line	6	Nos		
3	Supply, Installation, Testing, Commisioning of volume control - cum - ON - OFF switch flush mounted on wall along with other electrical switches .The size and plate of the regulating knob should match with other switches nearby.	1	Nos		
4	Supply, Installation & Testing of Microphone of Ahuja / approved equivalent make	1	Nos		
5	Supply, Installation & Testing of Amplifier for Public Address System suitable to operate on 230V A.C. / 12V D.C. supply with two low impedance microphone input, tone control, protection circuit complete for the speakers output lines. (Ahuja / approved equivalent make)	1	Nos		
6	Supply, Installation & Testing of Music system (but cost of the player not more than Rs. 5500/-), the system to be of Philips / Sony make. The system to comprise of MP3 compatible discs, FM radio, Audio casette, etc. complete with all neccessary hardware & accessories, etc.	1	Nos		
	TOTAL of SECTION (H)				