

Name of work: Providing Electrification, Networking, Public Addressing System And Fire Fighting System For Studio Room At Academic Center, Jawaharlal Institute Of Postgraduate Medical Education And Research (JIPMER)

Sl. No.	Work Description	Unit	Qty	Rate	Amt
1	LT SWITCH GEARS & DISTRIBUTION BOARDS :				
1.1	LT PANEL BOARDS:				
	Design, manufacture, supply, installation, testing and commissioning of following LT switch-gear panels suitable for 415 V, 3 phase, 4 wire, 50 Hz power distribution system. The panel shall be, Indoor, free standing, floor mounting, sheet metal clad, cubicle, dead front, dust and vermin proof type compartmentalized design fabricated out of 14 SWG sheet steel, complete with aluminium bus bars, separate earth bus bar to be provided through out the length of the panel.				
	MDB				
	One (1) No. 125A 4P on load type change over switch.				
	One (1) No. 125 Amps, 25 KA TPN MCCB				
	Metering & indication				
	Digital volt, current & Frequency (VAF) Meter with in built selector switch, 100A/5A CL-1.0,15VA CTs and control fuses.				
	One set (3 nos.) phase indication lamps with fuses.				
	Outgoing:				
	63A,40A,32A,20A,16A,4P&40A,32A,DP,MCB,'C'curve				
	Three Nos.: 40A, 10KA 4P MCBs 'C' curve	set	1.00		
	All MCCBs below and including 200A rating shall be provided with thermal magnetic protection releases for short circuit, overload & earth fault protection with 0.8 - 1 x In adjustable overload protection release. .				
	All MCCBs shall be (Ics=100% Icu)				
1.2	DISTRIBUTION BOARDS :				
	Supply ,Installation, Testing, commissioning of following double door type distribution boards fabricated out of 16 SWG, CRCA sheet steel recessed in wall or surface mounted.				
a)	UPSDB				
	Incoming:				
	One (1) 40 Amp 4P MCB 10 KA 'C' Curve type.				
	Three (3) nos. 40A DP RCCB (30mA sensitivity)				
	Outgoing:				
	Eighteen (18) nos 6-25A SP MCBs, 10 KA. B/C curve type as per requirement.	Set	1.00		
b)	LDB				
-	Incoming:				

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
	One (1) no. 40 Amp DP MCB 10 KA 'C' Curve type.				

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	One (1) no. 40 Amp DP RCCB (30mA sensitivity)				
-	Outgoing:				
	Eight (8) no.s 6-25A SP MCBs, 10 KA. B/C curve type as per requirement.	Set	1.00		
2.0	LIGHTING FIXTURES & FANS:				
	Supplying, assembling, installation, testing & commissioning of following type of light fixtures. The installation arrangement shall be done using proper support etc. complete as required.				
a)	36W LED 2X2 FIXTURE	Nos.	18.00		
b)	Halogen Innova Type	Nos.	8.00		
3	CABLES, SUB MAINS & CABLE TRAYS:				
3.1	1.1 KV Cabling				
	Supply installation, testing and commissioning of following sizes of PVC sheathed PVC/XLPE insulated Aluminium conductor / copper conductor power / multicore control armoured cable of 1.1 KV grade on wall, or in existing cable tray / masonry ducts/hume pipe with fixing hardware etc as required.				
a)	3 1/2 C x 35 Sq.mm XLPE Al. cable	RM	150.00		
b)	4 C x 6 Sq.mm XLPE Cu. cable	RM	30.00		
c)	4 C x 4 Sq.mm XLPE Cu. cable	RM	60.00		
3.2	Cable Termination				
	Supply and making end termination with brass double compression glands for the following PVC insulated PVC sheathed & armoured 1100 V grade cable including cost of crimping lugs/ferrules, compression glands, solder, cable sockets, insulation tape etc complete as required.				
a)	3 1/2 C x 35 Sq.mm XLPE Al. cable	Nos.	4.00		
b)	4 C x 6 Sq.mm XLPE Cu. cable	Nos.	2.00		
c)	4 C x 4 Sq.mm XLPE Cu. cable	Nos.	4.00		
3.3	Cable Trays				
	Supply and installation of ladder type / perforated type cable trays of the following sizes fabricated out of GI sheets of minimum 2 mm thick with 75/40 mm flange to be installed horizontally or vertically. The cable tray shall be complete including cost of bends, elbows, cross, tees, reducers etc as per drawings/site condition and rate shall include cost of anchor fasteners, screws, nuts, bolts and misc. other fixing hardware, painting of support structure etc as required.				
	Perforated Type Cable tray				
	40 X 150 X 40 mm (2mm thick)	RM	45.00		
3.4	Structural Steel Supply & Fabrication				

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
	Supply, fabrication and installation of cable support structure and other works as per site requirement comprising of ISMCS, ISA's, flats rods etc for supporting cable trays and other items. The rate shall include painting with 2 primer coats of red oxide and two finishing coats of approved enamelled paint.	Kg	150.00		
4	EARTHING				
4.1	EARTHING STATIONS:				
a)	Supply, installation, testing and commissioning of copper plate earthing stations making earth pits, earthing with Copper earth plate 600 mm x 600 mm x 3 mm thick including funnel, char-coal/coke, salt, all earth work. Providing masonry enclosure with 10 mm thick C.I. cover plate having locking arrangement and watering pipe, disconnecting/ testing links etc as per IS -3043 complete as required.	Nos.	2.00		
b)	Same as above but earthing with G.I. earth plate 600 mm x 600 mm x 6 mm thick complete as required.	Nos.	2.00		
c)	Same as above but earthing with 40 mm dia 4.5 m long GI earth pipe including disconnecting/ testing links etc as required.	Nos.	2.00		
4.2	Earthing Strip/Wires				
	Supply, installation, testing and commissioning of following sizes of GI/ Copper strip/wire clamped to walls, cable trays, cables in recess or surface etc for equipment/ System /Lightning protection earthing complete as required including inter connection between length at joints, all fixing accessories saddles, clamps etc and other fixing hardware material as required for proper installation.				
4.2.1	G.I. Earthing strip/wire				
a)	25 x 3 mm strip	RM	50.00		
b)	32 x 6 mm strip	RM	8.00		
c)	10 SWG wire	RM	150.00		
5	INTERNAL WIRING				

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
5.1	Supplying, wiring, testing and commissioning for lights, ceiling fans, exhaust fans and 6 A socket outlets using 1.5 Sq mm stranded copper conductor, 1100 volts grade, FRLS PVC insulated wires drawn through, MS concealed/ surface conduit including cost of providing saddles for surface conduits and cost of cutting and filling chases for recessed conduits using necessary conduit accessories, junction boxes, switch outlet boxes, switch plates, bends, collars, clamps, 6/16 A, one way/ Two way switches, fan regulator boxes, etc. shall be flush mounted in brick wall or on the surface of wall for surface installation as required.				

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
a)	Primary light point i.e. one light controlled by one switch or first light in the group in which more than one lights are controlled by one switch.	Nos.	13.00		
b)	Secondary light points	Nos.	13.00		
c)	One 6 Amps, 2/3 pin socket controlled by one 6 Amps switch.	Nos.	8.00		
5.2	Wiring for 6/16 Amp power outlet on UPS/RAW power with 4 Sq mm FRLS PVC insulated stranded copper conductor wires in recessed/surface MS conduit including cutting/filling chases, providing conduit with conduit accessories, saddles, supply and fixing of 3 pin 6/16Amps shuttered socket controlled by 16A switch with internal wiring in G.I. box, earthing of 3 rd pin with FRLS PVC insulated, green colour 2.5 Sq mm copper wire, complete with all accessories as required. (Not more than 2 outlets shall be connected to one circuit)	Nos.	15.00		
5.3	Wiring for 6 Amp power outlets on UPS power with 1.5 Sq mm FRLS PVC insulated stranded copper conductor wires in recessed/surface MS conduit including cutting/filling chases, providing conduit with conduit accessories, saddles, supply and fixing of 3 pin 6Amps shuttered sockets controlled by 1 no. 6A switch with internal wiring in G.I. box, earthing of 3 rd pin with FRLS PVC insulated, green colour 1.5 Sq mm copper wire, complete with all accessories as required. (Not more than 10 sets shall be connected to one circuit)	Set	4.00		
5.4	Wiring for a set of 2 nos. 6 Amp power outlets on UPS power with 2.5 Sq mm FRLS PVC insulated stranded copper conductor wires in recessed/surface MS conduit including cutting/filling chases, providing conduit with conduit accessories, saddles, supply and fixing of 2 nos. 3 pin 6Amps shuttered sockets controlled by 1 no. 10A switch with internal wiring in G.I. box, earthing of 3 rd pin with FRLS PVC insulated, green colour 1.5 Sq mm copper wire, complete with all accessories as required. (Not more than 4 sets shall be connected to one circuit)	Set	10.00		

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
5.5	Wiring for a set of 3 nos. 6 Amp power outlets on UPS power with 2.5 Sq mm FRLS PVC insulated stranded copper conductor wires in recessed/surface MS conduit including cutting/filling chases, providing conduit with conduit accessories, saddles, supply and fixing of 3 nos. 3 pin 6Amps shuttered sockets controlled by 2 nos. 10A switch with internal wiring in G.I. box, earthing of 3 rd pin with FRLS PVC insulated, green colour 1.5 Sq mm copper wire, complete with all accessories as required. (Not more than 4 sets shall be connected to one circuit)	Set	1.00		
5..6	M.SConduit				

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
	Supply and installation of following sizes of black enamelled MS conduit on surface/steel structures including all accessories, GI fishwire, fixing hardware etc including, chasing the wall/floor and plastering the chased portion and making good the damages including fittings e.g. bends tee, inspection bends etc as required.				
a)	25 mm dia	RM	800.00		
b)	32 mm dia	RM	40.00		
c)	40 mm dia	RM	60.00		
5.7	Wiring				
	Supply and drawing of following sizes of FRLS PVC insulated stranded copper conductor wires of 1100 Volts grade in existing conduit, pipe including connection/termination as required.				
a)	4x10+2x4 sq mm	RM	15.00		
b)	2x6+1x2.5 sq mm	RM	15.00		
c)	2x10+1x4 sq mm	RM	15.00		
d)	3C-4 sq mm copper flexible cable for sockets under server racks	RM	50.00		
5.8	Supplying and installation of following sizes of 1.6 mm thick GI raceways with 2.0 mm thick GI cover and fixing hardware in recess/ on surface including chasing the wall/floor complete as required.				
a)	150 x 40	RM	30.00		
b)	75x40	RM	15.00		
5.09	Supplying and installation of following sizes 2.0 mm thick 4 way GI boxes with 2.0 mm thick Stainless Steel cover and fixing SS hardware in recess/ on surface including chasing the wall/floor complete as required.				
a)	200x250x50mm	RM	6.00		
b)	150x150x50 mm	RM	2.00		
5.10	Industrial Socket Outlets				
	Supply, installation, testing & commissioning of industrial type plug and socket outlet with SP/TPN MCB (10 KA motor duty) mounted in a sheet steel enclosure including termination, earthing etc as required.				
a)	16A metal clad SPN Socket outlet controlled by 16/20A SP MCB.	Nos	2.00		
b)	32A metal clad TPN Socket outlet controlled by 32A TPN MCB.	Nos	2.00		
5.11	Mobile Socket Outlets				
	Supply, installation, testing & commissioning of Legrand mobile plug and socket outlet including termination, earthing etc as required.				
a)	16A 2P+E, Cat no. 057514 and 057434	Nos	2.00		

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
b)	32A 2P+E, Cat no. 058214 and 058134	Nos	2.00		

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Sl. No.	Work Description	Unit	Qty	Rate	Amt
5.12	Supply, fixing, testing and commissioning of following switchgear in powder coated sheet metal enclosure with earthing terminal and internal wiring complete as required.				
a)	40A, 10KA 4P MCB 'C' curve type in MS box. with cable termination box	Nos.	2.00		
b)	32A, 10KA DP MCB 'C' curve type in MS box. with cable termination box	Nos.	1.00		
c)	16/20/32A, 10KA 4P MCB in weather proof outdoor type MS box with cable termination box	Nos.	3.00		
6	DATA / VOICE WIRING SYSTEM :				
6.1	CONDUITING				
	Supplying and installation of following sizes of black enamelled MS conduit in recess/ on surface including all accessories, M.S. junction/ pull boxes, G.I. fish wire, fixing hardware etc including chasing the wall/floor and plastering the chased portion and making good the damages etc., complete as required.				
a)	25 mm dia	RM	100.00		
6.2	Wiring				
	Supplying and drawing of following size PVC insulated PVC sheathed annealed tinned copper conductor 0.61 mm dia telephone wires conforming to ITD-S/SW-113B in existing MS conduit/G.I. pipe/ cable trays/ hume pipes etc complete as required.				
a)	3 Pair	RM	150.00		
6.3	Telephone Socket Outlet				
	Supply and installation of plug - in type telephone socket outlet (RJ-11) with G.I.outlet box and cover plate complete as required.				
a)	Single plug in type.	Nos.	12.00		
6.4	Telephone Tag Block				
	Supply and installation of telephone tag block of IDC (krone) type of following sizes in sheet metal enclosure of suitable dimensions fabricated out of 16 SWG sheet steel with castle key lock, hinged type cover including termination of riser cables, making connections, painting of box etc, complete as required.				
a)	20 Pair connector,telephone Box	Nos.	1.00		
b)	Supplying & Fixing of 20 Pair Krone DB as required	Nos.	1.00		
6.5	Structured cabling				
a)	Supply, laying, installation, testing and commissioning of Cat-6 4Pair UTP Cable 23 AWG for data in existing conduits/raceway/furniture including termination & numbering on both ends.	RM	800.00		

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b)	Supplying and fixing in position GI box for data outlet suitable for fixing of RJ 45 jack complete as required.	Nos.	20.00		

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c)	Supply & installation of Plug in type RJ45 computer data outlet in existing box & cover plate in wall/furniture/floor complete as required.	Nos.	27.00		
d)	Face Plates				
i	Supply & Installation of Quad Face Plate	Nos.	2.00		
ii	Supply & Installation of Dual Face Plate	Nos.	9.00		
iii	Supply & Installation of Single Face Plate	Nos.	3.00		
iv	Supply of Dust Cover	Nos.	6.00		
6.6	Patch Panel				
a)	Supply, installation, testing and commissioning of 24 Port Patch Panel with cable manager.	Nos.	2.00		
6.7	Wire manager				
a)	Supply & installation of 1U Wire manager	Nos.	2.00		
6.8	Mounting (patch)Cords				
a)	Supply of CAT 6 Mounting Cord-7 ft, yellow.	Nos.	25.00		
b)	Supply of CAT 6 Mounting Cord-3 ft, yellow	Nos.	25.00		
6.9	Racks				
	Supply, installation, testing and commissioning of 42U rack with accessories like front glass door, rear door, castor, fans, 6/16A AC distribution sockets with provision of dual input power supply, hardware, key board tray, shelf, cable manager etc. complete as required.	Nos.	1.00		
6.10	Supply and laying of RG 6 tinned copper conductor co-axial cable in existing conduit.	RMT	150.00		
6.11	Supply and fixing in position GI box for T.V. outlet including modular cover plate and co-axial type T.V. socket outlet complete as required.	Nos.	4.00		
7	FIRE ALARM & PA SYSTEM				
7.1	Fire Alarm Panel :				
	Supplying, installation, testing and commissioning of Fire Alarm control panel with zone indication for fire detection with Selection for individual zone. The panels shall include solid state circuit, 240V AC power supply, Automatic battery charger, 24V sealed lead acid batteries capable of operating the system for 24 hrs during normal conditions and then 2 hrs during emergency conditions. amplifiers etc. and fire/fault/test position selector switches, zone isolation facility etc. complete with sufficient numbers NO/NC contacts and relays etc.as required.				
a)	Main Control Panel (4 Zone)	Nos.	1.00		
b)	Supplying, fixing, testing and commissioning of conventional photoelectric type smoke detector with mounting base and LED etc. complete as required.	Nos.	8.00		

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c)	Supplying, fixing, testing and commissioning of conventional rate of rise cum fixed heat detector with mounting base and LED etc. complete as required.	Nos.	1.00		
d)	Supplying, fixing, testing and commissioning of dual tone type electronic hooter.	Nos.	1.00		
e)	Supply, fixing, testing and commissioning of flush type response indicator with red coloured neon lamp.	Nos.	6.00		
f)	Supplying, fixing, testing and commissioning of manual call point.	Nos.	1.00		
7.2	Supplying, laying, terminating, testing and commissioning of 2C x 1.5 Sqmm. XLPE insulated PVC sheathed FRLS copper conductor armoured RED colour cable 1100 V grade on surface/existing pipe/ tray including all accessories, consumables like saddles/clamps etc. complete in all respect and as required.				
a)	2cx1.5 sq mm,FRLS Armoured cable with accesories	RM	150.00		
7.3	Wiring and Speakers for PA system				
	Providing, installing, testing and commissioning of PA	Nos.	1.00		
a)	Supply, installation, testing and commissioning of ceiling mounted 8watt Music speaker with line matching transformer	Nos.	6.00		
b)	Supply, installation, testing and commissioning of wall mounted 10 watt Music speaker with line matching transformer	Nos.	8.00		
c)	Supplying, drawing, connecting, testing and commissioning single pair PVC insulated twisted copper conductor cable of 48/0.20 mm dia in existing conduit. .	RM	150.00		
d)	Supply and fixing of volume controller/ON-OFF selector switch recessed in wall including connection etc. as required.	Nos.	1.00		
7.4	Supplying and fixing of following sizes of 16SWG MS conduit along with the accessories like saddles, junction boxes, bends, sockets, check nut reducer, fish wire etc. in surface/recess including painting in case of surface conduit or cutting the wall and making good the same in case of recess conduit as required.				
a)	25mm	mtr	120.00		
Sub total Amount					
GST @ 18%					
Grand Total					