

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR
ESTATE SECTION
Estimate

Name of Work: Electrical work for the construction of Shopping complex in MNIT Jaipur.

PART A (G SCHEDULE)

S.No.	Particulars	Unit	QTY.	Rates	Amount
1	S&F following sizes (dia.) of ISI marked medium duty PVC conduit along with accessories in surface / recessed using saddles, clamps, fastener as required including cutting the wall, covering conduit and making good the same as required. (Make: AKG, BEC, Precision, Polypack, Polycab)				
1.1	20 mm	R. mtr.	320.0	32.00	10240.00
1.2	25 mm	R. mtr.	500.0	42.00	21000.00
2	Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles, Hot Dipped Galvanized Modular Box with earth terminal, 6 A Modular switch, Modular plate with grid plate, screws, making connections, testing etc. as required. (Make BSR Group-1)				
2.1	Medium point (up to 6 mtr.)	P. point	22.0	377.00	8294.00
2.2	Long point (up to 10 mtr.)	P. point	58.0	508.00	29464.00
3	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required. (RR Kabel, National, Finolex)				
3.1	2 x 2.5 sq. mm. + 1x1.5sqmm	Mtr.	400.0	53.00	21200.00
3.2	2 x 4.0 sq. mm. + 1 x 2.5 sq. mm.	Mtr.	600.0	77.00	46200.00
3.3	2 x 6.0 sq. mm. + 1 x 2.5 sq. mm.	Mtr.	400.0	109.00	43600.00
3.4	1 x 10.0 sq.mm	Mtr.	50.0	78.00	3900.00
4	P&F 240/415 V AC MCB with positive isolation of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections with lugs, testing etc. as required. (Make: Schneider (neo break), Siemens, HPL, GE, Standard, Indoasian(gold), Havell's, C & S, ABB (S270))				
4.1	Single pole MCB				
a	0.5 A to 5 A rating	Each	6.0	206.00	1236.00
b	6 A to 32 A rating	Each	78.0	151.00	11778.00
4.2	Triple pole MCB				
a	40 A 63 A rating	Each	4.0	1034.00	4136.00
5	P&F 240/415 V isolator conforming to IS:13947-III/ IEC 60947-3 on existing board / sheet including making connections, testing etc. as required.(Make: Schneider (neo break), Siemens, HPL, GE, Standard, Indoasian(gold), Havell's, C & S, ABB (S270))	Each			
5.1	Double pole isolator	Each			
a	30 A / 40 A rating	Each	4.00	298.00	1192.00
b	63 A rating	Each	12.00	367.00	4404.00
6	P&F 240/415 V Residual current circuit breaker conforming to IS:12640:1988/ IEC 61008 on existing board/sheet including making connections, testing etc. as required. (Schneider (neo break), Siemens, HPL, GE, Standard, Indoasian(gold), Havell's, C & S, ABB (S270))				
6.1	Two pole 30 mA sensitivity				
a	25 A rating	Each	8.0	1781.00	14248.00
7	P&F Recessed/ Surface mounting heavy duty horizontal type sheet steel Distribution board phosphatised/ powder painted complete with suitable rating insulated copper bus bar, shorting link, neutral link, earth link and din bar, masking sheet, conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs, testing etc. as required. (Make: Schneider (neo break), Siemens, HPL, GE, Standard, Indoasian(gold), Havell's, C & S, ABB (S270))				
7.1	Double door (single phase)	Each			
a	6 Way, Gr.I	Each	2.00	860.00	1720.00

b	8 Way, Gr.I	Each	6.00	897.00	5382.00
8	P&F metal clad industrial plug top & socket unit with pin and sleeve type contact on porcelain/ bakelite base in sheet steel enclosure (without MCB) including making connections with lugs, testing etc.as required.(Make:Schneider (neo break), Siemens, HPL, GE , Standard, Indoasian(gold), Havell's, C & S, ABB (S270))				
8.1	Single / Double Pole (Three pin)				
a	20 A	Each	10.0	725.00	7250.00
9	P & F following modular accessories made out of unbreakable and fire retardant poly carbonate with silver contacts including making connections testing etc. as required (Make: Legrand (Myrius), ABB (Classic Luminia), Anchor (Wood), Schneider (Opale), Philips, Havell's (Crabtree))				
9.1	6 A one way switch	Each	10.0	92.00	920.00
9.2	16 A one way switch	Each	90.0	138.00	12420.00
9.3	6 A 3 pin shuttered socket	Each	10.0	120.00	1200.00
9.4	16 A 6 pin shuttered socket	Each	90.0	138.00	12420.00
9.5	5 step fan regulator 2 Module	Each	18.0	460.00	8280.00
9.6	Blanking plate	Each	10.0	19.00	190.00
10	P & F following size mounting grid plates with cover plates. (Make: Legrand (Myrius), ABB (Classic Luminia), Anchor (Wood), Schneider (Opale), Philips, Havell's (Crabtree))				
10.1	3 Module	Each	10.0	74.00	740.00
10.2	5/6 Module	Each	32.0	109.00	3488.00
11	P & F following size hot dip galvanized M.S. box with earthing terminal in recess/ surface suitable for modular accessories as required. (Make: Legrand (Myrius), ABB (Classic Luminia), Anchor (Wood), Schneider (Opale), Philips, Havell's (Crabtree))				
11.1	3 Module	Each	10.0	47.00	470.00
11.2	5-6 Module	Each	32.0	82.00	2624.00
12	SITC of wall/ free standing floor mounted dust and vermin proof compartmentalised cubical panel made out of CRCA sheet , required hardware ,duly treated for derusting in 7 tank process with dephosphating and with powder coating on both side of panel in desired shade The panel having PU/ Neoprene rubber gasket of not less than 3mm thickness , separate detachable gland plate M.S. base channel ,hinged door with locking arrangement for equipment/switchgear . Thickness of sheet shall not be less than 1.6 mm up to 600 mm length / width of any compartment and be of 2.0 mm above 600 mm. Load bearing structure shall be of 2.0 mm thick sheet supported by base M.S. channel if required . Side walls and cable alley compartments having bolted type doors with / without detachable extension type structure. (only outer area on all sides shall be measured & panel to be fabricated from CPRI approved fabricator)	Sqm	18	2752.00	49536.00
13	Supplying and fixing of Aluminium / Copper bus bar by means of SMC / DMC type insulator, high tensile nuts and bolts spring washers in existing panel including bending , cutting in required shape and size and colour coding with heat shrinkable PVC sleeves.				
13.1	Electrolytic grade Aluminium bus bar	Kg	15	420.00	6300.00
14	SF of (0-500) V range Volt meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. Schneider, L&T, HPL, Secure, AE, Neptune, Raychem RPG				
14.1	Digital type, Gr.I	Each	2	1100.00	2200.00
15	SF of CT operated direct reading type Ampere meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. Schneider, L&T, HPL, Secure, AE, Neptune, Raychem RPG				
15.1	Digital type, Gr.I				
a	Below 500 A, Gr.I	Each	2	1100.00	2200.00
16	SF of Current Transformer , with all necessary support in existing panel including connection etc. as required . C&S, L&T, Nippen, Schneider, Siemens, AE, Kappa, Milborn				
16.1	from 200 / 5 to 400/5 Ratio , 10 VA , class 1 accuracy, Gr.I	Each	6	323.00	1938.00

17	SF of selector switch of 10 A for voltmeter (4 position) including making connection etc. as required .GE, Siemens, C&S, HPL, L&T (salzer), ABB, Schneider	Each	2	228.00	456.00
18	SF of CT linked selector switch of 10 A for Ampere meter (4 position) including making connection etc. as required .GE, Siemens, C&S, HPL, L&T (salzer), ABB, Schneider	Each	2	286.00	572.00
19	SF of 110/220 V, LED (22.5 mm dia) Indicating lamp with integral circuit, terminal block, including connection etc. as required.Siemens, C&S, GE, ESBEE (L&T), BCH, ABB, Schneider, Vaishno, Rass control, Kaycee, HPL,Milborn				
19.1	Red/yellow/Green colour, Gr.I	Each	4	150.00	600.00
19.2	Blue colour, Gr.I	Each	2	250.00	500.00
20	P&F of IP51 direct or CT operated, 1x240 / 3x240 volts , 50 Hz static watt-hour meter (kwh) having resolution 0.1 / 0.01 kwh , 1/ 0.5 accuracy class , LED indicators for tamper operation (Reverse &/or earth connection) , pulsating LED indicator for meterology , electromechanical counter , LCD Display, cover plate for body and terminal sealing , including making connection ,testing etc. as required.HPL , L&T, Schneider, Secure, AE, Raychem RPG, Neptune				
20.1	up to 40 ampere single phase meter	Each	8.0	1350.0	10800.00
21	SITC of quick make and quick break 4 POLE current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 60947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip ,earth fault trip, push (test) to trip , including making connections with lugs & spreaders, etc. as required. Make:- Schneider (neo break), C & S, ABB (S270)				
21.1	With Thermal Magnetic release				
a	up to 100 Amp , 25 kA, fixed O/L & S/C setting	Each	4	4302.00	17208.00
b	250 Amp , 35 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu, Gr.I	Each	1	18989.00	18989.00
c	160 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	1	7363.0	7363.00
22	Supply and fixing of following accessories for MCCB				
22.1	Extended Rotary Handle	Each	2	2041.00	4082.00
23	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,Ind class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size. Make:- Havell's, KEL, Polycab,RR Kable				
23.1	16.0 Sq.mm				
23.1	4 core		210.0	178.00	37380.00
23.1	16.0 Sq.mm				
a	3 core	Mtr.	350.00	159.00	55650.00
23.2	70.0 Sq.mm				
a	3.5 core	Mtr.	70.0	388.00	27160.00
23.3	150.0 Sq.mm				
a	3.5 core	Mtr.	145.0	735.00	106575.00
24	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.Jainsons, Dowell's, Elcon, Metalcraft, Cabend, Trinity Touch				
24.1	3 x 16.0 sq.mm	Set	16.0	65.0	1040.00
24.2	3.5 x 70.0 sq.mm	Set	2.0	186.0	372.00
24.3	3.5 x 150.0 sq.mm	Set	2.0	328.0	656.00

25	Plate Earthing as per IS:3043 with copper Earth plate of size 300mm x 300mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 25 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple ,wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required. (Make BSR Group-1)	Set	3.0	5000.00	15000.00
26	S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required.				
26.1	8 SWG copper Wire	Mtr.	230.0	79.0	18170.00
26.2	20mm x 3mm copper strip	Mtr.	8.0	402.0	3216.00
27	P & F Star rated double ball bearing capacitor start, aluminium body & blade ceiling fan with down rod up to 30 cm with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. (Almonard, CG, Khaitan, Bajaj, Usha, Orient, , Havell's,Polar).				
27.1	1200 mm Sweep 5 Star rated, Gr.I	Each	18.0	1896.00	34128.00
28	P&F of Double ball bearing, capacitor start single phase metallic blade fresh air fan, in existing opening including cost of hardware , flexible copper conductor ,making connections, testing etc. as required. Almonard, CG, Alstom, Khaitan, Bajaj, Usha, Remi, EPC,Polar				
28.1	300 mm sweep	Each	18.00	1856.00	33408.00
29	P & F extra down rod of 15 mm dia . ERW (Electrical resistance welded) of 1.6mm nominal thick medium duty steel pipe including cutting, threading, drilling, fixing quarter pin etc as reqd.	Mtr.	17.0	89.00	1513.00
Total					735008.00

Sr.No.	Description of Item	Estimated cost of work (in Rupees)	Percentage "Above" or "Below" or "At par" the			
			Rate Quoted by		Price	
			"Above" or	% in Figures	In Words	Total Cost (in
1	2	3	4	5	6	7
1		735008.00				-
TOTAL COST OF SCHEDULES:-		7,35,008.00	TOTAL QUOTED PRICE=			0.00
Grand Total (in words)						

PART B (H SCHEDULE)

S.No.	Particulars	Unit	QTY.	Rates	Amount
1	P & F energy efficient direct fit (Retrofit) LED tube system (with integral driver), on existing fixture. Power Consumption of 18W / 36W 1500-3000 lumens, system lumen efficiency 100 lm/Watt output, life time of 50,000 burning hours with 70% initial lumen maintained. CCT 3000°K, 4000°K & 6000°K. Philips, Havell's, Lighting Science				
1.1	4' LED Tube shape fixture 18W	Each	45.0		
2	P & F of IP65 IK10 rated LED bulk head type light fixture made from CRCA sheet steel housing suitable for mounting LED tube system (integral driver), Power Consumption of 10-15W ~ 500-600 lumens, system lumen efficiency 100 lm/Watt output suitable for 1x100W GLS / 9W CFL bulk head fixtures, life time of 50,000 burning hours with 70% initial lumen maintained. CCT 3000°K, 4000°K & 6000°K. Fixture shall be in compliance with CE & KEMA standards. Philips, Havell's, Lighting Science.				
2.1	LED BULK head luminaire 9/10W	Each	10.0		

3	P & F of IP 65 protected LED Post-Top-Light system with Die cast housing, polycarbonate diffuser, 40 - 60W, 220-240V, 50Hz (integrated Driver), LED lamps supplied with pre-wired cable of 1 mtr. Driver shall be high efficiency having efficiency > 85% and in compliance to IEC standards (Integral with light fixture).system life of 25000 Burning Hours with 70% of initial Lumens maintained. Light output in Cool white or Warm White Colour as per engineers choice. Fixtures shall be CE compliance. Philips, Havell's, Lighting Science.				
3.1	40W LED Post Top Fixture	Each	8.0		
4	Supply Installation testing and commissioning of 3.0 long MS tubular pole light pole standard pole fabricated out of 70 mm dia. pipe 1.8 metre long and bottom dia of 140 mm 1.2 meter long complete with 300 mm x 300 mm x 6 mm thick MS plate welded at bottom including welding of 1 no. earth stud and drilling holes for drawing the wire etc. complete as required.including foundation, wiring with 3x1.5sqmm copper wire from JB to light fitting.painting and connections . A looping/ junction box shall be inbuilt into the pole.	Each	8.0		
TOTAL					

**EXECUTIVE ENGINEER
MNIT JAIPUR**

TOTAL QUOATED AMOUNT (G SCHEDULE + H SCHEDULE)

SIGNATURE OF CONTRACTOR WITH POSTAL FULL ADDRESS