

PROJECT - SS INTERNATIONAL SCHOOL CHARHOLI ROAD,PUNE							
BILL OF QUANTITIES FOR INTERNAL ELECTRIFICATION WORK FOR G+2 FLOOR SCHOOL BUILDING							
SN	DESCRIPTION			LABOUR ONLY		WITH MATERIAL	
		QTY	UNIT	RATE	AMOUNT	RATE	AMOUNT
A.	INTERNAL ELECTRIFICATION						
1	DISTRIBUTION BOARDS						
	Providing and fixing Lighting/ Power Distribution Boards Flush						
	mounting/ Surface on Type, Double Door type as per						
	approved make and comprising of the following:						
i	Powder Coated Double Door Type Distribution Board						
ii	Incoming Breaker.						
iii	Copper Bus Bars						
iv	Outgoing Breakers						
v	Sub-incomer for ELCB's (wherever indicated)						
vi	All internal cabling as per specifications.						
vii	Ferrules for circuits						
viii	Control Chart inside DB						
ix	All MCB's to be of 10 KA Breaking Capacity and ELCB's						
	Of 30mA rating.						
x	With TV/TEL provision.						
a)	6 - WAY TPN D.B. FOR LIGHTING PER FLOOR-2.NOS						
	I/C - 40A FP (30mA) RCCB – 1 No						
	O/G - 10 A SP MCB - 12 Nos.						
	O/G - 20 A SP MCB - 6 Nos.	4	Nos.				
b)	16 - WAY SPN D.B. FOR U.P.S PER FLOOR-2.NOS						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	I/C - 40A DP (30mA) RCCB – 1 No						
	O/G - 20 A SP MCB - 14 Nos.	4	Nos.				
c)	6 - WAY TPN D.B. FOR U.P.S FOR COMPUTER LAB						
	I/C - 40A DP (30mA) RCCB – 1 No						
	O/G - 20 A SP MCB - 14 Nos.	1	Nos.				
d)	12 - WAY SPN D.B. FOR ALL FLOOR PASSAGE LIGHT						
	I/C - 40A DP (30mA) RCCB – 1 No						
	O/G - 10 A SP MCB - 10 Nos.	1	Nos.				
e)	4 - WAY TPN D.B. FOR SCHOOL OFFICE GROUND FLOOR						
	I/C - 40A FP (30mA) RCCB – 1 No						
	O/G - 10 A SP MCB - 6 Nos.						
	O/G - 20 A SP MCB - 4 Nos.	1	Nos.				
f)	4 - WAY TPN D.B. FOR SCHOOL BANK GROUND FLOOR						
	I/C - 40A FP (30mA) RCCB – 1 No						
	O/G - 10 A SP MCB - 6 Nos.						
	O/G - 20 A SP MCB - 4 Nos.	1	Nos.				
g)	12 - WAY SPN D.B. FOR GROUND FLOOR						
	I/C - 40A DP (30mA) RCCB – 1 No						
	O/G - 10 A SP MCB - 8 Nos.						
	O/G - 20 A SP MCB - 2 Nos.	1	Nos.				

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
B.	INTERNAL WIRING						
1	POINT WIRING						
1.1	1 Light Point controlled by 1 Switch Providing point wiring for 1 light point controlled by Single 6 Amp Switch using 2 X 1.5 + 1 X 1.0(E) sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25 mm and 1.8mm wall thickness ISI mark, Surface on wall & ceiling with necessary boxes/pull boxes complete with 6Amp single pole switch of approved make fixed on Surface hot dipped GI outlet boxes with earthing screws flushed with wall and continuous earthing up to fixture from switch board using 1.0 sq.mm. PVC insulated green color copper earth-wire and terminate the point in angle holder / batten holder / ceiling rose near the fixtures, including rate of GI box & white colour poly carbonate front plate for modular Switches (AVERAGE LENGTH 6 MTR)	220	Nos.				
1.2	Secondary Light Point looped using 2 X 1.5 X 1.0(E) sq. mm copper conductor PVC insulated FRLS wires in rigid PVC conduits of 25mm and 1.8mm wall thickness ISI mark, concealed in wall & ceiling with necessary boxes/pull boxes complete with 6Amp single pole switch of approved make fixed on concealed hot dipped GI outlet boxes with earthing screws flushed with wall and continuous earthing up to fixture from switch board using 1.0 sq.mm. PVC insulated green color copper						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	earth-wire and terminate the point in angle holder / batten holder / ceiling rose near the fixtures, including rate of GI box & white colour poly carbonate front plate for modular Switches. (AVERAGE LENGTH 4 MTR)	40	Nos.				
1.3	1 Buzzer Providing point wiring for 1 Nos of Buzzer point controlled by Single 6 Amp Bell Push Switch using 2 X 1.5+1X1.0 sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull boxes complete with 6 Amp switch of approved make fixed on Surface on hot dipped GI outlet boxes with earthing screws flushed with wall and continuous earthing up to fixture from switch board using 1.0 sq.mm. PVC insulated green color copper earth-wire and terminate the point in including provision of Buzzer including rate of GI box & white Colour poly carbonate front plate for modular switches .	5	Nos.				
1.4	1 Fan Point Controlled by 1 Switch Providing point wiring for 1 fan point controlled by Single 6 Amp Switch using 2 X 1.5+1X1.0 sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/ pull boxes, including provision of Fan Box as per specifications complete with 6Amp single						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	pole switch of approved make fixed on Surface on hot dipped GI outlet boxes with earthing screws flushed with wall and continuous earthing up to fixture from switch board using 1.0 sq.mm. PVC insulated green color copper earth-wire and terminate the point in angle holder / batten holder / ceiling rose near the fixtures, including Hum Free (Low noise) 6 Position Step Type Regulator, including rate of GI box & white colour poly carbonate front plate for modular switches.	140	Nos.				
1.5	1 Exhaust Fan Point Controlled by 1 Switch Providing point wiring for 1 Exhaust fan point with plug next to window controlled by Single 6 Amp Switch mounted outside toilet/ main board using 2 X 1.5 sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull boxes complete with 6Amp singlepole switch of approved make fixed on Surface on hot dipped GI outlet boxes with earthing screws flushed with wall and continuous earthing up to fixture from switch board using 1.0 sq.mm. PVC insulated green color copper earth-wire and terminate the point in angle holder / batten holder / ceiling rose near the fixtures including rate of GI box & white colour poly carbonate front plate for modular Switches.	25	Nos.				

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
1.6	<p>2 NOS.6 Amp Switch Socket mounted on Switchboard</p> <p>Providing point wiring for 1 No. 5 Pin 6 Amp plug point</p> <p>controlled by Single 6 Amp Switch mounted on an</p> <p>independent board using 2 X 1.5 sq. mm copper conductor</p> <p>PVC insulated FRLS wires from main switchboard in rigid</p> <p>PVC Conduits of 25mm and 1.8mm wall thickness ISI mark,</p> <p>Surface on in wall & ceiling with necessary boxes/pull</p> <p>boxes complete with 6 Amp single pole plug and switch of</p> <p>approved make fixed on Surface on hot dipped GI outlet</p> <p>boxes with earthing screws flushed with wall and continuous</p> <p>earthing up to main switchboard from the plug switch board</p> <p>using 1.5 sq. mm. PVC insulated green color copper</p> <p>earth-wire including rate of GI box & white colour poly</p> <p>carbonate front plate for modular switches. (Average length 6Mtr)</p>	180	Nos.				
1.7	<p>6 Amp Switch Socket mounted on Lighting/ Power Switchboard (HALF BOARD)</p> <p>Providing point wiring for 1 No. 5 Pin 6 Amp plug point</p> <p>controlled by Single 6 Amp Switch mounted on an main</p> <p>lighting / power switchboard board using 2 X 2.5 + 1.5 (E) sq. mm</p> <p>copper conductor PVC insulated FRLS wires, concealed in</p> <p>wall & ceiling with necessary boxes/pull boxes complete</p> <p>with 6 Amp singlepole plug & switch of approved make</p> <p>fixed on concealed hot dipped GI outlet boxes with earthing</p> <p>screws flushed with wall and continuous earthing up to main</p> <p>switchboard from the plug switch board using 1.0 sq. mm.</p> <p>PVC insulated green color copper earth-wire including rate</p>						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	of GI box & white colour poly carbonate front plate for modular switches.	60	Nos.				
1.8	AC Point Providing point wiring for 1 No.25 Amp Heavy Duty Socket, Surface on for Air-Conditioner mounted on an independent switchboard board including 2X 4.0+1X2.5 sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull boxes complete of approved make fixed on Surface on hot dipped GI outlet boxes with earthing, screws flushed with wall and continuous earthing up to main switchboard from the plug switch board using 2.5 sq.mm. PVC insulated green color copper earth-wire including rate of GI box & white colour poly carbonate front plate for modular switches.	2	Nos.				
1.9	16 Amp Switch Socket Providing point wiring for 1 No. 6/16 Amp plug point controlled by Single 6/16 Amp Switch mounted on an independent switchboard board including 2 X 2.5 + 1 X 1.5sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull necessary boxes/pull boxes complete with 6/16 Amp single pole plug & switch of approved make fixed on						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	Surface on hot dipped GI outlet boxes with earthing screws flushed with wall and continuous earthing using 2.5 sq.mm. PVC insulated green color copper earth-wire including rate of GI box & white colour poly carbonate front plate for modular switches.	3	Nos.				
1.10	Providing Mains Wiring for RAW POWER Circuit from Distribution Board to Switchboard using 2 X 2.5 + 1 X 1.5 sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull boxes complete with continuous earthing up to main switchboard from the Distribution board using 1.5 sq.mm. PVC insulated green color copper earth-wire.	500	Rmt				
1.11	Providing Mains Wiring for Lighting Circuit from Distribution Board to Switchboard using 2 X 2.5 + 1 X 1.5 sq. mm copper conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull boxes complete with continuous earthing up to main switchboard from the Distribution board using 1.5 sq.mm. PVC insulated green color copper earth-wire.	2000	Rmt				
1.12	Providing Mains Wiring for Power Circuit from Distribution Board to Switchboard using 2 X 4.0 sq. mm copper						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	conductor PVC insulated FRLS wires in rigid PVC Conduits of 25mm and 1.8mm wall thickness ISI mark, Surface on in wall & ceiling with necessary boxes/pull boxes complete with continuous earthing up to main switchboard from the Distribution board using 2.5sq.mm. PVC insulated green color copper earth-wire.	200	Rmt				
1.13	Cable Work Supply and laying of 1100 V grade, XLPE Aluminium/Copper conductor, flat armoured power cable as per specifications. The cable shall be laid in indoor trenches / cable trays as required. The cable shall be clamped at regular intervals to the supports in trench or to MS cable trays or brick wall using MS clamps and fasteners.						
	Note : Cable shall be procured as per actual Site measurement & only lug to lug measurement will be considered						
a	3.5 x 95 SQ.MM AL.ARM CABLE FOR MAIN PANEL	30	Rmt				
b	3.5 x 50 SQ.MM AL.ARM CABLE FOR MAIN PANEL	20	Rmt				
c	4X10 SQ.MM CU.ARM CABLE	600	Rmt				
d	4X6 SQ.MM CU.ARM CABLE	20	Rmt				
e	3X2.5 SQ.MM CU.ARM CABLE	20	Rmt				
f	3X6 SQ.MM CU.ARM CABLE	100	Rmt				
C	CABLE TRAYS & ASSOCIATED WORKS						
2	Supply and fixing Hot dip galvanized factory fabricated PERFORATED type cable trays, with Tee, radial bends, threaded rods, supports of cable trays support with special clamp suit to Building PEB structure etc for the following sizes of cable trays & as per specification.(The GI Coating shall be minimum 70 micron coating)						
2.3	300 mm x 75x 75 x 2 mm thick	20	Mtr.				
2.4	150 mm x 50 x 50 x 2 mm thick	20	Mtr.				

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
D	LIGHTING						
1	Supply and Installation Light Fitting with choke and lamp T5 - 28 WATT OR 18-WATT LED TUBE FITTING ultra slim ,robust ,noncorrosive , safer , lighter & energy saving decobatten. Glare free UV resistant diffuser, instant & flicker free operation over a wide voltage range. high power factor circuit with deactivation protection. patented 3D batwing profiled channel enhances light output.	490	Nos				
2	Supply and Installation Light Fitting 1 X 9W / 11 WATT CLF OR LED BULB aesthetic Wall/Ceiling-mounted luminaire suitable for compact fluorescent lamp. metallic channel colour options. white reflector base for higher light delivery. (O.C.copper ballast specially impregnated for longer life) OR	30	Nos				
3	Supply and Installation 48" size White colour Crompton Greaves Make High speed model, double ball bearing ceiling fan complete with Blades, Condenser, Downrod, fan motor, Canopies, etc. required. 30/35 watt 1x4 / 2x2 / 1x1 Square Surface Mounted Fitting	140	Nos				
		0	Nos				
E	TELEPHONE SYSTEM						
1	Wiring for Telephone Point Providing telephone wiring in standard PVC 25 mm from telephone tag block on individual flat to socket outlet using Two pair telephone wires comprising of CAT 6 Tinned copper conductor PVC insulated PVC sheathed telephone	200	Rmt				
2	Supply installation of Telephone Jack Unit RJ-11 With shutter including Surface on modular						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
	switchboard assembly including Surface on hot-dipped GI box and front plates in white color of poly carbonate material, necessary wiring etc.	8	Nos.				
3	Telephone Tag Block Providing and fixing in M.S. Enclosure(Powder Coated), telephone tag block KRONE type only of the following number of ways With inter-connections for incoming and outgoing telephone cables including ferruling, testing the joints, including all frame works for mounting the tag blocks.						
a)	20 Pair Krone Type Telephone Block	1	No.				
F NETWORKING SYSTEM							
1	Supply Installation of NETWORKING Jack Unit RJ-45 With shutter including concealed modular switchboard assembly including concealed hot-dipped GI box and front plates in white color of poly carbonate material, necessary wiring etc.	90	Nos.				
2	Supply & Laying of COMMSCOPE make Unarmoured UTP CAT -6 cable in 25 mm Conduits from server on individual floor to socket RJ45 outlet including Ferruling. Contractor to give as built drawing as per ferruling.	1500	Mtr.				
G UPS / INVERTER SYSTEM							
1	UPS SYSTEM :Taking delivery at site, unloading at site, Installation, testing & commissioning of followings rating UPS system as per tender technical specifications						

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
1.1	20 KVA UPS ,Min battery back Up ,Input volts :3 Ph 415 Volts,±10% Output : 3-Phase-415Volts 4 w 50 Hz ±2%(Dedicated UPS for Institute servers system) Including installation of SMF type batteries to each UPS.	1	Set				
H	LIFT ELECTIFICATION WORK						
1	Supply, Laying of 4 C x 10 Sq. mm. 650 V grade, CU.ARM Cable from Meter Panel Area to Lift DB (including termination)	150	Mtrs.				
2	Supply, Laying of 3 C x 6 Sq. mm., 650 V grade CU.ARM cable, from Meter Area to lift room & further in the duct to each switch board looped including termination.	150	Mtrs.				
3	Supply, Installation, Testing & commissioing of 63A FP, ELCB, 300 mA with enclosure in Lift room.	2	Nos.				
4	Supply, Installation, Testing & commissioing of 25A DP, ELCB, 100 mA with enclosure in Lift room.	4	Nos.				
5	Lift duct Point cabling for Light Point + half point using 6A Piano switch / Socket & bulk head on wooden box.(including termination) Bulkhead Should be of M.S.Cover.	22	Nos.				
I	EARTHING SYSTEM						
1	Supply, Installing, Testing and Commissioning Pipe in Pipe type Earthing Rod with 3 meter long Galvanised rod with G.I strip (Minimum coating shall be 70 Micron on surface) of 25x6 mm for termination, Brick Missionary Chamber etc.required to complete the job. Including Back fill compound of 25 KG,excavation & refilling of Earth pit.	20	Nos.				
2	Supply installation of G.I. STRIP 25 X 6 MM	300	MTR				

SN	DESCRIPTION	QTY	UNIT	LABOUR ONLY		WITH MATERIAL	
				RATE	AMOUNT	RATE	AMOUNT
3	Supply and Installation of 5 Spike L.A.	1	JOB				
J	Supply and Installation of Panel .with Copper Busbar of 200 A with Indicators, Ammeter, Voltmeter and Energy Meter and Outgoing Contractor to take approval of GA panel drawing from Consultant/ Architect/Clinet. All MCCB shall be microprocessor release. 160 A FP MCCB - 1 NOS 1) 40 A ,FP MCB-10 Nos (FOR LIGHTING DB) 2) 40 A ,DP MCB-10 Nos (FOR UPS D.B) 3) 40 A FP MCB - 2 NOS (FOR LIFT) 4) 32 A FP MCB - 1 NOS (FOR WATER PUMP) 5) 40 A FP MCB - 1 NOS (FOR EXTERNAL LIGHT) 6) 40 A FP MCB - 2 NOS - spare 7) 32 A DP MCB - 2 NOS - spare	1	JOB				
K	SUPPLY & INSTALLATION OF 82.5-KVA D.G SET	1	JOB				
L	SUPPLY & INSTALLATION OF 100-KVA TRANSFORMER WITH 2-POLE STRACURE AND ALL ACCESSORIES	1	JOB				
				TOAL AMOUNT			