



CONSTRUCTION OF GROUND AND FIRST FLOOR VIROLOGY AND UTILITY BUILDINGS  
HEJ RESEARCH INSTITUTE OF CHEMISTRY, UNIVERSITY OF KARACHI

**Summary Of Plumbing Works**

	COLD/HOT WATER PIPING:		Rs.		
	SOIL SANITARY WASTE AND VENT & RW PIPES:		Rs.		
	PLUMBING FIXTURES:		Rs.		
	NATURAL GAS		Rs.		
	FIRE PROTECTION SPECIALTIES:		Rs.		
	OVER HEAD FIBER TANK		Rs.		
	Total Amount:				



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1	Wiring & Accessories		Rs.	
2	Light & Fan Fixtures		Rs.	
3	Race ways		Rs.	
4	L.V. Switchgear		Rs.	
5	Main / Sub-main Feeders		Rs.	
6	Voice System / Networking		Rs.	
7	Fire Alarm System		Rs.	
8	Close Circuit TV System.		Rs.	
9	Access Panel		Rs.	
10	Earthing System		Rs.	
	<b>GRAND TOTAL</b>			
	Date : _____			

<b>Grand Total :</b>	
Amount Rupees :	



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S. No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
<b>ELECTRICAL WORKS</b>					
1	<b>Wiring &amp; Accessories</b>				
1.1	Supply, installation & testing of following items, clipped to the surface or concealed in the building fabric, including all conduit & wiring accessories, as per drawings & instructions. Complete in all respect.				
a)	Wiring of light / fan point controlled by one switch with 3x1C-1.5 sq. mm PVC cables drawn in 20/25mm dia PVC conduits, including 1.5 mm, powder coated MS back box and gang switches. Clipsal / Orange cable Pakistan/fast/New Age Cable	112	Nos		
b)	Wiring of light point to light point with 3x1C-1.5 sq.mm PVC cables drawn in 20/25mm dia PVC conduits.	25	Nos		
c)	Wiring of light circuits from DB to switch board(s) with 3x1C-2.5 sq.mm PVC cables drawn in 20 mm dia PVC conduits, including termination & labelling at both ends.	15	Nos		
d)	Wiring for power circuits from DB to 1st SSO Power Circuit with 3x1C-4 sqmm PVC cables in 20 mm dia PVC conduit, including termination & labelling at both ends.	97	Nos		
e)	Wiring for A/C circuit from DB to A/C unit with 3x1C-6.0 sqmm PVC cables drawn in 25 mm dia PVC conduit, including termination & labelling at both ends.	25	Nos		
f)	Wiring of SSO to SSO with 3x1C-2.5 sq.mm PVC cables drawn in 20 mm dia PVC conduits, including termination & labelling at both ends. (side by side or back to back will not be payable).	54	Nos		
g)	Wiring for 15A socket outlet from UPS DB to outlet with 3x1C-4.0 sqmm PVC cables drawn in 32 mm dia PVC conduit, including termination & labelling at both ends.	15	Nos		
h)	Wiring for 5A socket outlet from UPS DB to outlet with 3x1C-2.5 sqmm PVC cables drawn in 32 mm dia PVC conduit, including termination & labelling at both ends.	58	Nos		
i)	Wiring for Industrial socket outlet from UPS DB to outlet with 5x1C-10.0 sqmm PVC cables drawn in 32 mm dia PVC conduit, including termination & labelling at both ends.	1	Nos		
1.2	Supply & Installation of following Switch Socket Outlets (SSO) on already installed boxes.				
a)	5 Amp 3 Pin SSO.	54	Nos		
b)	15 Amp 3Pin SSO.	12	Nos		
c)	Industrial Plug / Socket Outlet 63A 5pin. Make: Garo /	10	Nos		
d)	32 Amp triple pole switch Make: MK / Clipsal	10	Nos		
1.3	Providing & fixing of following technology / floor boxes made of 1.5 mm sheet steel, power coated with earth terminal.				
a)	1.5 mm, powder coated MS back box with earthing terminal.	65	Nos		
b)	Multi Boxes including Voice And power Plug	10	Nos		
c)	Multi Floor Boxes including Data/Voice And power Plug	22	Nos		
<b>Sub Total of Wiring &amp; Accessories Rs.</b>				<b>Total</b>	



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S. No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
2	<b>Light &amp; Fan Fixtures</b>				
2.1	Supply & Installation of following light fixtures complete with lamps, starters, holders, electronic ballast etc including hangers, supports & all mounting / fixing accessories, complete in all respect & as per consultants approval.				
a)	Down Light Ceiling Mounted EUROPA LED ( Philips )	18	Nos		
b)	Celinig mounted fan 56" dia including suitable fan rod & 1.5 mm sq. flexible cable as per requirement with 5 / 8 inch MS fan hook + dimer.	8	Nos		
c)	Wall Bracket fan 12" dia	12	Nos		
d)	Tms Ceiling LED model no 011 Philips	16	Nos		
e)	Ceiling Light water proof model ( Pacific) philips	8	Nos		
f)	Ceiling Light model philips 18 w LED Core line Slim	16	Nos		
g)	Ceiling Light panel Light 2' x 2' TILE SLIM 40W	64	Nos		
	<b>Sub Total of Light &amp; Fan Fixtures Rs.</b>			<b>Total</b>	
3	<b>Race ways</b>				
3.1	Supply & Installation of following sizes of conduits with all accessories, clipped to the surface or concealed in building fabric or to be laid in floor including cutting /excavation & back filling, complete in all respect.				
a)	PVC pipe 25 mm dia	80	Mtr		
b)	PVC pipe 38 mm dia	40	Mtr		
c)	PVC pipe 50 mm dia	55	Mtr		
	<b>Sub Total of Race ways Rs.</b>			<b>Total</b>	
4)	<b>L.V. Switchgear</b>				
4.1	Supply, installation, testing & commissioning of following factory assembled, pre-wired panel / distribution boards, concealed in wall or surface mounted or floor standing, 1.5/2.0 mm MS sheet steel fabricated, 120 microns powder coated, suitable for 500 volts, 3phase, 4wires, 50Hz, incorporate following components and configuration, complete with all mounting & connecting accessories as per drawings.				
a)	MDB	1	No		
b)	DB Utility Building	1	No		
c)	UPS DB	1	No		
d)	POWER DB	1	No		
e)	LIGHT DB	1	No		
	<b>Sub Total of L.V. Switchgear Rs.</b>			<b>Total</b>	



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S. No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5	<b>Main / Sub-main Feeders</b>				
5.1	Supply, installation & termination at both ends of following main/sub-main cables in already installed Pipes complete as per site requirements Pakistan Cable / Fast Cable				
a)	1x120 mm sq 4core PVC/PVC Cable+1x16mm sq 1 core PVC Cable.	70	Mtr		
b)	1x95 mm sq 4core PVC/PVC Cable+1x35mm sq 1 core PVC Cable.	70	Mtr		
c)	1x50 mm sq 4core PVC/PVC Cable+1x35mm sq 1 core PVC Cable.	70	Mtr		
d)	1x35 mm sq 4core PVC/PVC Cable+1x35mm sq 1 core PVC Cable.	18	Mtr		
e)	1x16 mm sq 4core PVC/PVC Cable+ 1 x 10mm sq 1 core PVC Cable.	18	Mtr		
f)	2(240 mm sq 4core ) SWA/PVC Cable	350	Mtr		
g)	2(185 mm sq 4core ) SWA/PVC Cable	350	Mtr		
<b>Sub Total of Main / Sub-main Feeder Rs.</b>				<b>Total</b>	
6	<b>Voice System</b>				
6.1	Supply, pulling & fluke testing of Voice cables in PVC Pipe, including labeling at both ends as per drawings. Make: Clipsal / Systimax.				
a)	Cat-5E UTP Cable in 20/25 mm dia PVC Pipe	220	Mtr		
6.2	Supply, installation & termination of face plates comprising as follows. Make: Clipsal / Systimax.				
b)	1No RJ-11 socket outlet	12	Nos		
6.3	Supply, Installation & termination of 24 port RJ-45 Cat-5E UTP Patch Panel complete with all accessories. Make: Clipsal / Systimax.	1	Nos		
a)	1 meter long	12	Nos		
b)	3 meter long	3	Nos		
<b>Sub Total of Data &amp; Voice System Rs.</b>				<b>Total</b>	



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S. No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
7	<b>Networking</b>				
7.1	Supplying, Termination, Installing and deploying , CAT-6 wires as for all nodes mentioned in drawing with end to end flak testing of deployed internet cable in PVC pipes, including , labelling and tagging at both ends, proper harnesses and structured cabling system, including fixing them in communication racks , with layers-3 Gigabit manageable switches with SFP Modules as Duplex SFP ports /media converters for Fiber uplinks with Cable managers patch panels to accommodate each and every node, with all accessories complete in respect as needed or as required , make 3-M /Panaduit / Schneider.	118	Nos		
7.2	Supply , installation fixing and termination of single gang network Faceplates with I/O'S fixed in it for RJ-45 CAT-6 UTP wire, with all accessories complete in all respect as needed or as required , make 3-M /Panaduit / Schneider.	118	Nos		
7.3	Supplying, providing and deploying of network I/O's UPS. CAT-6 RJ - 45 as connecting port with all accessories complete in respect as needed or as required make 3-M /Panaduit / Schneider.	118	Nos		
7.4	Supplying, Termination, Installing and deploying of Ethernet Patch Panels , cable managers and cable organizers for the same deployed Ethernet CAT-6 data wires nad nodes as RJ-45 connecting ports with all accessories complete in all respects as needed or as required. make 3-M /Panaduit / Schneider.	2	Nos		
7.5	Supplying , providing and installing communication Rack 18 u with rotatable tires, sliding trays No.2 and fixed trays No-3 with 3M/ Panduit front cable organizers and with 12 sockets	1	Nos		
7.6	Supply of 1 meter long CAT-6 UTP RJ-45 To RJ data wire Make 3-M /Panduit / Schneider .	118	Nos		
7.7	Supply of 3 meter long CAT-6 UTP RJ-45 To RJ data wire Make 3-M /Panduit / Schneider .	118	Nos		
7.8	Supplying providing Installation and configuring 24 Port GIGA ABIT CISCO, Layer 3 Manageable Switch with 2 Fiber SFP duplex ports with all ports with all Racks mounted accessories with all required accessories complete in all respect as needed or as required.	1	Nos		
7.9	Supplying providing Installation and configuring 24 Port GIGA ABIT CISCO, Layer 3 Manageable PoE Switch with 2 Fiber SFP duplex ports with all ports with all Racks mounted accessories with all required accessories complete in all respect as needed or as required.	1	Nos		
7.10	Supplying providing Installation and configuring 24 Port GIGA ABIT CISCO, Layer 3 Manageable Switch with 2 SFP ports with all Racks mounted accessories with all required accessories complete in all respect as needed or as required.	2	Nos		
7.11	Providing of Fiber Patch Cords 3 Meter long SC or as required	4	Nos		
7.12	Providing of Fiber Patch Cords 3 Meter long LC , to LC or as required	4	Nos		
	<b>Sub Total of Networking Rs.</b>			<b>Total</b>	



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S. No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
8	<b>Fire Alarm System</b>				
8.1	Wiring with 2 X 1.5 sqmm fire resistant cables for Conventional Fire Alarm system in 20mm dia PVC conduit clipped to be surface or concealed in building fabric, including labelling at both ends, complete as per drawing.	26	Nos		
8.2	Supply, installation & testing of Conventional Fire Alarm Control Panel (8 zones) including back-up battery and all accessories, required to complete the job.	1	No		
8.3	Supply, installation & testing of Fire Alarm system devices / components with MS back boxes.	1	No		
a)	Smoke Detector.	26	Nos		
b)	Heat Detector.	1	Nos		
c)	Manual Call Point.	4	Nos		
d)	Fire Alarm Bell.	4	Nos		
e)	End of line resistance.	4	Nos		
f)	Fire Alarm Hooters.	3	Nos		
	<b>Sub Total of Fire Alarm System Rs.</b>			<b>Total</b>	
9	<b>Close Circuit TV System.</b>				
	Supply & Pulling of following CCTV in 20mm dia PVC Pipe including labelling at both ends.				
a)	3MP IP Network IR Camera	13	Nos		
b)	NVR 24 Channel support upto 4 TB HDD X 2	1	Nos		
c)	8 Port GB POE Network Switch	3	Nos		
d)	HDD 4 TB SATA Surveillance	1	Nos		
e)	CAT-6 Data Cable for Camera Installation 3M or equivalent from NVR to Camera	13	Nos		
f)	Wall mount rack	2	Nos		
g)	LED Screen 24" (Panasonic / Sony)	2	Nos		
	<b>Sub Total of Close Circuit TV System Rs.</b>			<b>Total</b>	



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S. No.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
10	<b>Access Control System</b>				
10.1	Supply & Pulling of access control wiring cat-6 UTP cable in 20mm dia PVC Pipe.	380	Mtr		
10.2	Supply, Installation, Testing, Commissioning, Training & Programming of following Access Control System.				
a)	Network Proximity Access Control Panel.	10	Nos		
b)	Push button.	10	Nos		
c)	Converter	1	Nos		
d)	Electromagnetic Lock.	10	Nos		
e)	PVC Card, Proximity - HID 125 KHZ, Graphics quality, printable PVC Card for use with HID 125 KHZ readers.	1	Nos		
f)	Power Supply with Battery back-up panel.	1	Nos		
	<b>Sub Total of Access Control System Rs.</b>			<b>Total</b>	
11	<b>Earthing System</b>				
a	Providing & fixing of earthing rod 6 feet long 100 percent pure copper inserted in the ground at a depth of 120 feet from the ground level (with salt and charcoal, or earthing chemical powder) etc making the bore of 120 feet deep by boring in Hard type of soil i/c fixing of 8 SWG copper wire in 1/2" G.I conduit with earth connecting point with all necessary accessories complete in all respect as required.	2	Job		
	<b>Sub Total of Earthing System Rs.</b>			<b>Total</b>	