20.03.20 | 26.03.2014

Bill of quantites / Schedule of works for Electrical installation work with Estimation to be carried our for Proposed Bio-incubator at ITM Reserch Park and ITM, Chennai.

Reserch Park and IITM, Chennai.											
Item No:	Description		Q	ty		Su	ıpply	Erection			
		IITRD IITM Total				Rate	Amount	Rate Amount			
		IITRD	IITM	To	otal	Rs.	Rs.	Rs.	Rs.		
01.01.00	MCB DBs										
	Supplying, fixing, connecting & commissioning the										
	following Compartmentalised MCB DISTRIBUTION BOARDS fixed flush with the wall. All MCB DBs										
	shall be double door only.										
01 01 00	MAIN VERTICAL DB FOR Raw Power & UPS										
01.01.00	6 way TPN Main Vertical DB for R&D				0 1						
	Incomer: 100 AMPS 4P MCCB 1 No.	1		1	Set						
	Outgoing:										
	63 AMPS TP MCB 6 Nos.										
01.02.00	Lighting Distribution Board RD/ LDB Cum PDB										
	12 WAY TPN 3 TIER MCB										
	INCOMER:	1	1	2	SET						
	32 AMPS 4P MCB 1 No.			_	JEI						
	OUTGOINGS :										
	25 AMPS DP 30 mA RCBO 3 Nos.										
01.03.00	6-10 AMPS SP MCB 36 Nos. Power Distribution Board					1	1	1	1		
31.03.00	8 WAY TPN 3 TIER MCB										
	INCOMER:	1		1	SET						
	63 AMPS 4P MCB 1 No.										
	OUTGOINGS:										
	40 AMPS DP 30 mA RCBO 3 Nos. 16-20 AMPS SP MCB 24 Nos.										
01.04.00	6 WAY TPN 3 TIER MCB										
01.04.00	INCOMER:	RO			SET						
	32 AMPS 4P MCB 1 No.	RU			SEI						
	OUTGOINGS :										
	25 AMPS DP 30 mA RCBO 3 Nos.										
	6-10 AMPS SP MCB 18 Nos.										
02.00.00	UPS DB FOR WORK STATIONS										
02.01.00	12 WAY TP2N 3 TIER MCB DB - RD										
	INCOMER:	1		1	SET						
	63 AMPS 4P MCB with 125A Removable neutral										
	link1 No.										
	OUTGOINGS: 63 AMPS DP MCB 3 Nos.										
	10-16 AMPS SP MCB 36 Nos.										
	TO TO NIVII S ST WICE SO Wes.										
03.00.00	FSU/MCCB CONTROL										
03.01.00	Supplying, erecting, connecting &commissioning	1		1	SET						
	63 AMPS 4P MCB in an angle iron frame with necessary interconnections, cable box brackets,										
	screws, bolts, nuts Control for AHU control										
03.02.00	Supplying, erecting, connecting &commissioning	1		1	SET						
	32 AMPS 4P MCB in an angle iron frame with necessary interconnections, cable box										
	brackets,screws, bolts, nuts Control for UPS										
	control										
04.00.05	CARLES (TERMINATIONS										
04.00.00	CABLES/TERMINATIONS										
	Supplying, laying, connecting & commissioning	l									
	the following 1.1 KV Grade AYFY/AYWY (or) YWY										
	/ YFY Under ground cables with necessary										
	clamps, screws, etc. in the following methods:-										
					 		+	1			
04.01.00	CLAMPED ALONG WALL /COLUMN/ LAID IN										
	TRAY (Inclusive of clamps, but exclusive of										
	Cable Tray)						1	1			
	i) 3 1/2 x 35 Sq.mm Al (For Vertical DB)	100		100	MTS.	1	1	1	1		
	ii) 4 x 10 Sq.mm Cu (For AHU)	50			MTS.		1	1			
	iii) 4 x 16 Sq.mm Al (For LDB / IITM Incoming	100	50		MTS.						
	cable)										
L	l .	l .	L	<u> </u>	<u> </u>	l	l		<u> </u>		

Bill of qua	26.03.2014 antites / Schedule of works for Electrical install Park and IITM, Chennai.	ation w	vork w	ith Est	imatio	n to be carrie	ed our for Propo	sed Bio-incub	ator at IITM
04.02.00	Supplying, terminating, connecting& commissioning the above Underground cables with compression type SIBG Cable glands. The cost of earthing gland with copper strips/wires shall also be included. The cables shall be terminated with Aluminium / copper lugs after crimping. The cost of lugs/ sockets shall be included.								
	ii) 3 1/2 x 35 Sq.mm Al (For Vertical DB) ii) 4 x 10 Sq.mm Cu (For AHU) iii) 4 x 16 Sq.mm Al (For LDB / IITM Incoming cable)	2 2 2	2	2 4 4	Nos. Nos. Nos.				
05.00.00	Mains Wiring								
	ALL CONDUITS ABOVE FALSE CEILING SHALL BE PROPERLY FIXED ON RCC CEILING ON 1.5 mm THICK BRACKETS								
05.01.00	Supplying, laying, connecting & commissioning 4 Runs of 16 Sq.mm. with 2 Run of 6 Sqmm. PVC Insulated multistranded FRLS copper conductor wires for continuous earthing in MS conduits concealed in wall/ partitions or laid in open fashion above fasle ceiling with necessary clamps screws att for 15KVA IJES	20		20	MTS				
05.02.00	Supplying, laying, connecting & commissioning 5 Runs of 10 Sq.mm with 2 Run of 6 Sqmm. PVC Insulated multistranded FRLS copper conductor wires for continuous earthing in MS conduits concealed in wall/ partitions or laid in open fashion above fasle ceiling with necessary clamps, screws etc.from 15KVA UPS to UPS DB	20		20	MTS				
05.03.00	Supplying, laying, connecting & commissioning 4 Runs of 6 Sq.mm. with 2 Run of 2.5 Sqmm. PVC Insulated multistranded FRLS copper conductor wires for continuous earthing in MS conduits concealed in wall/partitions or laid in open fashion above fasle ceiling with necessary clamps, screws let from VDB to PDBs.	20		20	MTS				
06.00.00	Power Wiring								
	NOTE :- a) ALL CONDUITS ABOVE FALSE CEILING SHALL BE PROPERLY FIXED ON RCC CEILING ON 1.5 mm THICK BRACKETS.								
06.01.00	Supplying, laying, connecting & commissioning 2 Runs of 4 Sq.mm PVC Insulated multistranded copper conductor FRLS wires (One each for Phase, Neutral) with 1 Run of 2.5 Sqmm. PVC Insulated multistranded FRLS copper conductor wires for continuous earthing in already laid MS Conduits concealed in wall / partitions / floor with necessary clamps, screws etc - 6/16 Amps Sockets	500	25	525	MTS				
06.02.00	Supplying, laying, connecting & commissioning 3 Runs of 1.5 Sq.mm PVC Insulated multistranded copper conductor FRLS wires (One each for Phase, Neutral and earth) in already laid MS Conduits concealed in wall / partitions / floor with necessary clamps, screws etc - 6 Amps Sockets	350	50	400	MTS				
06.03.00	Supplying, laying, connecting & commissioning 6/16 AMPS Switched Socket combined in Manufacturer's mounting box fixed flush with the wall / Partitions.	15	2	17	Nos.				
	NOTE: In one Circuit there shall be 2 Sets of 6/16A Socket shall be wired								
06.04.00	Supplying, laying, connecting & commissioning 6 AMPS Switched Socket combined in Manufacturer's mounting box fixed flush with the wall / Partitions.	100	25	125	Nos.				
	NOTE:								
	In one Circuit there shall be 8 Sets of 1 x 6A Socket shall be wired								
	In one Circuit there shall be 3 Sets of 2 x 6A Socket shall be wired In one Circuit there shall be 2 Sets of 3 x 6A Socket shall be wired In one Circuit there shall be 2 Sets of 4 x 6A								
06.05.00	Socket shall be wired Supplying, laying, connecting & commissioning 32AMPS SPN Metal clad Plug & Socket combined	RO			Nos				
	with 32 AMPS DP MCB in Manufacturer's mounting box fixed flush with the wall/ Partitions with								
06.06.00	necessarv accessories. Supplying, laying, connecting & commissioning 20 AMPS SPN Metal clad Plug & Socket combined with 20 AMPS DP MCB in Manufacturer's mounting box fixed flush with the wall/ Partitions with necessary accessories.	14	2	16	Nos				
06.07.00	Supplying, laying 32 mm. dia MS Conduits laid in floor /concealed in wall / partitions with necessary clamps, screws etc. for UPS Wiring	100	25	125	MTS				

Bill of qua	26.03.2014 antites / Schedule of works for Electrical install Park and IITM, Chennai.	ation w	vork w	ith Est	imatio	n to be carrie	d our for <mark>Propo</mark>	sed Bio-incub	ator at IITM
06.08.00	Supplying, laying 25 mm. dia MS Conduits laid in floor /concealed in wall / partitions with necessary clamps.screws etc. for UPS Wiring	100	25	125	MTS				
07.00.00	Light Point Wiring								
	NOTE :- ALL CONDUITS ABOVE FALSE CEILING SHALL BE PROPERLY FIXED ON RCC CEILING ON 1.5 mm THICK BRACKETS.								
07.01.00	Supplying, wiring, connecting & commissioning the light points with 3 Runs of 1.5Sq.mm. PVC insulated multistranded Copper Conductor wires (One each for Phase, Neutral and Earth) in MS Conduits concealed in wall / ceiling or open above false ceiling with necessary clamps screws etc including supplying and fixing 5AMPS Switch in manufacturers mounting box fixed flush with the wall / Partitions. Average length is 10 Meters (From LDB to Switch Baord and Switch Baord to								
07.01.01	One Light Controlled by one Switch	10	5	15	Pts				
07.02.00	Supplying, wiring, connecting & commissioning the light points with 3 Runs of 1.5 Sq.mm. PVC insulated multistranded copper Conductor FRLS wires (One each for Phase, Neutral and Earth) in MS Conduits concealed in wall/ ceiling with necessary clamps, screws etc for additional points. The additional points will have to be wired from the first point mentioned under Item under Item No.07.01.01. The maximum length will be 5.0Mts.	40	7	47	Pts				
07.03.00	Same as the Item No.07.01.00 but for 6AMPS Independant switched socket combined including supplying and fixing 6 AMP Switched Socket with MS box.	5		5	Pts				
07.04.00	MS DOX. Same as the Item No.07.01.00 but in switched board itself NOTE:	RO	5	5	Pts				
	THE COST OF SUPPLYING, LAYING & PULLING CIRCUIT MAINS WIRING WITH 3 RUNS OF 1.5 SOMM. PVC INSULATED MULTISTRANDED COPPER CONDUCTOR WIRES IN MS CONDUITS SHALL BE INCLUDED IN THE POINT RATE FOR LIGHT, FAN, EXHAUST FAN, 5 AMPS SOCKETS ETC. AVERAGE LENGTH 10 MTS(LDB TO SWITCH BOARD AND SWITCH BOARD TO FIRST POINT)								
08.00.00	UPS WIRING								
08.01.00	Supplying, laying, connecting & commissioning 3 Runs of 2.5 Sq.mm PVC Insulated multistranded copper conductor FRLSwires (One each for Phase, Neutral) with continuous earthing in already laid MS Conduits concealed in wall / partitions or laid in openfashion above false ceiling with necessary clamps, screws etc.from DB to Power Points	400	150	550	MTS				
08.02.00	Supplying, fixing, connecting & commisioning 2 x 6 Amps UPS Universal Sockets with 1No 16A switches housed in Manufacturer's mounting box fixed flush with the wall (or) on partition switch necessary accessories such as screws bolts & nuts	60	21	81	SETS				
	NOTE: In one Circuit there shall be 3 Sets of 2 x 6 A Socket shall be wired								
08.03.00	Supplying, fixing, connecting & commisioning 1x6 Amps UPS Universal Sockets with 1No 6A switches housed in Manufacturer's mounting box fixed flush with the wall (or) on partition switch necessary accessories such as screws bolts & nuts	RO			SETS				
	Supplying, laying, connecting & commissioning 2 Runs of 4 Sq.mm PVC Insulated multistranded copper conductor FRLS wires (One each for Phase, Neutral) with 1 Run of 2.5 Sqmm. PVC Insulated multistranded FRLS copper conductor wires for continuous earthing in already laid MS Conduits concealed in wall / partitions or laid in open fashion above false ceiling (or)laid in floor with	RO			MTS				
08.05.00	Supplying,fixing, connecting & commisioning 6/16 Amps UPS Universal Sockets with 1No 16A switches housed in Manufacturer's mounting box fixed flush with the wall (or) on partition switch necessary accessories such as screws bolts & nuts etc.	RO			SETS				
	NOTE: In one Circuit there shall be 2 Sets of 1 x 6 /16 A								
	Socket shall be wired								

	lar an and				1	T		T	
	26.03.2014 antites / Schedule of works for Electrical install	ation w	ork w	ith Ect	timatio	n to be carried	Lour for Propo	sed Rio-incub	ator at HTM
	Park and ITTM, Chennai.	ation v	VOIK W	itti LS	iiiiatio	ii to be carried	Tour for Propo	seu bio-iricub	ator at II III
			0.5		1.170	l I		İ	İ
08.06.00	Supplying, laying 32 mm. dia MS Conduits laid in floor /concealed in wall / partitions with necessary clamps.screws etc. for UPS Wiring	50	25	/5	MTS				
08.07.00	Supplying, laying 25 mm. dia MS Conduits laid in	150	25	175	MTS				
	floor /concealed in wall / partitions with necessary								
	clamps, screws etc. for UPS Wiring								
08.08.00	Supplying, laying 25 mm. dia Metallic Flexible hose laid in floor / concealed in wall / partitions	75	10	85	MTS				
	with necessaryclamps, screws etc. for UPS Wiring								
	with necessary cramps, serews etc. for or 5 wiring								
00.00.00	FINE DOESNOW LOUIS DOLLIS WILDING								
09.00.00	EMERGENCY LIGHT POINT WIRING								
09.01.00	Supplying, wiring, connecting & commissioning 3 Runs of 1.5 Sqmm. PVC insulated multi stranded	100	25	125	MTS				
	copper conductor FRLS Wires (one each for Phase,								
	Neutral and earth) in MS Conduits concealed in wall / Partitions or laid in open fashionabove false								
	ceiling with necessary clamps, screws,etc.								
09.02.00	Supplying and fixing 6 AMPS Switch in	5	2	-	NOS				
09.02.00	manufacturers mounting box fixed flush with the	5		,	NOS				
	wall/ Partitions								
10.00.00	ALUMINUM RACE WAYS								
10.00.00	ALUMINUM RACE WAYS								
10.01.00	Supplying, laying, connecting the Aluminum								
	Raceways laid in the ceiling with all necessary								
	clamp support.screws etcFOR DATA & VOICE								
10.01.01	40x 40 mm.	RO	RO		MTS				
10.01.02	60 x 40 mm.	RO	RO		MTS				
10.01.03	100 x 40 mm.	RO	RO		MTS				
11.00.00	EMPTY PVC CONDUITS FOR DATA & VOICE								
11.01.00	Supplying and laying the following 1.8 mm. thick								
11.01.00	PVC Conduits concealed/ open in wall/floor etc.								
	with necessary clamps, screws etc. with 1 Run of								
	16 SWG G.I. Fish wire.								
11.01.01	25mm DIA PVC CONDUITS	250	50	300	MTS.				
11.01.02	32mm DIA PVC CONDUITS	150	100		MTS.				
11.02.00	Supplying, fixing, connecting & commissioning MS	25	10	35	NOS.				
	Base box for Data/Voice with necessary screws etc. The Data Socket with front plate shall be supplied								
	by the Client at Site.								
11.03.00	Supplying, fixing, connecting & commissioning PVC	RO			NOS.				
	Base box for Data/Voice with necessary screws								
	etc.,The Data Socket with front plate shall be supplied by the Client at Site.								
11.04.00	Supplying, laying of 32 mm. dia PVC flexible hose	150	50	200	MTS.				
	laid in partitions with necessary supports clamps,								
	screws etc.								
12.00.00	TELEVISION								
10.01.00	Complete States and St	DC	DC		NOC				
12.01.00	Supplying, fixing, connecting & commissioning Television sockets in Manufacturer's MS	RO	RO		NOS.				
	enclosure fixed flush with the wall.								
12.02.00	Supplying, laying RG 6 Co-axial cable in 25mm.	RO	RO		MTS.				
	Dia heavy duty PVC Conduit concealed in floor / ceiling with necessary clamps, screws, etc for TV								
<u></u>	Antenna through Splitter.					<u> </u>			
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	26.03.2014 antites / Schedule of works for Electrical install	ation v	ork v	ith Ect	imatio	n to be carried	d our for Propo	cod Pio incub	ator at LLTM
	antites / Schedule of Works for Electrical Install Park and HTM, Chennai.	ation w	ork w	ith Es	imatio	n to be carried	our for Propo	sea Bio-incub	ator at IIIIW
13.00.00	JUNCTION BOXES								
12.01.00	Complete a secretary 14 C third, however, have		25	7.5	C E4				
13.01.00	Supplying, erecting 14 G thick Junction boxes without cover height to suit as per site conditions	50	25	/5	Sq.Ft.				
	The Junction boxes shall be powder coated type								
	and fixed flush with the wall / floor								
13.02.00	Supplying, erecting SS cover for above item	15	5	20	Sq.Ft.				
	113 5.				,				
14.00.00	FLOOR CUTTING								
14.00.00	1 EGOR GOTTING								
14.01.00	Cutting, breaking and removing debaris and								
	plastering with chicken mesh for floor raceways								
14.01.01	0" - 6"	50		50	MTS.				
14.01.02	6.1" - 12 "	RO			MTS.				
14.01.03	12.1" - 18 "	RO			MTS.				
15.00.00	EARTHING								
15.01.00	Supplying, installing and connecting a Copper	4		4	Sets				
	plate of size 600mm.x 600 mm.x 3 mm. at a depth of 3000 mm. in an earth pit of 700 x 700 x							1	
	3500 mm. filled with salt and charcoal mixed with								
	sand in alternate layers 150 mm. each upto a							1	
	height of 3000 mm. from bottom. Two copper flats								
	of 25 x 6mm. shall be braced to this copper plate throughout the overlaping length with the copper								
	plate and brought to the surface of the								
	earthpit. This copper flat shall have provision for								
	connecting wires of flats as the case may be. A suitable size of 40 mm. dia GI Pipe shall be								
	provided uptil the bottom of the earth pit. This GI								
	Pipe shall have provision for watering through a								
	funnel. A masonary strucutre shall be								
	constructed to a depth of 450mm. and a heavy duty CI Cover shall be used to cover the pit. The								
	cost of digging and back filling shall also be								
	included . Sand, salt and charcoal are in the								
	Contractor's scope. SERVER - 1No, UPS - 2 Nos EPABX - 1 No								
15.02.00	Supplying, installing and connecting a 2.5 Mtr.	RO	RO		Sets				
	long 40mm. dia G.I. Pipe with holes drilled								
	diametrically opposite to each other once every								
	150 mm. in an earth pit of 380 x 380 x 3500 mm. filled with salt and charcoal mixed with sand								
	in alternate layers 150 mm each upto a height of								
	3000 mm. from bottom. The pipe shall have								
	provision for watering through a funnel. It shall also have provision for connecting 50 x6 mm.								
	G.I. Flat on two sides. A masonary strucutre								
	shall be constructed to a depth of 450 mm. and a								
	heavy duty CI Cover shall be used to cover the pit. The cost of digging and back filling shall also								
	be included . Sand, salt and charcoal are in								
	the Contractor's scope.								
15.03.00	Supplying, laying & connecting 300mm long	2	1	3	Sets				
	25 x 6mm. GI flat with SMC / DMC Insulators in								
	open fashion with necessary clamps, screws, etc. as earth link							1	
15.04.00	Supplying, laying & connecting 300mm long	3		3	Sets				
	25 x 3mm. Copper flat with SMC / DMC Insulators							1	
	in open fashion with necessary clamps, screws, etc. as earth link			L		<u> </u>		<u> </u>	
15.05.00	Supplying, laying, connecting & commissioning 8	100	50	150	Mts			[
	SWG bare enamelled copper wire with necessary clamps, screws etc. for earthing AC Units.							1	
	·			<u></u>					
15.06.00	Supplying, laying & connecting 16 Sq.mm. PVC	300		300	Mts				-
	Insulated copper conductor wires in PVCConduit open fashion with necessary clamps, screws,							1	
	interlinks etc. for UPS Neutral								
15.07.00	Supplying, laying & connecting 6 Sq.mm. PVC	300		300	Mts			1	
	Insulated copper conductor wires in PVCConduit open fashion with necessary clamps, screws,]			
	interlinks etc. for Server / EPABX							1	

20.03.20 26.03.2014 Bill of quantites / Schedule of works for Electrical installation work with Estimation to be carried our for Proposed Bio-incubator at IITM Reserch Park and IITM, Chennai.									
	Cable Tray								
	,	100			17				
16.01.00	Supplying, fabricating, erecting, connecting kommissioning of the Powder coated (ALUMINIUM COLOUR) Ladder Type Cable Trays with necessary Angle ironsfor cable supports and other allied fabricationworks. Fixing to concrete surfaces shall be donewith the help of expandable type anchor fastners capable of bearing a weight of 500 Kgs. Fixing to brick walls shall be done with grouting. The distance between two supports shallbe600mm. The materialsand labour for grouting, cable supports and other allied fabrication work shall supplied by the Contractor at no extra cost.	100	20	120	Kgs				
17.00.00	PVC FLEXIBLE HOSE								
17.01.00	Supplying, laying, connecting & commissioning PVC flexible hose of the following sizes with necessary accessories and glands etc.								
17.01.01	25 mm. Dia	50	10		Mts				
17.01.02	32 mm. Dia	50	10	60	Mts				
	METALLIC HOSE								
18.01.00	Supplying, laying, connecting & commissioning MS flexible hose of the following sizes with necessary accessories and glands etc.								
	25 mm. Dia	RO			Mts				
18.01.02	32 mm. Dia	RO			Mts				
19.00.00	Light Fittings								
19.01.00	Supplying, fixing, connecting and commissioning of Direct or indirect suspended Type (Space saving design) luminaries suitable for 2 x 28 W CFL Lamps (Wipro Curve WVF 86228 OR equivalent) with anodized matt Aluminum in fill pieces and double parabolic reflector compliance with all accessories including lamps	25		25	Nos				
19.02.00	Supplying, fixing, connecting and commissioning of Direct or indirect luminaries suitable for 2x28W CFL Lamps recessed mounted fitting		10	10	Nos				
19.03.00	Supplying, fixing, connecting & commissioning Spot light fitting with Electronic Ballast complete with all accessories including Suspension system, supplying and fixing of 2 nos 18watts (WIPRO WCP 32113/118 OR equivalent) Flourecent Lamps with fixing materials for suspension type in the false ceiling.	15	5	20	Nos				
	Supplying, fixing, connecting and commissioning of RECESSED DOWN LIGHTER FOR 12V,50 W HALOGEN DICHROIC LAMP OF PHILIPS MAKE CAT # DN 652 (OR) Equivalent with separate Transformer and electronicregulator and all accessories for fixing flush with the false ceiling.	5	5	10	Nos				
	Supplying, fixing, connecting and commissioning of 1x36 W T5 Fitting with necessary clamps, screws etc.				Nos				
	Supplying, fixing, connecting & commissioning exhaust fan for with necessary foundation brackets, interconnection etc.	Ro			No				
20.00.00	SAFETY EQUIPMENTS								
	Supplying, erecting and connecting a 2KG CO2 FIRE EXTINGUISHER properly fixed on the wall with necessary clamps, screws, bolts and nuts etc. The extinguisher shall be suitable for all types of fires (A.R.&.C).	1			No				
20.02.00	Supplying, erecting and connecting Treatment Chart in English and Tamil directly fixed on to the wall with necessary screws etc.	1		1	No				
20.03.00	Supplying, and laying 1800 mm. x 1200 mm x 6 mm. thick ISIMarked Rubber mats to be laid in Front of the Distribution Boards.	2		2	Nos				
21.00.00	MISCELLANEOUS								
21.01.00	Liasion with The Chief Electrical Authority to	1		1	LS				
	Govt.obtaining Safety Certificate for Energisation.of Tamilnadu , preparation of Working drawings etc., obtaining approval for drawing .	,							
21.02.00	Preparation of " AS BUILT DRAWINGS"	1		1	LS				
	Total								
ь	Grand Total				ı	l			