

SCHEDULE - 'A'

Additions & Alterations to Electrical points and Repair of Service Connection to Residential Buildings in Township.

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
	<b>POINT WIRING</b>				
1	Supply & Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated multistranded copper conductor single core cable in surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box, required bends, junction boxes etc. and earthing the point with 1.5 sq.mm. FR PVC insulated multistranded copper conductor single core cable etc as required; complete all as directed by Engineer-in-charge.	Each	150	457.50	68,625.00
2	Supply & Wiring for <b>twin control</b> light point with 1.5 sq.mm FR PVC insulated multistranded copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way piano type switch, phenolic laminated sheet, suitable size MS box, required bends, junction boxes etc. and earthing the point with 1.5 sq.mm. FR PVC insulated multistranded copper conductor single core cable etc as required; complete all as directed by Engineer-in-charge.	Each	15	625.00	9,375.00
3	Supply and fixing 5A PVC batten holder / angle holder / 3-pin ceiling rose (ISI marked) including connection etc. as required; complete all as directed by Engineer-in-charge.	Each	200	34.00	6,800.00
	<b>PLUG POINTS</b>				
4	Supply and wiring for light plugs ( <b>separate socket</b> ) with 2 x 1.5 sq.mm + 1 x 1.5 sq.mm (earth wire) of FR PVC insulated multistranded copper conductor single core cable in surface / recessed medium class PVC conduit as required along with Supply and fixing metal box of 150mm X 75mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection etc. as required; complete all as directed by Engineer-in-charge.	Each	150	687.00	103,050.00
5	Supply and fixing of 6 Amps. piano type switch and 3 pin 6 Amps. socket outlet ( <b>common socket</b> ) on the existing switch box / cover including connections etc. as required; complete all as directed by Engineer-in-charge.	Each	100	65.00	6,500.00

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(1)	(2)	(3)	(4)	(5)	(6)
6a	Supply and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin <b>6A/16A amps socket</b> outlet and 16 Amps piano type switch, connection, etc. as required; complete all as directed by Engineer-in-charge. <i>(wiring separate with 2.5 sq.mm run of mains)</i>	Each	100	225.00	22,500.00
7	Supply and installation of 20A SP MCB and <b>20A metal clad socket</b> outlet in single phase MCB box on surface or in recess, with chained cover for the socket outlet and complete with connections, testing and commissioning etc. as required; complete all as directed by Engineer-in-charge. <i>(wiring separate with 4.0 sq.mm run of mains)</i>	Each	50	693.00	34,650.00
	<b>MAINS WIRING</b>				
8	Supply & wiring for circuit / submain wiring alongwith earth wire with the following sizes of FR PVC insulated multistranded copper conductor, single core cable in surface / recessed medium class PVC conduit as required; complete all as directed by Engineer-in-charge.				
a)	<b>2 x 2.5 sq.mm</b> + 1 x 2.5 sq.mm earth wire	Rmt.	850	131.00	111,350.00
b)	<b>2 x 4.0 sq.mm</b> + 1 x 4.0 sq.mm earth wire	Rmt.	500	162.00	81,000.00
c)	<b>2 x 6.0 sq.mm</b> + 1 x 6.0 sq.mm earth wire	Rmt.	225	206.00	46,350.00
d)	<b>4 x 4.0 sq.mm</b> + 2 x 4.0 sq.mm earth wire	Rmt.	25	268.00	6,700.00
	<b>ACCESSORIES</b>				
9	Supply & fixing following <b>piano type</b> switch / socket on the existing switch box / cover including connections etc. as required; complete all as directed by Engineer-in-charge.				
a)	240V, 6A Switch	Each	40	29.50	1,180.00
b)	250V, 6A 5-pin socket outlet	Each	60	35.50	2,130.00
c)	250V, 16A Switch	Each	25	61.50	1,537.50
d)	250V, 16A 6-pin socket outlet	Each	25	73.00	1,825.00
10	Supply & fixing following <b>modular</b> switch / socket on the existing modular plate & switch box including connections etc. as required; complete all as directed by Engineer-in-charge.				
a)	240V, 6A Switch	Each	25	75.00	1,875.00
b)	250V, 6A 3-pin socket outlet	Each	25	96.00	2,400.00
c)	250V, 16A Switch	Each	10	109.00	1,090.00
d)	250V, 16A 6-pin socket outlet	Each	10	147.00	1,470.00
11	Supplying and fixing following <b>Modular base &amp; cover plate</b> on existing modular metal boxes etc. as required; complete all as directed by Engineer-in-charge.				
a)	1 or 2 Module	Each	5	63.00	315.00
b)	3 Module	Each	5	75.00	375.00
c)	4 Module	Each	5	81.50	407.50

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(1)	(2)	(3)	(4)	(5)	(6)
d)	6 Module	Each	5	98.50	492.50
e)	8 Module	Each	5	121.00	605.00
12	Supply and fixing following accessories with internal connections etc. as required; complete all as directed by Engineer-in-charge.				
a)	230V, 16A, 3-pin plug top	Each	5	60.00	300.00
b)	Ding dong bell	Each	5	118.00	590.00
c)	Electronic Musical bell	Each	3	263.00	789.00
	<b>MAINSWITCHES, FUSES &amp; FUSE D.B.</b>				
13	Supply & fixing of porcelain rewirable fuse unit of reputed make; complete all as directed by Engineer-in-charge.				
a)	32A, 415V fuse unit	Each	25	141.00	3,525.00
b)	63A, 415V fuse unit	Each	40	220.00	8,800.00
14	Supply, fixing and connecting of following Main Switch; complete as directed by Engineer-in-charge.				
a)	415V, 32A Double Pole Iron Clad Main Switch	Each	5	898.00	4,490.00
b)	415V, 32A Triple Pole Iron Clad Main Switch	Each	2	937.00	1,874.00
c)	415V, 63A Triple Pole Iron Clad Main Switch	Each	2	2,044.00	4,088.00
15	Supply, fixing and connecting of porcelain fuses distribution board having metallic sheet steel enclosure; complete as directed by Engineer-in-charge.				
a)	250V, 16A, 1-phase 6-way	Each	2	468.00	936.00
b)	250V, 16A, 1-phase 8-way	Each	2	588.00	1,176.00
	<b>ISOLATORS, MCBs &amp; MCB D.B.</b>				
16	Supplying and fixing of single pole 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.	Each	35	141.00	4,935.00
17	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a)	40 amps	Each	3	245.00	735.00
b)	63 amps	Each	3	303.00	909.00
18	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a)	40 amps	Each	5	554.00	2,770.00
b)	63 amps	Each	3	563.00	1,689.00
c)	100 amps	Each	2	709.00	1,418.00

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(1)	(2)	(3)	(4)	(5)	(6)
19	Supply and fixing following way, single pole & neutral, sheet steel, MCB distribution board on surface / recess complete with tinned copper bus bar, neutral busbar, earth bar, din channel, interconnections, powder painted including earthing etc as required ; complete all as directed by Engineer-in-charge.				
a)	240V, 2 + 4 way, single door including 63A double pole isolator and 5-32A MCBs complete.	Each	2	1,340.00	2,680.00
b)	240V, 2 + 6 way, single door including 63A double pole isolator and 5-32A MCBs complete.	Each	5	1,662.00	8,310.00
c)	240V, 2 + 8 way, single door including 63A double pole isolator and 5-32A MCBs complete.	Each	1	1,984.00	1,984.00
20	Providing earthing conforming to IS:3043 with 40 mm dia G.I. earth pipe and all accessories including excavation of pit, filling with homogenous layers of coke/charcoal & salt and providing masonry enclosure with hinged cover plate having locking arrangement and watering pipe etc.; including cost and conveyance of all materials; complete as directed by Engineer-in-charge.	Set	5	3,385.00	16,925.00
21	Providing and fixing of 4.00 mm dia copper wire on surface / in recess as required; complete all as directed by Engineer-in-charge.	Metre	100	87.50	8,750.00
	<b>M.S. ITEMS</b>				
22	Supply & fixing of angular iron frame in wall with 1/1.6 mm MS sheet on top with hinges & all four sides with screws. Necessary red-oxide / grey painting as directed by engineer in charge.	Kg.	50	112.00	5,600.00
23	Supply, fabrication & fixing of MS sheet cupboards made of sheet 1.6mm thick with single/double shutter and mechanical locking arrangements. The cupboards shall be given 2 coats of red-oxide paint and finished with necessary general purpose quick drying oil paint of suitable shade, etc. complete as directed by engineer in charge.	Kg.	26	184.00	4,784.00
	<b>METERS</b>				
24	Supply, fixing and connecting of 3 phase 5Amp /100Amp – 415V C.T meter	Each	1	2,990.00	2,990.00
25	Supply, fixing and connecting of 3 phase 5Amp/100Amp-415V C.T. meter coil.	Each	3	143.00	429.00
	<b>LIGHTING</b>				
26	Supply, fixing & connecting of bulk head luminaire cat.no. NXC101, with 1 x GLS 60 watts lamp phillips make.	Each	5	687.00	3,435.00
	<b>SPECIAL ITEMS</b>				
27	supply & fixing of tubular type heating element suitable for 50 Ltrs / 90 Ltrs water heaters 3 hole /triangular disc type / non-threaded type as per samples given as directed by engineer in charge	Each	25	440.00	11,000.00
28	Supply & fixing of thermostat 30 °C to 90 °C adjustable and suitable for 25Lts to 90Lts.	Each	5	230.00	1,150.00
	<b>SERVICE CONNECTIONS</b>				

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
29	Supply & fixing of PVC insulated (WPTC) sheathed weather proof AL. Conductor cable of payal/gold model make 1100V grade together run with 7/18 SWG GI bearer wire outside building and concealed /surface in rigid PVC conduit inside the building including necessary clips insulation tape etc., for service tapping as directed by engineer in charge.				
a)	one run of 2x10 Sq.mm (twin core WPTC)	Rmt.	220	54.00	11,880.00
b)	two run (4 wires) of 2x10 Sq.mm (twin core WPTC)	Rmt.	450	92.00	41,400.00
	<b>SERVICE CONNECTIONS SUPPORTING MATERIALS</b>				
30	Supply, fabrication and fixing / grouting of eye bolt made of MS rounds 10/12/16mm dia. as directed by Engineer in charge.	Kg.	20	122.00	2,440.00
31	Supply & fixing of guy insulator of 80x50mm. One guy insulators to be fixed at either ends of the GI wire supporting the service connection cable.	Each	35	44.00	1,540.00
32	Supply & grouting in wall 32mm dia GI pipe (class B) at the building end for entry of service tapping to building. One end of the pipe should have threaded for fixing bends.	Mtr.	10	226.00	2,260.00
33	Supply & grouting in wall 25mm dia GI pipe at the building end for entry of service tapping to building. One end of the pipe should have threaded for fixing bends.	Mtr.	20	166.00	3,320.00
34	Supply & fixing of GI bends 32mm dia for fixing of 25mm/32mm dia GI pipe for arresting entry of rain water into the pipe . Also suitable size of PVC/Rubber bushes should be provided at the entry of the point of pipe/bend.	Each	20	82.00	1,640.00
35	Supply of 32 mm dia 1.5 mm thick medium class PVC conduit pipe along with accessories in surface / recess including cutting the wall and making good the same with required massonary work etc. as required; complete all as directed by Engineer-in-charge.	Mtr.	80	80.50	6,440.00
36	Supply & fixing of Steel support wire 7/20 SWG with tape and new link clips to the existing weather proof wire only in case of breaking of GI wire.	Mtr.	800	11.00	8,800.00
37	Supply & fixing of bus bar insulators with necessary screw etc..	Each	100	22.00	2,200.00
38	Supply & fixing of 25mm x 5mm copper strip (1.12 kg/m) on surface or in recess for connections as required; complete all as directed by Engineer-in-charge.	Metre	5	766.00	3,830.00
39	Restranging of old service connections with necessary link clips and tapes for the above item	Each	200	196.00	39,200.00
	<b>CABLES LAYING</b>				
40	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation (0.6 x 0.9m), sand cushioning, protective covering and refilling the trench etc as required; complete all as directed by Engineer-in-charge. ( cable will be supplied by BHEL )				
a)	Upto 35 sq. mm	Metre	100	167.00	16,700.00
b)	Above 35 sq. mm and upto 95 sq. mm	Metre	100	173.00	17,300.00

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(1)	(2)	(3)	(4)	(5)	(6)
41	Providing and laying in position cement concrete of 1:4:8 grade (1 cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size) excluding the cost of centering and shuttering etc. complete all as directed by Engineer-in-charge.	CuM	1	3,331.25	3,331.25
42	Supply & fixing of crimping type copper lugs conforming to I.S. specifications for following sizes of cables including connections; complete all as directed by Engineer-in-charge.				
a)	upto 16 sq.mm	Each	30	14.00	420.00
b)	25 sq.mm	Each	20	17.00	340.00
c)	35 sq.mm	Each	20	30.00	600.00
d)	50 sq.mm	Each	20	39.00	780.00
e)	70 sq.mm	Each	10	47.00	470.00
f)	95 sq.mm	Each	10	55.00	550.00
	<b>SPECIAL ITEM (providing power point for microwave ovens)</b>				
43	Supply and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 6A/16A amps socket outlet and 16 Amps piano type switch, connection, etc. as required; complete all as directed by Engineer-in-charge. ( <i>wiring separate with 2.5 sq.mm run of mains</i> )	Each	200	225.00	45,000.00
44	Supply & wiring for circuit / submain wiring with <b>2 x 2.5 sq.mm</b> + 1 x 2.5 sq.mm earth wire of FR PVC insulated multistranded copper conductor, single core cable in surface / recessed medium class PVC conduit as required; complete all as directed by Engineer-in-charge.	Rmt.	2000	131.00	262,000.00
				<b>TOTAL ... ..</b>	<b>1,092,104.75</b>

Sl. No.	Name of accessories	Recommended Make to be used
1	FR PVC insulated multistranded copper conductor single core cables ( 1.5 / 2.5 / 4.0 / 6.0 sq.mm )	1100 Volt Grade, Flame Retardant Low Smoke Type Only. FINOLEX / L&T / HAVELLS / ANCHOR.
2	PVC Conduits	Sudhakar / Avonplast / Nandi
3	6A & 16A piano type / modular type switches & sockets, Bell push	Anchor / maru / GM / SSK / MK
4	Lamp Holder, 3-pin ceiling rose	Anchor / maru / GM / SSK / MK
5	Calling Bell	Anchor / maru / GM / SSK / MK
6	63A, 240V rewirable porcelain fuse unit	Anchor / maru / GM / SSK / MK
7	MCB Dist. Board, 5-32A SP MCBs, 63A DP isolators	Havells / Legrand / Indoasian / Standard
8	Metallic MCB Distribution Board with Metal Clad Socket + Plug top ( <i>for AC</i> )	Havells / Legrand / Indoasian / Standard
9	10.0 Sq.mm (twin core) PVC insulated, sheathed, 1.1 kV grade Al. Conductor cable	Payal / Fincab / Gold / Havells
10	<b>Generally all materials supplied by the Contractor</b>	<b>standard make and ISI certified as agreed by the Engineer-in-Charge.</b>

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(1)	(2)	(3)	(4)	(5)	(6)

Note:- The tenderers are required to quote their tender value on %age basis at excess or less or on par with estimated value.

Tender (%)	Figures	words
Excess		
Less		
Estimate rate only		

**Conditions :**

1	A <b>penalty of 0.5%</b> of the gross value of work will be levied for every week's delay of work subject to a maximum penalty of 10% of the gross value of work.
2	The tender % age quoted by the contractor shall be inclusive of all taxes and duties other than service tax as applicable from time to time.
3	<b>Service tax will be extra if applicable for this contract.</b> Service Tax if paid by the contractor with respect to this work will be reimbursed by BHEL on production of documentary evidence for having paid the service tax by the contractor.
4	In case there is any difference in the quoted % age between figures and words, the resultant higher tender value will be taken for evaluation of tender priority and while awarding, lower tender value will be taken and this should be binding on the contractor.
5	The department reserves the right to cancel the work without assigning any reasons therefor.
6	Conditional offers are not acceptable.
7	All the bills of the contractors will be cleared subject to the production of clearance certificate by the contractors in respect of compliance of all statutory requirement, issued by IR section of BHEL-HR department.
8	The maintenance period of the work is 12 months from the actual date of completion of work. The security deposit will be released after satisfactory completion of the maintenance period.