

**ARYABHATTA RESEARCH INSTITUTE OF
OBSERVATIONAL SCIENCES, ARIES, MANORA
PEAK, NAINITAL**

**TENDER DOCUMENT
AO/CIVIL/RES/2011/01**

PRICE BID

FOR

SLICE-1

**BALANCE AND INCOMPLETE WORKS FOR
LAB (RESIDENTIAL) BLOCKS - 10 UNITS AT
ARIES, MANORA PEAK, NAINITAL**

2011-12

GRAND SUMMARY

SLICE-1

Balance & Incomplete works for Lab (Residence) Block –10 units

Sl.No.	Description	Amount in Rs.
1.	Civil works	
2.	Electrical works	
Total Tender cost		

Total cost in words (Rs. _____)

Signature of Tenderer

SUMMARY

SLICE- 1 Balance & Incomplete works for Lab (Residence) Block –10 units

CIVIL WORKS

S.No.	SUB - HEAD	AMOUNT in Rs.
1.	Earth Works	
2.	Concrete Works	
3.	R C C Works	
4.	Masonry Works	
5.	Wood Works / Aluminium Works	
6.	Steel Works	
7.	Flooring Works	
8.	Roofing Works	
9.	Finishing Works	
10.	Miscellaneous Works	
11.	Sanitary Installation Works	
12.	Soil Waste & Rain Water Pipe works	
13.	Water Supply Works	
14.	Sewerage & Drainage Works	
	SUB - TOTAL	
	Discount if any	
	Nett Total after discount	

Total Rs

(Rupees..... (In words)

Signature of Contractor
along with stamp & date

SLICE- 1

1.0 Earth Work

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
1.1	Earth work in excavation in foundation trenches or drains(not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil, back filling and disposal of surplus excavated soil as directed, for all leads within the campus. a) All kinds of soil b) Ordinary Rock	120.38 12.50	Cum Cum		
1.2	Excavating trenches of required width for pipes, cables etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidation each deposited layer by ramming, watering etc and deposited layer by ramming, watering etc and disposing of surplus excavated soil as directed, for all leads within the campus. 1) Pipes, cables etc. exceeding 80mm dia but not exceeding 300mm dia	115.00	Meter		
1.3	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc, in layers not exceeding 20cm in depth: consolidating each deposited layer by ramming and watering, All lead and lift upto 1.5m	299.31	Cum		
1.4	Extra for every additional lift of 1.5 m or part thereof in a) All kinds of soil	15.00	Cum		

	b) Ordinary Rock	35.18	Cum		
1.5	Supplying and filling in plinth with sand under floors including, watering, ramming consolidating and dressing complete	114.55	Cum		
	SUB - HEAD TOTAL				

SLICE- 1

2.0 Concrete Work

<i>S. No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate in Rs. (Rate in fig & Words)</i>	<i>Amount in Rs.</i>
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering-upto floor five level				
	a) 1:4:8(1 cement: 4 coarse sand: 8 graded stone aggregate 40mm nominal size)	67.06	Cum		
	b) 1:5:10 (1 cement: 5 coarse sand : 10 grade stone aggregate 40mm nominal size)	7.50	Cum		
2.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets coping, bed blocks, anchor, blocks, plain window sills, fillets etc upto floor five level, excluding the cost of centering, shuttering and finishing:				
	1:2:4(1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size)	5.00	Cum		
2.3	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand : 6stone aggregate 20mm nominal size) over 75 mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the smooth	20.00	Sqm		
	SUB - HEAD TOTAL				

SLICE- 1

3.0 RCC Work

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
3.1	Providing and laying in position Machine Batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centring, shuttering, finishing and reinforcement including Admixtures in recommended proportion (as per IS: 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Project Engineer M-20 grade reinforced cement concrete.				
	a) All work upto plinth level	59.32	Cum		
	b) All work from plinth level upto floor V level				
	i) Walls, columns, pillars, posts and struts	41.24	Cum		
	ii) Beams, plinth beams, griders, bressumers, cantilevers, suspended floors lintels roofs and staircases including spiral staircases, shelves etc.	301.43	Cum		
3.2	-Do- as per item No 3.1 but for Providing M-25 grade reinforcement cement concrete.	700.51	Cum		
3.3	Centering and shuttering at all level and for all shapes including inclined, circular. including strutting, propping etc. and removal of form for:				
	a) Foundations, footings, bases of columns etc. for mass concrete	559.53	Sqm		
	b) Suspended floors, including inclined roofs, landings, balconies and access platform	544.19	Sqm		
	c) Lintels, beams, plinth beams, griders, bressumers and cantilevers	544.19	Sqm		
	d) Columns, Pillars, Piers, Abutments,	3581.31	Sqm		

	Post and struts				
3.4	Extra for additional height in centring, shuttering wherever required with adequate bracing, propping etc. including cost of de-shuttering and decentring at all levels, over a height of 3.5m, for every additional height of 1 metre or part thereof(plan area to be measured)	270.00	Sqm		
3.5	Reinforcement for R.C.C works including straightening, cutting, bending, placing in position and binding all complete. Thermo mechanically treated bars	34005.21	Kg		
3.6	Add for plaster drip course/group in plastered surface or molding to RCC projections complete as directed.	300.00	Meter		
	SUB - HEAD TOTAL				

SLICE- 1

4.0 Brick Work

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
4.1	Brick work for all shapes including circular with bricks of class designation 75 in foundation and plinth in: Cement mortar 1:6 (1 cement: 6 coarse sand)	103.55	Cum		
4.2	Brick work all shapes including circular with bricks of class designation 75 in super structure above plinth upto floor V level				
	a) Cement Mortar 1:6 (1 cement: 6 coarse sand)	148.98	Cum		
4.3	Half brick masonry with bricks of class designation 75 in plinth / super structure above plinth upto floor five level Cement mortar 1:4 (1 cement:4 coarse sand)	201.16	Sqm		
4.4	Extra for providing and placing in position 2 Nos. 8mm dia M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	201.16	Sqm		
4.5	Honey-comb brick work 10/11.4 cm thick with bricks of class designation 75 in cement mortar 1:4(cement: 4 coarse sand) .	4.50	Sqm		
4.6	Random rubble masonry with hard stone in foundation and plinth including leveling with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 grade stone aggregate 20 mm nominal size at plinth level with: Cement mortar 1:6 (1 cement: 6 coarse sand) . (Rate shall be inclusive of providing of weep hole etc complete as directed. CC band beam will be measured & paid for separately in respective item).	2.30	Sqm		
4.7	Brick work 7 cm thick with FPS bricks of class designation 75 in cement				

	mortar 1:3(1 cement:3 coarse sand) at all levels	5.0	Sqm		
4.8	Extra for treating the surfaces for efflorescence before plastering /painting with 5% solution of muriatic acid including scraping of existing loose dust, dirt , white wash/paint before application of solution . the wall must be thoroughly washed with copious flow of clean water both before and after the application of solution.	200.00	Sqm		
	SUB- HEAD TOTAL				

SLICE- 1

5.0 Wood Work/Aluminum Work

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
5.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position:				
	a) Second class teak wood	0.13	Cum		
	b) Kiln seasoned and chemically treated hollock wood	2.77	Cum		
	c) Sal wood	9.77	Cum		
5.2	Providing and fixing 35 mm thick glazed shutters for doors, windows and clerestory windows using 10 Kg/square meter (4mm thick) glass panes including ISI marks M.S butt hinges with necessary screws and cutting rebate where ever required as per architectural drawing.				
	a) Second class teak wood	93.50	Sqm		
5.3	Providing and fixing flush door shutters decorative type, core of block board construction with frame of 1 st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters: 35mm thick including ISI marked M S butt hinges with necessary screws	144.0	Sqm		
5.4	Providing and fixing 35 mm thick wire gauze shutters using galvanized M.S. wire gauze of average width of aperture 1.4mm with wire of dia 0.63 mm for doors, windows and clerestory windows including ISI marks MS butt hinges with necessary screws and cutting rebate where ever required as per architectural drawing.				
	a) Second class teak wood	93.50	Sqm		
5.5	Extra for providing lipping with 2 nd class teak wood battens 25mm				

	minimum depth on all edges of shutters(over all area of door shutter to be measured) over item of Flush door shutter	144.00	Sqm		
5.6	Providing and fixing IS:3564 marks aluminium die cast body tubular type universal hydraulic door closer, Hardwyn make (classic queen) or Everite with necessary accessories and screws etc. complete.	2.00	Each		
5.7	Providing and fixing aluminium sliding door bolts anodized (anodic coating not less than grade AC 10 as per IS:1868)transparent or dyed to required colour or shade with nuts and screws etc, complete: 300x16 mm	100.00	Each		
5.8	Providing and fixing aluminium tower bolts anodized (anodic coating not less than grade AC 10 per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:				
	a) 250x 10mm	240.00	Each		
	b) 150x10mm	240.00	Each		
	c) 100x 10mm	640.00	Each		
5.9	Providing and fixing aluminium pull bolt lock anodized (anodic coating not less than grade AC 10 as per IS:1868) transparent of dyed to required colour and shade with necessary screws etc. complete.	20.00	Each		
5.10	Providing and fixing aluminium handles anodized(anodic coating not less than grade AC 10 as per IS:1868) transparent of dyed to required colour or shade with necessary screws etc. complete.				
	a) 125 mm	400.00	Each		
	b) 100 mm	480.00	Each		
	c) 200 mm long D Type	400.00	Each		
5.11	Providing and fixing aluminium handing floor door stopper anodised (anodic coating not less than grade AC 10 as per IS:1868) transparent of dyed to required colour and shade with necessary screws etc. complete. Twin rubber stopper	200.00	Each		

5.12	Providing and fixing aluminium casement stays anodised(anodic coating not less than grade AC 10 as per IS:1868) transparent or dyed to required colour and shade with necessary screws etc. complete.	200.00	Each		
5.13	Providing and fixing plain glass panes on wooden frame including teak wood beading complete in all respect.				
	a) 4 mm thick	40.00	Sqm		
	b) 6 mm thick	40.00	Sqm		
5.14	Providing and fixing wooden moulded beading size 50 mmx12 mm to door and window/frames with iron screws, plugs and priming coat on unexposed surface etc. complete	1000.00	Rm		
5.15	Providing and fixing expansion hold fasteners on CC/R.C.C surface backing including drilling necessary holes and the cost of bolt etc. complete as directed by Engineer-Incharge. Wedge expansion type Fastener with threaded dia. 3/8" or 10mm -125 mm long or as directed.	1400.00	Each		
5.16	Providing and fixing door back rubber stopper to required colour and shade with necessary screws etc. complete.	20.00	Each		
5.17	Providing and fixing aluminium kick plate 24 guage, cut to shape and size, fixing with nails, screws etc. complete as directed.	10.00	Sqm		
	SUB- HEAD TOTAL				

SLICE- 1

6.0 Steel Work

S. No.	Description	Quantity	Unit	Rate (Rate in fig & Words)	Amount
6.1	Steel work welded in built up sections/framed work including cutting, hoisting, welding fixing in position and applying a priming coat of approved steel primer all complete. In gratings, frames, grills, ladder, MS railings, brackets, gates and similar works	240.00	Kg		
6.2	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts or wooden plugs and embeddings in cement concrete block 30x10x15 cm 1:3:6 mix(1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size).	720.00	Each		
	SUB- HEAD TOTAL				

SLICE- 1

7.0 Flooring

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
7.1	Cement concrete flooring 1:2:4(1 cement: 2 coarse sand:4 graded stone aggregate)finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete. 40 mm thick with 20 mm nominal size stone aggregate	1006.10	Sqm		
7.2	Cement plaster skirting(upto 30cm height) with cement mortar 1:3 (1 cement :3 coarse sand) finished with a floating coat of neat cement 18mm thick	90.00	Sqm		
7.3	Providing and fixing matt/glossy finish glazed tiles conforming to IS: 13753 of minimum thickness of 6.00mm of approved make like KAJARIA, SOMANY, NITCO, ORIENT in flooring and walls over 12mm thick bed of cement mortar 1:3 (1 cement:3 coarse sand) and jointing with grey cement slurry @3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete, Size, thickness and colour as per drawing and direction of Project Engineer.	473.76	Sqm		
7.4	Kota stone slab flooring in floors, treads (in single piece up to 1.5 m length), cills, copings, bands with stone of required size over 20mm (average) thick base laid over and jointed with Grey cement slurry mixed with pigment to match the shade of the slab including rubbing and wax polishing complete with base of 1:4 (1 cement: 4 coarse sand) 25mm thick	53.6	Sqm		
7.5	Kota stone slabs 25mm thick in risers of steps(in single piece up to 1.5m				

	length),skirting, dado bands and pillars laid on 12mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and wax polishing complete. 25mm thick	32.64	Sqm		
7.6	Providing and fixing matt finish ceramic floor titles conforming to IS: 13755 of minimum thickness of 7.70mm of approved make like KAJARIA (Group V), SOMANY (Grade V) or equivalent in NITCO/ORIENT Make over 20 mm thick bed of cement mortar 1:4 (1 cement:4 coarse sand) including pointing in white cement mixed with pigment of matching shade complete Size and colour as per drawing and direction of Project Engineer.	156.47	Sqm		
7.7	Providing and fixing 18mm thick mirror polished machine cut for kitchen platform, vanity counteres faciase and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement: 4 coarse sand)with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, polishing etc. complete at all levels.				
	a) Udaipur green marble	30.24	Sqm		
7.8	Extra for providing edge molding to 18 mm thick stone counters vanities etc. over the above item including machine polishing to edge to give high gloss finish etc. complete as per design approved by Project Engineer.				
	a) Udaipur green marble	50.40	Rm		
7.9	Extra for full round nosing in steps and treads of kota stone slab. Including polishing etc complete.	204.00	Rm		
7.10	Providing and fixing glass strips in joints of terrazzo/cement concrete floors.				

	40mm wide and 4 mm thick	1800.00	Rm		
7.11	Extra for providing opening of required size & shape for wash basins/kitchen sink in kitchen platform, vanity counters and similar location in marble/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	10.00	Each		
	SUB- HEAD TOTAL				

SLICE- 1

8.0 Roofing

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
8.1	Supply & installation of precoated galvanised iron profile sheets(size shape and pitch of corrugation as approved by Engineer -In charge) 0.50 mm+/-5% total coated thickness (TCT) thick zinc coating 120 gsm as per IS: 277 in 240 mpa steel graded, 5-7 microns epoxy primer on both side of the sheet and polyester topcoat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single lenth upto 12 meter or as desired by Engineer –In charge .the sheet shall be fixed using self drilling / self tapping screws of size (5.5x55mm)with EPDM seal or with polymer coated J&L hooks, bolts and nuts 8mm diameter with bitumen and G.I limpet washers or with G.I limpet washers filled with white lead complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins,rafters and trusses and including cutting to size and shape wherever required.	750.00	Sqm		
8.2	Supply & installation of precoated galvanised steel sheet roofing accessories 0.50 mm+/-5% total coated thickness (TCT) thick zinc coating 120 gsm as per IS: 277 in 240 mpa steel graded, 5-7 microns epoxy primer on both side of the sheet and polyester topcoat 15-18 microns using self drilling / self tapping screws or with polymer coated J&L hooks, bolts and nuts or with G.I seam bolts nuts, and G.I plain and bitumen washers complete.				
	a) Ridges plain (500-600mm)	100.00	Rm		
	b)Flashings/ Aprons (upto 600mm)	180.00	Rm		
	c)Gutter (600mm overall girth)				

	rectangular/semi-circular(as directed and approved) with iron brackets 40x5 mm size bolts, nuts and washer etc including making necessary connections with plain MS sheet rain water pipes with funnel complete as directed by Engineer –In charge.	200.00	Rm		
	SUB- HEAD TOTAL				

SLICE- 1

9.0 Finishing Work

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
9.1	12mm cement plaster of mix: 1:6 (1 cement: 6 fine sand)	2586.73	Sqm		
9.2	15mm cement plaster on the rough side of single or half brick wall of mix: 1:6 (1 cement: 6 fine sand)	1597.13	Sqm		
9.3	15mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.	180.00	Sqm		
9.4	6mm cement plaster to ceiling of mix: 1:3 (1 cement: 3 fine sand)	1352.20	Sqm		
9.5	Applying priming coat:				
	a) With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)	300.00	Sqm		
9.6	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade Two or more coats on new work manufacture	300.00	Sqm		
9.7	Finishing walls with textured exterior paint of required shade: New work (Two or more coats applied @ 3.28 ltr/10sqm) over and including base coat of water proofing cement paint applied @2.2kg/10sqm)	1000.00	Sqm		
9.8	Pointing on stone work with cement mortar 1:3 (1 cement: 3 fine sand): Flush pointing/Raised pointing.	5.00	Sqm		
9.9	20 mm thick plaster 1:4 cement 4 Coarse sand with providing and mixing water proofing materials in impermo of M/S Snowcap or equivalent in cement plaster work in proportion recommended by the Manufactures.	16.88	Sqm		
9.10	Distempering with oil bound washable distemper of approved brand and manufacture to given an even shade				

	New work (two or more coats) over and including priming coat with cement primer.	4383.93	Sqm		
	SUB- HEAD TOTAL				

SLICE- 1

10.0 Miscellaneous Work

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
10.1	Providing and fixing 150mm wide 24 gauge chicken wire-mesh strips on joints of RCC and brick wall with U shape nails and spread cement mortar 1:4 (1 cement: 4 coarse sand)	216.88	Sqm		
10.2	Supplying and laying reflective thermal insulation medium polymer brand or equivalent, 4mm thick polymer big with 9mm of close cell clear PE bubbles covered both sides with at least 8 micron anti corrosion aluminium foil, to be laid on sloping slab roofs as per manufactures specifications and directions of Project Engineer.	500.00	Sqm		
10.3	Demolishing RCC work manually/by mechanical mean including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	5.00	Cum		
10.4	Demolishing brick work manually/by mechanical mean including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	2.50	Cum		
10.5	Providing, making & fixing in position wardrobe made in 19mm commercial board (including partitions, drawers) and solid wood lipping at edges complete in all respect including priming and painting as required shade ,and all hardware like brass handles/knobs, multipurpose Godrej lock, magnetic catcher, brass tower bolts, sliding channel, hinges etc. complete as directed by Engineer –In charge.	60.00	Sqm		
10.6	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and approved size and design/shape laid in required colour and pattern over and				

	including 50mm thick compacted bed of coarse sand filling the joints with coarse sand etc. all complete as per the direction of Engineer-in charge.	20.00	Sqm		
	SUB- HEAD TOTAL				

SLICE- 1

11.0 SANITARY & PLUMBING WORKS.

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
11.1	Providing and fixing white vitreous china water closet squatting pan (Indian type WC pan) with 100mm sand cast iron P or S trap, 10 litre low level PVC flushing cistern with manually controlled device handle liner)conforming to IS; 7231 parry ware/Hind				
a)	Orissa pan WC of size 580x440 mm with integral type foot rests flush pipe and overflow arrangement.	10.00	Each		
11.2	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, with C.P. brass hinges and rubber buffers 10 litre low level flushing cistern with fittings & C.I./M.S. brackets, 40mm flush bend, overflow arrangement.				
a)	W.C. pan with white soild plastic seat and lid with white vitreous china flushing cistern & C.P. flush bend and water jet complete.	10.00	Each		
11.3	Providing and fixing white vitreous china wash basin with C.I./M.S. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good walls wherever required:				
a)	Flat back wash basin size 550x400 mm with a paid of 15 mm C.P. brass pillar tap.	10.00	Each		
b)	-Do- as item 11.3 but with basin mixture instead of pill tap	10.00	Each		
11.4	Providing and fixing stainless steel kitchen sink as per I.S. 13983 with C.I. brackets and stainless steel plug 40 mm				

	including painting of fittings and brackets, cutting and making good the walls wherever required. a) 535x460 bowl depth 178mm with drain board.	10.00	Each		
11.5	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleat with CP brass screws and washers complete.	20.00	Each		
11.6	Providing and fixing towel rod complete with brackets fixed to wooden cleats with C.P. brass screws.				
	600x200 mm size	20.00	Each		
11.7	Providing and fixing CP soap dish fixed to rawl plug of approved design with CP brass screws.	20.00	Each		
11.8	Providing and fixing toilet paper holder				
a)	C.P. brass.	10.00	Each		
11.9	Providing and fixing CP brass twin coat hooks fixed to wooden cleats with CP brass screws, hooks or approved equivalent.	20.00	Each		
11.10	Providing and fixing corner rack (glass) with complete.	10.00	Each		
11.11	Providing and fixing corner rack below mirror (glass) with complete.	10.00	Each		
11.12	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
	15 mm dia nominal bore	10.00	Each		
11.13	'-Do- as per item No. 11.12 but for short body	15.00	Each		
11.14	Providing and fixing brass bib cock	05.00	Each		
11.15	Providing and fixing CP brass angle valve for basin mixer and geyser points approved quality conforming to IS: 8931				
	15 mm dia nominal bore	100.00	Each		
11.16	Providing and fixing CP brass concealed stop cock of approved quality for shower assembly	40.00	Each		
11.17	Providing and fixing C.P. brass connection pipe with brass unions, 45 cm length.				

a)	15 mm dia nominal bore	40.00	Each		
11.18	Providing and fixing Shower set RELAXA or as approved.	20.00	Each		
11.19	Providing fixing, testing and commissioning of storage type electric water heater with automatic thermostatic control electric element, pressure release valve, brackets fixed to expansion fasteners with M.S. nuts and bolts all complete including cutting				
	25 liter capacity	20.00	Each		
11.20	Providing and fixing CP brass cockroach trap of approved make complete.	20.00	Each		
11.21	Providing and fixing CP floor trap jalli of approved make complete – 100 mm dia	25.00	Each		
11.22	'-Do- as per 11.21 but CI Jalli	10.00	Each		
	SUB- HEAD TOTAL				

SLICE- 1

12.0 Soil waste & Rain Water Pipe

<i>S. No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate in Rs. (Rate in fig& Words)</i>	<i>Amount in Rs.</i>
12.1	Providing and fixing soil, waste and vent pipes				
a)	100 mm dia centrifugally cast (spun) iron S&S	5.00	Rm		
12.2	Providing and fixing M.S. holder-bat clamps of approved design to sand cast iron/ cast iron (spun) pipe embedded in and including cement blocks 10x10x10cm of 1:2:4 mix (1cement :2 coarse sand :4 graded stone aggregate 20mm nominal size)				
a)	For 100mm dia pipe.	50.00	Each		
12.3	Providing and fixing plain bend of required degree.				
a)	100 mm centrifugally cast (spun) iron S&S	1.00	Each		
12.4	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
a)	100x100x100 mm centrifugally cast (spun) iron S&S	1.00	Each		
12.5	Providing lead caulked joints to sand cast iron/centrifugally cast(spun) iron pipes and fittings of diameter.				
a)	100 mm	3.00	Each		
12.6	Providing and fixing sand cast iron trap of self cleansing design with sand cast screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors.				
b)	100 inlet and 100 mm outlet	2.00	Each		
12.7	Cutting holes upto 30x30 cm in walls including making good the same.				
a)	With FPS Bricks	20.00	Each		
12.8	Providing and fixing UPVC soil waste rainwater (SWR) pipe with one end				

	plain and other and integrally socketed and providing with square grooves and along with V shaped rubber ring including fittings bend, tees etc. and cutting & making good wall and flooring wherever necessary. The wall thickness of the pipe and other technical characters conform to IS: 13592-1992 and rubber ring conform to IS: 5382 the jointing to be completed with rubber lubricant (Type A).				
	a) 110 mm diameter	412.00	Rm		
	b) 160mm diameter	5.00	Rm		
12.9	Providing and fixing PVC trap of self cleansing design with grating complete, including cost of cutting and making good the walls and floors. 100 inlet and 100mm outlet.	20.00	Each		
	SUB- HEAD TOTAL				

SLICE- 1**13.0 Water supply**

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
13.1	Providing G.I pipes and fixing G.I pipes complete with G.I fittings including trenching and refilling etc,complete with including painting with anti corrosive bitumastic paint.				
a)	15 mm dia	10.00	Rm		
b)	20 mm dia	100.00	Rm		
c)	25 mm dia	100.00	Rm		
d)	32 mm dia	5.00	Rm		
e)	50 mm dia	2.00	Rm		
13.2	Concealed pipe including painting with anti corrosive bitumastic paint. Cutting chases and making good the wall				
a)	15 mm	440.00	Rm		
b)	20 mm	300.00	Rm		
13.3	Constructing masonry chamber 30x30x50cm inside with 75 class designation brick work in cement mortar 1.5 (1 cement: 5 fine sand) for stop cock/gate valve, with CI surface box 100x100x75mm (inside) with hinged cover fixed in cement concrete slab 1:2:4: mix (1 cement)				
a)	With F.P.S. brick	20.00	Each		
13.4	Providing and fixing brass ball valve with C.I. wheel of approved quality (screwed end).				
a)	15 mm nominal bore	1.00	Each		
b)	20 mm nominal bore	1.00	Each		
c)	25 mm nominal bore	2.00	Each		
d)	32 mm nominal bore	1.00	Each		
13.5	Providing and fixing wall mixture without telephonic shower of approved quality complete as directed	20.00	Each		
13.6	Providing and fixing sink mixture with complete approved quality	10.00	Each		
13.7	Providing and placing on terrace (at all				

	floor levels)polyethylene water storage tank IS: 1270 marked including the BIS license no. with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fitting.	7500.00	Liter		
13.8	Providing and fixing fittings to polyethelene water storage tank such as 40 mm dia nomial bore GI scour pipe 300 mm long with GI fittings, 25 mm norninal bore GI overflow pipe with fittings, 300 mm long and overflow pipe with fittings, 300 mm long and 25 mm dia mosquito proof coupling with perforate	1.00	Each		
	SUB-HEAD TOTAL				

SLICE- 1

14.0 SEWERAGE & DRAINAGE .

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
14.1	Providing laying and jointing glazed stone ware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1.1 (1 cement: 1 fine sand) including testing of joints complete.				
a)	100 mm dia	5.00	Rm		
b)	150 mm dia	100.00	Rm		
14.2	Providing and laying cement concrete 1:5:10 (1 cement: 5 coarse sand: 10 graded stone aggregate 40 mm nominal size) 150mm thick around S.W/PVC. pipes including bed concrete as per standard design				
a)	100 mm diameter SW pipe	85.00	Rm		
b)	150 mm diameter SW pipe	100.00	Rm		
14.3	Providing and fixing square mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with bricks of class designation 75 and water tight CI cover with frame of 300x 300 mm size (inside) the weight of cover to be not less				
a)	150X 100 mm size P type with FPS bricks	10.00	Each		
14.4	Constructing brick masonry manhole with 75 class designation bricks in cement mortar 1:4 (1 cement: 4 coarse sand), RCC top slab 100mm thick in 1:2:4: mix (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:4:8 (1 cement: 4 coarse sand :8 stone aggregate 20 mm nominal size) 100 mm thick including excavation, 12mm				

	thick internal plaster with floating coat of neat cement,12mm thick external plaster, benching etc complete.				
	a) Inside size 90-x 80- cm and 45 cm deep including CI cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (wt. of cover 23 kg and wt of frame 15 kg) with F.P.S. bricks	7.00	Each		
14.5	Constructing brick masonry manhole with 75 class designation bricks in cement mortar 1:4 (1 cement: 4 coarse sand), RCC top slab in 1:2:4: mix (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:4:8(1 cement: : 4 coarse sand :8 stone aggregate 20 mm nominal size) 100 mm thick including excavation,12mm thick internal plaster with floating coat of neat cement,12mm thick external plaster, benching etc complete.				
	a) Inside size 120-x 90 cm and 90 cm deep including CI cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (wt. of cover 58 kg and wt of frame 58 kg) with F.P.S. bricks	8.00	Each		
14.6	Providing and fixing SW `T'/ intercepting trap in manholes with stiff mixture of cement mortar 1:1(1 cement : 1 fine sand) including testing of joints etc complete				
	a) 150mm dia	2.00	Each		
14.7	Providing sand cast iron drop connection externally for 60cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all-round with cement concrete 1:5:10(1 cement: : 5 coarse sand :10 stone aggregate 20 mm nominal size) with all centering and shuttering required , cutting hole in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered				

	with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement : 1fine sand) joints between sand cast iron tee and S.W. pipe, making required channels as per standard design and specifications.				
	a) For 150mm dia sand cast iron drop connection	2.00	Each		
14.8	Extra for depths beyond 60cm of sand cast iron drop connection complete.				
	a) For 150mm dia sand cast iron drop connection	0.50	Rm		
14.9	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floor with cement concrete 1:2:4; cement plaster on both sides with cement mortar 1:3 finished with a floating coat of neat cement and making necessary channels for the drain etc complete.				
	a) For pipes 100to 230 mm diameter	1.00	Each		
14.10	Supplying fixing CI cover without frame for manholes				
	a)560mm diameter CI cover (medium duty) wt. of cover 58 kg and wt of frame 58 kg	5.00	Each		
14.11	Extra depth for manholes.				
	a) Size 900X800mm.	1.00	Each		
	b) Size 1200X900mm.	1.00	Each		
	SUB-HEAD TOTAL				

SUMMARY

SLICE-2: Construction of double duplex Lab (Residential) Blcks-05 units

Sr. No .	Description of Items	Amount (In Rs.)
1	Wiring	
2	Distribution system	
3	Sub mains and cables	
4	Earthing	
5	Fixtures and fittings	
6	Street light	
	Sub Total	
	Discount If Any	
	Nett Total After Discount	

Amount In Words : Rupees _____

(Signature of the Bidder)

SLICE-1

(A) WIRING

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
1	Point wiring for switch controlled primary light points with 3x2.5sqmm (P+N+E) FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in PVC pipe minimum 20mm dia recessed and/or surface conduiting system including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting in RCC slab/floor/walls etc as required and including the cost of supplying and fixing modular grid plate mounted flush mounted 240 volt 6 Amp control switch of approved quality and colour housed in zinc chromate passivated MS boxed with moulded cover plate and including cost of circuit wiring (from DB to first switch in the sub circuit) complete as per specifications and as required.	350	each		
2	Point wiring for DB controlled primary light points with 3x2.5 sq mm (P+N+E) FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in PVC pipe minimum 20 mm dia recessed and/or surface conduiting system including cost of providing saddles etc for surface conduiting and/or cost of				

	cutting and filling chases for recessed conduiting in RCC slab/floor/walls complete as specifications and as required (cost of MCB nos included.	10	each		
3	Point wiring for Secondary light points with 3x1.5 sq mm (P+N+E) FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in PVC pipe minimum 20mm dia recessed and/or surface conduiting system including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting in RCC slab/floor/walls complete as per specifications and as required.	50	each		
4	Point wiring for ceiling fan points with 2x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in PVC pipe minimum 20mm dia recessed and/or surface conducting system including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting in RCC slab/floor/walls including circuit wiring (from DB to first switch) 2x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires and including loop earthing with 1x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires and including cost of supplying and fixing modular grid plate mounted flush mounted 240 volt 6 amp control switch of approved quality & colour housed in zinc chromate passivated MS boxes				

	with moulded cover plate and fan hook box and including space provision for electronic speed regulator complete as per specifications and as required.	75	each		
5	Point wiring for exhaust fan points with 2x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in PVC pipe minimum 20mm dia recessed and/or surface conduiting system including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for—recessed conduiting in RCC slab/floor/walls including circuit wiring (from DB to first switch) with 2x2.5 sq mm FRLS PVC insulated 600/1100 volt grade stranded copper conductor wires and including loop earthing with 1x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires and including the cost of supplying and fixing modular grid plate mounted flush mounted 240volt 6 amp socket outlet of approved quality & colour housed in zinc chromate passivated MS boxes with moulded cover plate near the fan and supplying and fixing modular grid plate mounted flush mounted 240volt 6 amp control switch of approved quality & colour housed in zinc chromate passivated MS boxes with moulded cover plate and at separate location complete as per specifications and as required.	30	each		
6	Wiring for bell push with 2x1.5 sq. mm pvc insulated stranded copper conductor 1100 volt grade wires in				

	<p>PVC pipe minimum 20 mm dia conduit in recessed slab/floor/walls including cost of providing saddles etc. as required for surface conduiting and/or cost of cutting and filling chases as required and including providing and fixing a grid plate mounted 6 amp 240 volt Bell push with moulded cover plate in recessed zinc chromate passivated MS box and including the cost of running 1x1.5 sq mm PVC insulated copper conductor wire for loop earthing etc. complete as per specifications and as required, complete as required.</p>	15	each		
	SUB- HEAD TOTAL				

SLICE-1

(B) Outlets on Raw Power wired from DB

<i>S. No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate in Rs. (Rate in fig& Words)</i>	<i>Amount in Rs.</i>
1	Point wiring for 6 amp socket outlet with 2x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in PVC pipe minimum 20mm dia recessed and/or surface conduiting system including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting in RCC slab/floor/walls including circuit wiring (from DB to first switch)with 2x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires and including loop earthing with 1x2.5 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires and including the cost of supplying and fixing modular grid plate mounted flush mounted 240 volts 6 amp socket outlet with 6 amp control switch of approved quality & colour housed in zinc chromate passivated MS boxex with moulded cover plate complete as per specifications and as required.	160	each		
2	Point wiring for 16 amp socket outlet with 2x4 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in				

	<p>PVC pipe minimum 20mm dia recessed and/or surface conduiting system including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting in RCC slab/floor/wals and including loop earthing with 1x4 sq mm FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires and including the cost of supplying and fixing modular grid plate mounted flush mounted 240 volts 16 Amp socket outlet with 16 amp control switch of approved quality & colour housed in zinc chromate passivated MS boxes with moulded cover plate complete as per specifications and as required.</p>	150	each		
3	<p>Point wiring for Geyser points with 3x4.0 sq.mm FRLS PVC insulated stranded copper conductor 660/1100 volt grade wires in PVC pipe minimum 20 mm dia recessed and/or surface conduiting system including cost of providing saddles etc as required for surface conduiting and/or cost of cutting and filling chases as required and including providing and fixing of a 6 pin 240 volt 16 amp socket outlet with safety shutters with moulded cover plate in recessed zinc chromate passivated MS box near the Geyser point and including earthing of the 3rd pin with 4.0 sq mm 1100 volt grade PVC insulated stranded copper wire and</p> <p>Including providing and fixing a 16 amp single pole 240 volt 16 amp switch with moulded cover plate in recessed zinc chromate passivated</p>	30	each		

	MS box located separately as per drawings/ instructions for Geyser controls complete as required.				
4	Point wiring for weather proof 16 amp outlets with 3x4 sq mm (P+N+E) FRLS PVC insulated 660/1100 volt grade stranded copper conductor wires in IS embossed galvanized in minimum 20 mm dia 16 SWG MS recessed and/or surface conduiting system including the cost of cutting/making good chases in brick work and including the cost of providing and fixing MDS make comprising of Switch control PVC moulded recessed mounting box with 16 amp 240 volts (2P+E) socket outlets and plug top complete with IP 56 ingress protection complete as required.	10	each		
	SUB- HEAD TOTAL				

SLICE-1

(C) Raceways and Conduits

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
1	Supplying and fixing MS raceway system suspended above false ceilings with 40x40x6 mm galvanized MS angle supports 12 mm dia galvanized MS rod hangers spaced 600 mm apart through the length, including hooks, dash fasteners, nuts and bolts etc. The MS raceway system with neoprene gasketed removable cover fixed to the raceway by countersunk cadmium plated screws at 300 mm intervals along with all fittings like bends, T-joints, end caps, couplers etc. shall be fabricated from 2 mm thick MS sheets finished with powder coating paint finish of approved colour and including cost of earth links between adjacent sections to ensure earth continuity complete as per specifications as required and as below.				
a)	50 mm wide x 50 mm deep	5	mts		
b)	100 mm wide x 50 mm deep	5	mts		
2	Supplying and fixing of following MS raceway system with neoprene gasketed removable cover fixed to the raceway by countersunk cadmium plated screws at 300 mm intervals recessed in floors including the cost of chasing and				

	making good. The MS raceway system alongwith all fittings like bends. T-joints couplers etc. shall be fabricated from 2 mm thick and covers from 3 mm thick electro galvanized MS sheets finished with powder coating paint finish of approved colour and shall include the cost of providing 2 nos. 25 mm x6mm GI strips fixed to the metal portion in electrical contact throughout the length of the raceway complete as per specifications as required and as below:				
a)	150 mm wide x50 mm deep	18	mts		
b)	50 mm wide x 50 mm deep	15	mts		
3	Supplying and fixing of following floor recessed junction boxes for MS raceway systems fabricated from 2 mm thick electro galvanized MS sheets finished with powder coating paint finish with 3 mm thick neoprene gasketed removable cover fixed by counter sunk cadmium plated screws including the cost of earth links at all joints to ensure earth continuity and including the cost of chasing and making good recess in floor etc complete as required and as below.				
a)	200 mmx200 mmx75 mm deep	5	nos		
b)	100 mmx 100mm x75mm deep	5	nos		
4	Supplying and fixing PVC pipe recessed and/or surface conduits including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting complete as per				

	specifications as required and as below.				
a)	20 mm	100	mts		
b)	25 mm	150	mts		
c)	32 mm	150	mts		
d)	40 mm	25	mts		
e)	50 mm	25	mts		
5	Supplying and fixing heavy gauge ISI embossed galvanized GI Conduit recessed and/or surface conduiting including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting including the cost of cutting/marketing good chases in brick work complete as per specifications, as required and as below.				
a)	25 mm 16 SWG	25	mts		
b)	32mm 16 SWG	25	mts		
	SUB- HEAD TOTAL				

SLICE-1

(D) DATA/VOICE SYSTEM

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
1	Wiring for telephone point with required telephone conductor (0.61mm annealed tinned electrolytic copper conductor PVC insulated unsealed twisted wire) surface/concealed conduit including cost of providing saddles etc. for surface conduiting and/or cost of cutting and filling chases for recessed conduiting and fixing of modular switch and modular type RJ-11 (telephone socket) along with complete accessories like inner plate, outer plate and flush metal elbows with modular cover plate in zinc chromate passivitive MS box, including the cost of running telephone conductor and tag block from EPBAX room/DBs to in points. Rate shall be inclusive of providing and fixing required pair of cables and accessories, junctions etc. complete as directed.	10	Nos.		
2	Supply and fixing of the following sheet steel clad wall/recess/floor mounting telephone tag block of Krone make constructed from 14 SWG sheet steel, finished with red oxide coating of two coats of paint, with hinged gasketed door and complete with adequately rated and sized telephone terminal block to				

	receive incoming and outgoing wires. The cost shall be complete with fixing arrangements, foundations etc as required.				
a)	30 pair	1	Nos		
b)	20 pair	2	nos		
c)	10 pair	2	nos		
3	Supply, laying clamped to wall with suitable clamps saddles and fixing bolts/in ground including the cost of digging and back filling with sand and brick protection as required and testing and commissioning of the following multi core 0.61 mm annealed tinned copper conductor PVC insulated and PVC sheathed and overall PVC sheathed armoured telephone cables generally conforming to ITDs/WS-11-B and IS 1554 Part I as required and including making terminal joints, complete as required.				
a)	30 pair	100	mts		
b)	20 pair	100	mts		
c)	10 pair	100	mts		
4	Supplying and fixing heavy gauge ISI embossed galvanized GI Conduit recessed and/or surface conduits including cost of providing saddles etc for surface conduiting and/or cost of cutting and filling chases for recessed conduiting including the cost of cutting/making good chases in brick work complete as per required and as below.				
a)	25 mm 16 SWG	20	mts		

b)	32 mm 16 SWG	20	mts		
	SUB- HEAD TOTAL				

SLICE-1

(E) Data Communication (vender to obtain certification from the parent company for all data communication network)

<i>S. No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate in Rs. (Rate in fig& Words)</i>	<i>Amount in Rs.</i>
1	Wiring and testing, commissioning for RJ-45 point with CAT-6 LAN cable surface/concealed conduit including cost of providing saddles etc. for surface conduiting and/or cost of cutting and filling chases for recessed conduiting and fixing of switch and modular type RJ-45 socket with shutter along with complete accessories like inner plate, outer plate and flush metal boxes with modular cover plate in zinc chromate passivitive MS box, including the cost of running CAT-6 LAN conductor from server room	10	Nos.		
	SUB- HEAD TOTAL				

SLICE-1

(F) TV system

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
1	Wiring for TV point with RG-6 conductor surface/concealed conduit including cost of providing saddles etc. for surface conduiting and/or cost of cutting and filling chases for recessed conduiting and fixing of modular type TV socket along with complete accessories like inner plate, outer plate and flush metal boxes with modular cover plate in zinc chromate passivitive MS box, including the cost of running RG-6 conductor from main junction box out site the building.	10	Nos.		
	SUB- HEAD TOTAL				

SLICE-1

(G) DISTRIBUTION SYSTEM

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
1	Supply, installation, testing and commissioning of factory fabricated and factory assembled, sheet steel clad powder coated, wall/recess mounting dust and vermin (IP-42 ingress protection) proof double door vertical type Distribution Boards fabricated from 16 SWG sheet steel provided with hinged gasketed door with padlocking facility and including suitably rated PVC insulated copper busbars with FRLS PVC insulated copper interconnections and neutral bar assemblies one per earthing terminals assembly etc. complete as required and as below. Sample to be got approved by ARIES (I/C Elect.).				
	ALL MCB kA VALUES indicated shall be Ics breaking capacity				
a)	1 no. 32 amp DP 10 kA MCB with thermal magnetic protective releases incoming with 2 pole 40 amp HDHC tinned copper bus bar with coloured heat shrinkable PVC sleeves and 6 nos. 6/10/16/20 amps SP 10 kA MCB with thermal magnetic protective releases out going	11	each		
b)	1-32 amp TPN 10 kA MCB with thermal magnetic protective releases incoming with 4 pole 40 amp HDHC tinned copper bus bar with coloured heat shrinkable PVC sleeves and 3				

	single phase banks each comprising of 1-32 Amp DP 30mA ELCB incoming and 6 Nos 10/16/20 Amps SP 10 kA MCB with thermal magnetic protective releases out goings.	1	each		
c)	1-63 amp TPN 10 kA MCB with thermal magnetic protective releases incoming with 4 pole 40 amp HDHC tinned copper bus bar with coloured heat shrinkable PVC sleeves and with 3 single phase banks each comprising of 1-63 Amp DP 30mA ELCB incoming and 8 Nos 10/16/20 Amps SP 10kA MCB with thermal magnetic protective release out goings.	1	each		
d)	1-63 amp TPN 10 kA MCB with thermal magnetic protective release incoming with 4 pole 40 amp HDHC tinned copper bus bar with coloured heat shrinkable PVC sleeves and with 3 single phase banks each comprising of 1-63 amp DP 30mA ELCB incoming and 12 Nos 10/16/20 amps SP 10 kA MCB with thermal magnetic protective release out goings.	1	each		
2	Meter Board	10	Nos.		
	Design, manufacture, supply, installation, testing and commissioning of 2mm thick MS sheet fabricated cubical type meter board dust and bermin proof complete with hinged and lockable doors and covers with opening for each meter reading. The meter board shall be wall mounted and dead front construction complete with inter connections by copper tapes/wires and powder coated etc. as required as per drawing.				
a	Incoming				
	1 No. 32 Amp DP MCB C curve 10 KA breaking capacity.				

b	1 No. 0-40Amp single phase two wire electronic digital secure make KWH meter.				
3	Design, manufacture, supply, fixing in position, testing and commissioning of the following front operated front access 2mm thick steel enclosed free standing, dust and bermin proof, feeder pillars with IP 54 protection with hinged and lockable doors complete with inter connections, copper crimping lugs, brass glands, bonding to earth and painting suitable for use at 415 volts, 3 ph 4 wire 50 Hz system, and with 25 MVA rupturing capacity at 415 volts.				
	All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The bus bar insulation shall be with heat shrinkable sleeves. SMC/DMC shroudes and bus bar support shall be used. Pad locking facility shall be provided.				
	The breaking capacity given under are the Ics values.				
A	Main Feeder Pillar-Housing				
	INCOMING				
	1 NO. 200 Amps 690 volt 15 kA TP MCCB with fixed neutral with bimetallic over current and magnetic short circuit releases				
	BUSBARS				
	Electrolytic high conductivity aluminium three phase and neutral bus bars rated at 300 amps having a maximum current density of 1 amp per sq mm suitable to with stand symmetrical fault level of 25 MVA at 415 volts. The neutral bus bar is to be of 100% capacity.				
	OUTGOING				
	8 nos 63 amp 690 volt 15 kA TPN MCCB with				

	thermal magnetic releases				
	4 nos. 32 amp 690 volt 10 kA TPN MCB with thermal magnetic releases				
	1 No.32 amp 690 volt 10 kA TPN MCB with thermal magnetic releases each with Dual setting 24 hour calibrated time switch for automatic operation of the supply. 32 amp TP Contactor for operation of the outgoing supply through the Time Switch and with 6 nos 10/20/amp SPN 10 kA MCB's as outgoing.				
	The Feeder Pillar shall be complete with all interconnections, bus bars etc. complete as per design to be approved by the ARIES (I/C Elect.).	1	No.		
B	Sub Feeder Pillar-Housing				
	INCOMING				
	1 NO. 63 Amps 690 volt 15kA TP MCCB with fixed neutral with bimetallic over current and magnetic short circuit releases				
	BUSBARS				
	Electrolytic high conductivity aluminium three phase and neutral busbars rated at 100 amps having a maximum current density of 1 amp per sq mm suitable to with stand symmetrical fault level of 25 MVA at 415 volts. The neutral bus bar is to be of 100% capacity.				
	OUTGOINGS				
	7nos 32 amp 690 volt 15 kA TPN MCCB with thermal magnetic releases.				

	1 no 32 amp 690 volt 10 kA TPN MCB with thermal magnetic releases each with Dual setting 24 hour calibrated time switch for automatic operation of the supply. 32 amp TP Contactor for operation of the outgoing supply through the Time Switch and with 6 nos 10/20 amp SPN 10 kA MCB's as outgoing.				
	3 nos 32 amp 690 volt 10 kA TPN MCB with thermal magnetic releases.				
	The feeder pillar shall be complete with all inter connections, bus bar etc complete as per design to be approved by ARIES (I/C Elect.).	1	each		
	SUB- HEAD TOTAL				

SLICE-1

(H) SUB-MAINS AND CABLES

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig & Words)	Amount in Rs.
A	SUB-MAINS				
1	Wiring for Submains with FRLS PVC insulated stranded copper conductor 660/1100 volt grade wires in surface/concealed conduit including cost of providing saddles etc as required for surface conduiting and/or the cost of cutting and filling chases complete as per specifications as required and as below:				
a)	3x6 sq mm (P+N+E) in FRLS PVC insulated stranded copper conductor 660/1100 volt grade wires in 25 mm PVC conduit	10	mts		
b)	6x6 sq mm (3P+N+2E) in FRLS PVC insulated stranded copper conductor 660/1100 volt grade wires in 40 mm PVC conduit	10	mts		
c)	6x10 sq mm (3P+N+2E) in FRLS PVC insulated stranded copper conductor 660/1100 volt grade wires in 40 mm PVC conduit.	10	mts		
d)	6x16 sq mm (3P+N+2E) in FRLS PVC insulated stranded copper conductor 660/1100 volt grade wires in 50 mm 14 SWG MS conduit.	10	mts		
B	CABLES				

1	Supply and laying in cable Tray/clamped to wall with suitable clamps saddles and fixing bolts/in ground including the cost of digging and back filling with sand and brick protection as required and including testing and commissioning of the following 1100 volt grade armoured PVC/XLPE insulated and sheathed aluminium conductor armoured cable complete as required. The costs shall include for all cables to be provided with a ID gap and shall be properly clamped with cable clamps and ties. Identification tags shall be provided for all cables and route markers for cables in ground.				
a	3.5 core 240 sq.mm	200	mts		
b	4 Core 35 Sq.mm	200	mts		
c	4 Core 25 Sq.mm	100	mts		
d	4 Core 16 Sq.mm	50	mts		
e	4 Core 10 Sq.mm	100	mts		
f	4 Core 6 Sq.mm	200	mts		
2	Cable termination of following XLPE cables as per item B.1 above including the cost of crimping heavy duty aluminium lugs, nickel plated brass double compression glands, insulation tape and all requisite material for completion of termination complete as required and as below				
a	3.5 core 240 sq.mm	4	each		
a)	4 Core 35 Sq.mm	8	each		
b)	4 Core 25 Sq.mm	8	each		

c)	4 Core 16 Sq.mm	40	each		
d)	4 Core 10 Sq.mm	10	each		
e)	4 Core 6 Sq.mm	10	each		
C	PIPES				
1	Supply and laying of RCC Hume pipes for cable entry including the cost of excavation and refilling and including the cost of sealing the ends complete as required and as below				
a)	150mm dia	20	mts		
b)	100mm dia	20	mts		
2	Supplying, laying heavy duty PVC pipe sleeves for cable entry including the cost of excavation, making hole, and sealing both ends, refilling etc. complete as required				
a)	100mm dia	10	mts		
b)	75mm dia	10	mts		
3	Sealing of annular spaces around cables in floor/wall cutouts with 'Viper' brand Fire Seal in tumescent compound complete as required	1	Job		
4	Providing and making of 600mm x 600mm x 600mm manhole chamber with masonry bricks and plastering inside with 1:3:6 and fixing of Heavy duty frame and pre cast RCC				

	cover as required	5	each		
5	Providing and making of 450mm x 450mm x 600mm manhole chamber with masonry bricks and plastering inside with 1:3:6 and fixing of Heavy duty frame and pre cast RCC cover as required	5	each		
	SUB- HEAD TOTAL				

SLICE-1

(I) EARTHING

<i>S. No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate in Rs. (Rate in fig & Words)</i>	<i>Amount in Rs.</i>
1	Providing and making earth pits including the cost of 600 mm x 600 mm x 6 mm GI plate electrode 50 mm dia GI pipe, CI funnel with wiremesh charcoal, salt, all earth work, masonry enclosure with CI frame & cover plate having locking arrangement complete as per IS 3043:1987 for body earth	1	nos		
2	Supplying and laying of the following earthing clamped to wall with suitable clamps saddles and fixing bolts/in ground including the cost of digging and back filling with sand and brick protection as required and complete as required to comply with IS 3043:1987				
a)	25 mm x 6 mm GI strip	25	mts		
b)	8 SWG GI wire	500	mts		
	SUB- HEAD TOTAL				

SLICE-1

(J) FIXTURES AND FITTINGS (Installation Only)

<i>S. No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate in Rs. (Rate in fig & Words)</i>	<i>Amount in Rs.</i>
1	Installation, testing & commissioning of light fixtures as below including the cost of brackets, suspension wires of lengths as required, hooks, hardware etc. complete as required				
a)	FTL Fixtures	125	nos		
b)	CFL Fixtures	200	nos		
c)	Celling/Bracket/Bulk head Fixture	60	nos		
d)	Track lights	15	nos		
2	Installation, testing and commissioning of 1400 mm sweep ceiling fans including down rods of required length, canopy, suspending shackle, blades, electronic regulator etc. complete as required	75	nos		
3	Installation, testing and commissioning of 300 mm dia 1500 rpm exhaust fans including louvered shutters etc. complete as required	30	Nos.		
	SUB- HEAD TOTAL				

SLICE-1

(K) STREET LIGHT

S. No.	Description	Quantity	Unit	Rate in Rs. (Rate in fig& Words)	Amount in Rs.
1	Supply and laying in ground/pipe including the cost of digging and backfilling with sand and brick protection as required and including testing and commissioning of the following 1100 volt grade armoured PVC/XLPE insulated and sheathed aluminium conductor cable complete as required.				
a)	2 core 10 Sq mm	400	mtrs		
b)	2 core 6 Sq mm	250	mtr		
c)	2 core 4 Sq mm	250	mtr		
2	Cable jointing/end termination of the following PVC/XLPE insulated and sheathed aluminium conductor cables 1100 Volt grade including cost of crimping lugs, compression glands, insulation tape and all requisite material for completion of joints				
a)	2 core 10 Sq mm	37	nos		
b)	2 core 6 Sq mm	39	nos		

c)	2 core 4 Sq mm	21	nos		
3	Supply, laying and connecting following 3 nos copper conductor PVC insulated 1100 volt grade wires from terminal block to light fixture along with end terminations and including the cost of PVC insulated stranded copper wire for earthing of the light fixture complete				
a)	2.5 Sq mm	125	mtrs		
4	Supply, fabrication and erection of 65 mm dia GI poles "B" class suitable for mounting light fixture including the cost of digging and making concrete foundations as required. The cost shall include supply and installation of 2 nos suitable length 50 mm GI pipe bend to shape for cable entry with all fixing arrangement to the pole etc. complete as required				
a)	3 m height	10	nos.		
5	Supply and fixing 16 SWG MS boxes duly painted embedded in or surface mounted as required including the cost of terminal block for incoming and outgoing PVCA cables, 10 amp 10 KA SP MCB, interconnections, hinged lockable door complete as required	10	nos.		
6	Supply and fixing thermoplastic weatherproof (Hensel make) IP-65 ingress protection cable junction boxes embedded in ground as required including the cost of terminal block for incoming and				

	outgoing PVCA cables, cable glands complete as required	10	Nos.		
7	Receiving, storing, fixing, testing and commissioning of the following light fixtures with all accessories including ballasts, condensers, starters etc. complete as required. The cost shall include making foundations, pedestal wherever required				
a)	Post top street light fixture	10	Nos		
	SUB- HEAD TOTAL				