



**TENDER DOCUMENT**

**FOR**

**CONSTRUCTION OF**

**ICAI Bhawan at Survey No.247/2, Plot "B", Chitlapakkam Village**

**FOR**

**THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA,  
ICAI BHAWAN, PO 7100, INDRAPRASTH MARG,  
NEW-DELHI – 110 002**

**BOOK III - BOQ ICAI BHAWAN**

**ARCHITECTS:**

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**PROPOSED CONSTRUCTION OF M/S. INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA,  
CHENGALPATTU DISTRICT BRANCH OF SIRC OF ICAI**

**SUMMARY - SCHEDULE OF QUANTITIES**

<b>Sr. No.</b>	<b>DESCRIPTION</b>	<b>AMOUNT (Rs.)</b>
1	SITE DEVELOPMENT & EARTH WORK	
2	PLAIN/ REINFORCED CEMENT CONCRETE WORK	
3	MASONARY/BRICK WORK	
4	WALL FINISH	
5	WOOD WORKS + GLASS + METAL - DOORS	
6	STEEL WORKS + MS WORKS	
7	ALUMINIUM WORK	
8	WATER PROOFING	
9	FLOORING WORK	
10	MISC. WORKS	
11	INTERIOR ITEMS	
12	STP - EQUIPMENT COST	
13	ROAD - PAVER + KERB 2060 SQM / 185 RM	
14	PERCOLATION PITS - 70 NOS	
15	LANDSCAPE	
16	NEW WELL WITH MS GRILL COVERED	
17	ELEVATION	
18	LIFTS (2 NOS.) 10 PASSENGERS	
19	<b>SUB-TOTAL</b>	
20	PLUMBING & SANITARY WORKS	
21	FIRE FIGHTING WORKS	
22	ELECTRICAL WORKS	
25	DG SET	
26	UPS	
27	HVAC WORK	
28	SOLAR	
29	CCTV	
30	<b>SUB-TOTAL</b>	
31	<b>GRAND TOTAL (INCLUSIVE OF ALL TAXES)</b>	
32	<b>SAY (in Cr.)</b>	

PROPOSED CONSTRUCTION OF M/S. INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA, CHENGALPATTU DISTRICT BRANCH OF SIRC OF ICAI					
BILL OF QUANTITIES FOR CIVIL, ELECTRICAL, PLUMBING, HVAC, FIRE FIGHTING WORKS					
A	CIVIL WORKS				
S.No	Preambles : General Notes				
1	Rates mentioned in BOQ shall be inclusive of all taxes as of date including GST, Labour CESS etc. or any other tax as applicable in Delhi.				
2	Rates quoted in this BOQ shall be applicable to any height & any location even if not specified in any item, including steel ( H frame, Ledger system etc) scaffolding, curing, cleaning and rectification.				
3	Details/ functions/ activities mentioned in preambles in each section are included in quoted rates and nothing extra shall be paid for it.				
4	Watching and lighting arrangements, wherever necessary, whether ordered by the Employer/ Architects or otherwise is included in items.				
5	This bill of quantities is to be read in conjunction with the drawings, specifications, terms & conditions etc.				
6	The quantities given are approximate and can vary up to any extent. The contractor will not be entitled to claim any extra on account of this quantity variation. Billing will be on actual measurement as executed and approved.				
7	Contractor has quoted the rates after visting the site and after considering all local factors.				
8	Rates are inclusive of Carting away debris / Cleaning / Security / statutory approval for disposal of debris etc.				
9	Rates are quoted for finished items, wastage factor is on contractor part and measurement will be for finished item only.				
10	The rates shall remain firm till the completion of the work and the contractor shall not be entitled to claim any escalation on any account till the completion of the project, in any respect.				
11	Where ever applicable all the material samples should be got approved from engineer incharge for its quality, makes, colour, pattern etc before start of work /mass procurement of material.				
12	Manufacturer test certificates/testing from lab and test results will be provided along with the sample for all the materials procured at site. Testing will be got done by the contractor at his own cost.				
13	Excavation beyond given depth will be made up by the contractor with PCC 1:4:8 at his own cost and nothing extra will be paid on this account.				
14	Curing, slurry, scaffolding, etc wherever applicable are included in item.				
15	All concreting to be done as per Mix Design (to be got done by contractor at his own cost) and got approved by him by EIC/ Architect before hand.				
16	For all concrete, Brick, stone, flooring and other works except plastering, sand used shall be coarse sand and for plastering, it would be 50% coarse + 50% fine, unless specified otherwise.				
17	All surfaces to be plastered/tiled, hacking of surface after stripping of shuttering is included in items.				
18	All cement related works shall be cured for 7 days or more as applicable as per specifications. The rate shall be also inclusive with Hassian cloth and any other form of curing as directed.				
19	Protection of all kinds of floorings with POP and polythene sheet etc. is included in item rate and nothing extra shall be paid for this. The rate is also inclusive of removing and cleaning the same after completion of work.				
20	Holes or pockets in the Brick work for Rain water pipes and other pipes shall be kept or the pipes shall be provided at the time of raising the masonry. These holes or Zarries should be made good after fixing of pipes and nothing extra shall be paid for the same.				
21	Chiseling of brickwork, if required shall be done to flush the floor skirting with the wall. Nothing extra shall be paid on this account.				
22	Grooves with cement finish up to 12 mm X 6 mm shall be formed in plaster at the junction of slab and beam and slab & brick work without any extra charge. Similar grooves shall be made in plaster at the junction of masonry and wood or steel door or steel window frames or at bottom of beams or chajja, slab projections as drip moulds without extra charge.				
23	Septic tanks, Soak pits, Underground sumps, cable trenches of various sizes, chambers having sizes other than specified in BOQ will be measured under relevant items of work.				
24	For landscaping work the cost of supply and replacement of good earth, organic manure are included in item rate.				
25	Water and electricity for all the work including landscaping work shall be arranged by the contractor at his own cost.				
26	Bailing out, pumping out, continuous dewatering or otherwise removing all water which may accumulate in the working areas from any or all causes whatsoever.				

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
I	<b>CIVIL WORKS - EARTHWORK EXCAVATION</b>					
	<b>Preambles</b>					
i	Excavation either straight, inclined or curved in trenches, footings etc., including marking out, cutting and dressing sides and bottom to true dimensions and depositing excavated stuff beyond three metres clear of the edge of trench or mass excavations for basements or anywhere within the site as directed.					
ii	Removal and disposal of all shrubs, roots, vegetation and trees upto 300mm girth from alignment of the buildings including loading, Transporting, unloading to approved municipal Dumping Ground or as approved by Engineer Incharge beyond 50m initial lead, for all leads including all lifts involved.					
iii	Continuous Dewatering - Work for excavation shall include bailing, continuous dewatering or pumping out water which may accumulate in the excavation during the progress of work either from subsoil, seepage, springs, flooding, rain or any other cause and diverting surface flow if any by bunds or other means, pumping out water shall be done in such approved manner as to preclude the possibility of any damage to the foundation trenches, concrete, or masonry or any adjacent structure. The excavation shall be kept free from water :- i. When Concreting / reinforcement work / waterproofing work are in progress. ii. Till the client / Architect consider that Concrete/ Mortar is sufficiently set.					
iv	All labour and material required for fencing and protection against risk of accident to open excavation etc. with necessary shoring, planking and strutting and for providing gangways with hand rails across open trenches etc., where necessary during the progress of the work.					
v	Battering, benching, forming steps in the sides of foundations, and mass excavations where required and removal of slips and falls.					
1	Excavation in all types of soil, including murrum, for foundations of wall, columns, plinth beams, basement, etc. including backfilling the excavated earth, shoring strutting, bailing out water / pumping off water if required, ramming, watering consolidating in 30 cms layers, removing and stacking simultaneously the excavated stuff as directed within the site area up to a lead of 100 m and/or spreading soils in layers for site development and consolidating as directed etc. complete. From existing ground level to - up to 1.5 m depth. Note: (Excavation to be as per IS authorised working space.)	Cum	2172.87			
2	Earthwork in excavation in all types of soil but for depth exceeding 1.5 M and not exceeding 3.0 M	Cum	588.01			
3	Earthwork in excavation in all types of soil but for depth exceeding 3.0 M and not exceeding 4.5 M (UG Sump)	Cum	52.00			
4	Filling in <b>Foundation and Plinth</b> with selected excavated earth available within site, in layers of 15 cms. to 20 cms. Including watering, ramming and compacting manually or using mechanical plate compactor / vibro-roller etc., including cost of transportation anywhere within site complete as directed.	Cum	1692.25			
5	Supplying and filling in foundation and the area wherever specified with approved good quality of (morrum) soil filling material in plinth, area development etc wherever specified in layer of not exceeding 300mm thick including breaking clods, storing, transportation, double levelling, watering compaction each layer with vibrator compaction and at unaccessible place with wooden bar steel rammers for achieving 90 - 95% proctor density at optimum moisture content, all lifts and lead, bailing-pumping out water to keep site dry while backfilling cost shall include conveyance of all materials labour, machinery etc complete as directed. The rate is inclusive of loading, unloading, hire and fuel charges for tools and plants and other incidental charges etc complete.	Cum	2458.40			
6	Supplying and applying <b>Anti termite treatment</b> by injecting chemical emulsion concentrate 1% chlorpyrifos or Chlordane emulsiable concentrate 1% for pre constructional treatment and creating a chemical barrier as per IS 6313(Part II) 1981 for wall trenches, foundation, top surface of plinth filling, foundation of wall and floor, along the external perimeter of the building, etc. complete and conforming to specification and as directed by the Engineer-in-charge. (Tenderer to submit guarantee on stamp paper of adequate value) plan area at Ground floor level shall be measured and paid.	Sqm	923.56			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
7	Providing & laying <b>GSB</b> in compacted thickness of 100 mm using stone aggregates of nominal size 65 mm metal shall be spread over the prepared base , consolidated layer in 3 layers as specified, the metal layer dry and wet shall then be rolled and consolidated by a Rammer (8-10T power roller) to achieve consolidated thickness. After the dry Rammer is completed, smaller size stones, grit, quarry dust / sand etc. shall be spread and watered and rolled all as complete and directed by Engineer in charge.	Cum	258.38			
II	<b>PCC</b>					
	<b>Preambles</b>					
i	<b>Making all drips, grooves, moulds, curved surfaces and chamfered edges etc., in concrete and /or plaster work as directed.</b>					
ii	<b>Forming all expansion and/ or construction joints in RCC as directed.</b>					
iii	<b>PVC or Concrete cover blocks shall be used for the reinforcement, will be as per IS standards and specifications , the cost of which is deemed to be included in the item rates of reinforcement.</b>					
iv	<b>Installing a calibrated cube testing machine at site, getting it calibrated every 3 month and submitting test report to Architects.</b>					
v	<b>Preparing test cubes, testing them at site and /or getting tested in an approved laboratory and any fees, costs etc. relating to them to borne by the contractor.</b>					
vi	<b>Working up or hacking of concrete surface for providing keys for further concrete work including applying thick cement slurry or mortar as directed.</b>					
vii	<b>Hoisting to all lifts, carrying to all leads, consolidating by rodding, vibrating, tamping, and curing. Shuttering to be made water tight with ply wood lined timber or by any other means.</b>					
viii	<b>Design Mix for all concretes will be done by contractor from approved lab or consultant. The same should be approved from project incharge prior to start of concerting at site.</b>					
ix	<b>Use of shuttering oil and cement slurry over shuttering before commencing barbinding and concreting respectively.</b>					
x	<b>Providing dowel bars wherever necessary (cost of bars to be paid as reinforcement).</b>					
xi	<b>Forming cutouts, openings, and concreting of same at a later stage as required.</b>					
xii	<b>Maintaining of POUR CARDS showing approval of Employer to concrete various components of R.C.C frame.</b>					
xiii	<b>Admixtures in recommended proportions. (As per IS: 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Employer/ Architect.</b>					
xiv	<b>Providing camber in the shuttering.</b>					
8	Plain cement concrete (1 cement: 4 M-sand : 8stone jelly) using 40mm and down gauge graded, hard blue granite stone aggregate,including required side shuttering, laid and well consolidated in foundation and basement etc., all as complete and directed by Engineer in charge.	Cum	92.38			
9	Plain cement concrete (1 cement: 3 M-sand : 6stone jelly) using 40mm and down gauge graded, hard blue granite stone aggregate,including required side shuttering, laid and well consolidated in foundation and basement etc., all as complete and directed by Engineer in charge.	Cum	92.96			
III	<b>RCC WORK</b>					
i	<b>Making all drips, grooves, moulds, curved surfaces and chamfered edges etc., in concrete and /or plaster work as directed.</b>					
ii	<b>Forming all expansion and/ or construction joints in RCC as directed.</b>					
iii	<b>PVC or Concrete cover blocks shall be used for the reinforcement, will be as per IS standards and specifications, the cost of which is deemed to be included in the item rates of reinforcement.</b>					
iv	<b>Installing a calibrated cube testing machine at site, getting it calibrated at every 3 months and submitting test reports to Architects.</b>					
v	<b>Preparing test cubes, testing them at site and /or getting tested in an approved laboratory and any fees, costs etc. relating to them to be borne by the contractor.</b>					
vi	<b>Working up or hacking of concrete surface for providing keys for further concrete work including applying thick cement slurry or mortar as directed.</b>					
vii	<b>Hoisting to all lifts, carrying to all leads, consolidating by rodding, vibrating, tamping, and curing. Shuttering to be made water tight with ply wood lined timber or by any other means.</b>					
viii	<b>Design Mix for all concretes will be done by the contractor from approved lab or consultant. The same should be approved from project incharge prior to start of concerting at site.</b>					
ix	<b>Use of shuttering oil and cement slurry over shuttering before commencing barbinding and concreting respectively.</b>					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
x	Providing dowel bars wherever necessary (cost of bars to be paid as reinforcement).					
xi	Forming cutouts, openings, and concreting of same at a later stage as required.					
xii	Maintaining of POUR CARDS showing approval of Employer to concrete various components of R.C.C frame.					
xiii	Admixtures in recommended proportions. (As per IS: 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Employer/ Architect.					
xiv	Providing camber in the shuttering.					
10	Providing, Laying and positioning of M 25 Grade Design mix concrete with minimum cement content of 360Kg/m3 Reinforced Cement concrete (admixture 0.5 to 1% of cement content) fine aggregate shall be M-sand in foundations, Raft,Wall, Pedestal,Column and mass concrete, including well compacted vibrating, curing etc.,in all shapes as per drawing including necessary shuttering metal / ply as required,scaffolding, bolts/nuts, fastener nails, wires for keeping in position till concrete is laid and members have acquired required strength, removal thereafter,complete as directed.all leads and lifts, materials, labour, equipment and machinery, loading and unloading, transportation and all other incidental charges etc all as complete and directed by Engineer in charge at all levels.					
a	Footing	Cum	173.31			
b	Column & Wall - Sub Structure	Cum	19.60			
c	Grade beam	Cum	129.71			
d	Plinth beam	Cum	19.90			
e	Column - Super Structure	Cum	76.05			
f	Roof Beam & Tie Beam	Cum	207.41			
g	RCC Raft	Cum	3.40			
h	RCC Wall	Cum	26.51			
i	Floor Slab	Cum	100.44			
j	Roof slab	Cum	248.71			
k	Wash basin counter, Sill Beam	Cum	12.36			
l	Lintel at 2.1m lvl	Cum	51.66			
m	Shunshade Concrete	Cum	17.69			
n	Waist Slab	Cum	14.10			
o	Buttress (Compound Wall)	Cum	9.00			
	UG Sump					
a	All works upto plinth level	Cum	102.99			
b	All works upto plinth level	Cum	10.49			
IV	<b>REINFORCEMENT</b>					
11	Supply and fixing of Reinforcement for RCC work including straightening, cutting, bending, cranking, placing in position and binding with GI binding wire of 18 SWG in double strand all complete using TMT steel bars conforming to IS:1786 in grade Fe-500. (The payment will be on actual/ length measurements of fabricated steelwork including authorised lap ,Chairs, Spacer bars/Pins shall be measured for reconciliation only and not for payment at theoretical weights for different sections) at all levels.	Kg	121812.95			
V	<b>BRICK MASONARY</b>					
	<b>PREAMBLES :</b>					
i	Work in English bond or any other bond or design as directed by the Architects					
ii	Work in square, round and rectangular pillars, flower troughs, under floor drains, making curved and tapered surfaces steps etc.					
iii	Forming openings, chases, grooves etc.					
iv	Embedding conduits, boxes, other fixture of any descriptions, hold fasts of doors, windows, glazings etc., no deduction shall be made for cavities so formed.					
v	Making all drip courses, projected courses of any description, offsets, setbacks, corbels, architraves or any other feature of any description.					
vi	Raking out joints, for plastering or pointing or finishing joints flush as directed.					
vii	Bonding with R.C.C. work.					
viii	Holes or pockets in the Brick work for Rain water pipes and other pipes shall be kept or the pipes shall be provided at the time of raising the masonry. These holes or Zarries should be made good after fixing of pipes and nothing extra shall be paid for the same.					
ix	Work in narrow widths, small quantities etc.					
x	Over lapping reinforcement and embedding reinforcement in adjoining walls in case of half brick masonry walls.					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
xi	Supplying moulds, taking briquettes, getting tested and any fees, costs etc., relating to the same.					
xii	Providing 25mmx 300mm GI strips of 20 gauge for anchoring masonry with RCC columns/structural members.					
xiii	Bricks to be tested for efflorescence, compressive strength and any other mandatory tests in the laboratory.					
xiv	No holes for scaffolding will be permitted into the brickwork .					
xv	Quoted Rates are for all heights, all depths, all levels, including basement to roof (mumty) & all leads and lifts, including curved , circular or any shape masonry work					
12	Brick work in following Cement Mortar using best quality II class table moulded chamber burnt bricks of size 9" x 4-1/2" x 3" for foundation and basement including curing, etc., complete complying with standard specification. <b>In Cement Mortar 1:5</b>					
a	Foundation	Cum	224.27			
b	Super structure - at all levels	Cum	392.43			
13	Brick partition walls of 11.50cm thickness using best quality II class table moulded chamber burnt bricks of size 9" x 4-1/2" x 3" in Cement Mortar 1:3 (One Cement and Three M.Sand) using hoop iron reinforcement if found necessary including curing etc. complete and as directed by the Departmental Officers. (Hoop iron reinforcement will be measured and paid for separately)					
a	Super structure - at all levels	Sqm	1121.73			
VI	<b>PLASTERING</b>					
	<b>PREAMBLES:</b>					
i	Making all drip courses, projected courses of any description, offsets, setbacks, corbels, architraves or any other feature of any description. Included in item rate.					
ii	Raking out joints in brickwork, for plastering or pointing flush as directed.					
iii	Cleaning of Brickwork for efflorescence, chemical washing will be done as directed, free of cost.					
iv	Base preparation, cracks, undulation or any other filling required with pop or putty are included in item.					
v	All the painting work to be carried out as per IS standards & will be done with brushes only unless stated otherwise.					
vi	Scaffolding for work will be arranged by the contractor (only steel scaffolding is allowed)					
14	Prepare surfaces and plaster with CM 1:3 (1 cement: 3 fine sand) 10mm thick to all ceiling area in RCC surfaces contiguous to masonry in super structure in all heights. The rates including curing, providing and removal of hacking,scaffolding, cost of materials, labour, equipments and machinery, all leads and lifts, loading and unloading, transportation and all other incidental charges etcncluding curing all complete as directed by Engineer-in-charge at all levels.	Sqm	1782.99			
15	Prepare surfaces and plaster with CM 1:5 (1 cement: 5 fine sand) 12mm thick to all interior faces of walls including hacking as required on RCC surfaces, and fixing double layer chicken mesh in the junction of RCC beam and brick masonry at least 100mm on either face (total 200mm high) filling packed these junctions . The rates including curing, providing and removal of scaffolding, cost of materials, labour, equipments and machinery, all leads and lifts, loading and unloading, transportation and all other incidental charges etcncluding curing all complete as directed by Engineer-in-charge at all levels.	Sqm	3223.27			
16	Prepare surfaces and plaster with CM 1:5 (1 cement: 5 fine sand) 17mm thick(12mm+5mm) to all exterior faces of walls including hacking as required on RCC surfaces continuous to masonry in super structure and 12mm will be rough plastering includes water proofing chemical compound and 5mm will be sand paper finishing & double layer chicken mesh .The rates including curing, providing and removal of scaffolding, cost of materials, labour, equipments and machinery, all leads and lifts, loading and unloading, transportation and all other incidental charges etc, all as complete and directed by Engineer in charge at all levels.	Sqm	2635.52			
	<b>PAINTING</b>					
17	Providing and applying white washing with lime on new/old work, at all heights, with three or more coats to give an even shade to ceiling, including addition of glue of Pidilite or of equivalent approved make, Indigo (blue) to give bright finishing (last two coats shall be applied with brush only) etc complete as directed at all levels.	Sqm	1782.99			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
18	Providing and applying for Internal walls <b>plastic emulsion paint</b> of approved make and desired shade , on new / old work including the preparation of surface for painting, applying primer over 2 coats of putty, rubbing the surface, applying plastic paint in two coats by Roller/brush finish an even shade , at all heights below and above highest plinth level, scaffolding etc complete as per manufacturer's specifications and as directed at all levels.	Sqm	3776.62			
19	Providing and applying Asian - Apex weather proof Acrylic Emulsion Paint (for External painting) and approved shade including preparation of surface for painting, applying primer and two or more coats of paint as per manufacturer's specifications, scaffolding curing etc. complete as directed at all levels.	Sqm	1442.74			
20	Prepare surfaces and providing and applying 2 coats Cement Paint over a priming coat of approved colour and manufacture to exterior faces of walls. (Compound Wall)	Sqm	1334.99			
<b>VII JOINERY</b>						
<b>PREAMBLES</b>						
i	<b>All the wood used should be well seasoned &amp; free for knots, warping, twisting etc,any substandard material will be replaced free of cost.</b>					
ii	<b>Antitermite treatment and protective paint is included in the reates.</b>					
iii	<b>All the flush doors will be of water proof, termite proof quality</b>					
iv	<b>All the fitting and fixtures will be of approved brand and quality</b>					
v	<b>Providing and fixing door frames with Fastners or hold fast as approved are included in the rates</b>					
20	Supplying and installation of <b>Double shutter 2 hour fire rated Steel door</b> with Fire Rated Vision Glass 200 x 300mm Panel & Tape and SS Ball Bearing Hinges - 102 x 76 x 3mm,Anchor Fastner,Door Closer with STD Arm ,Dead Lock with Both Side Operated Lock & Key,SS D Type Pull Handle on Both Sides . Including transport and packing charges.	No	2.00			
<b>Fully Glazed Door with Patch Fittings</b>						
21	Supply & Fixing of ALTERRA ALT 50 Frameless Glass Door (Double Leaf) with toughened glass and door accessories Frameless door Rebate Profile all around the door. Rebated Door Frame size 50x54mm design. Hardware- Dormakaba junior Office Hinges(3 nos) ,Studio Gala Locks (1no) in aluminium silver (EV1) finish and Dormakaba TS 89 Slide Channel Door closer with (as per EN 1154) and saddle plate for fixing on the Glass door . Glass Mounted Sweep seal or Door Bottom Seal. In case of Glass overpanel OHP100-SG Over Panel Door profile to be used.The hardware should be suitable for Glass thickness of 10/12mm.The Profile finish shall be as per Approved Architects specifications. Profile Manufacturer to supply all the necessary clips, seals and fixing accessories for the system. All Profiles to be with 1.5 mm Gauge thickness Excluding 20 Micron of Anodizing. Max Door Height - 2700mm - <b>Main door</b>	Sqm	24.42			
<b>SINGLE ALUMINIUM GLAZED STILE SIINGLE DOOR WITH ALTERRA SYSTEM with Door Closer- ALT 50</b>						
22	Supply & Fixing of ALT 50 Aluminium Glazed Door (Single Leaf) with Glass infill of toughened Glass of 10mm thick with Alterra rebate door frame System all around the door. Aluminium Stile to be formed out of 70x35mm Horizontal and Vertical Door Profile frame with clips & seals. Door Hardware - Flush Hinges ( 3 nos),Open Door Closer TS compact With std arm, dormakaba Lever Handle with Narrow stile Lock package and Suitable for Glass thickness of 10mm.The Profile shall be matt natural anodized, the Profile Manufacturer to supply all the necessary clips, seals and fixing accessories for the system. All Profiles to be with 1.5 mm Gauge thickness Excluding 20 Micron of Anodizing. Max System Height - 3000mm					
	size - 1200 x 2100 / 1000 x 2400	Nos	14.00			
<b>SINGLE ALUMINIUM GLAZED STILE DOUBLE DOOR WITH ALTERRA SYSTEM with Door Closer- ALT 50</b>						
<b>PREAMBLES</b>						
i	<b>Contractor to submit the anodising/ powder coating , EPDM/ Neoprene gaskets test reports / certificates</b>					
ii	<b>samples to be got approved before fabricating / fixing</b>					
iii	<b>All exposed framing shall be free from scratches and other serious blemishes</b>					



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iv	all aluminium sections/ profiles shall be protected by using masking tapes, which shall be removed as and when required during installation					
v	all screws bolts, nuts and washers to be used be only stainless steel of approved manufacturer					
vi	the glass shall be free from flaws, specks or bubbles and shall have square corners and straight line					
vii	the completed installation shall be free from vibration, wind whistles and noise due to thermal, structural movement and wind pressure					
23	Supply & Fixing of ALT 50 Aluminium Glazed Door (Double Leaf) with Glass in fill of toughened Glass of 10mm thick with Alterra rebate door frame System all around the door. Aluminium Stile to be formed out of 70x35mm Horizontal and Vertical Door Profile frame with clips & seals. Door Hardware Flush Hinges ( 6 nos), Open Door Closer TS kompakt With std arm, dormakaba Lever Handle with Narrow stile Lock package and Suitable for Glass thickness of 10mm. The Profile shall be matt natural anodized, the Profile Manufacturer to supply all the necessary clips, seals and fixing accessories for the system. All Profiles to be with 1.5 mm Gauge thickness Excluding 20 Micron of Anodizing. Max System Height - 3000mm					
	1800 x 2400	Nos	1.00			
24	Providing, fabricating and fixing Aluminium Powder Coated Partly Glazed Partly panelled door made out of HINDALCO/ INDAL / JINDAL or equivalent, 12 gauge frame & styles confirming to BIS using sections / profile of specified size, shape and thickness with 20 micron anodizing including supplying and fixing necessary holding bolts / screws , fixtures and fastenings of anodized aluminum as per requirement and 12 mm thick pre laminated panel board with special gasket felt – EPDM gasket and aluminum beading, filling the gaps around the frame with white colour gun grade silicon sealant to ensure the joint water tight, complete as per drawing etc complete as directed by The engineer.	Sqm	7.28			
25	Providing and fixing of 30 mm thick Flush shutter, with 6 mm ply finished with 1 mm thk laminate on both sides of the shutter and finishing with 3 horizontal grooves of 6 mm x 6 mm and wood door frames of size 90mm x 50mm with vision panel of size 100 x 600 mm with around beading neatly finished. using Dorma hinges, locks and door closure. Cost is inclusive of providing beech wood door frame with approved painted to desired color.	Sqm	13.90			
26	Providing and fixing factory made <b>Fiber Glass Reinforced Plastic (FRP)</b> door frame and door shutter, using FRP laminate and infilling with eco-friendly hard wood as per specification and including of approved make and two ore more coats of enamel paint shade etc. all complete as directed.as directed Engineer-in-charge.					
	Fitting of Each door:					
	(a) SS matt finish Butt hinges 125mm x 30mm with Nylon washer - 3 Nos.					
	(b) SS matt finish Tower Bolt 150mm x 12mm - 2 No.					
	(c) SS matt finish Handles 'D' Type 150mm size - 2 Nos.	Sqm	50.60			
27	Providing and fixing factory made Fiber Glass Reinforced Plastic (FRP) door frame and door shutter, using FRP laminate and infilling with eco-friendly hard wood as per specification and including of approved make and two ore more coats of enamel paint shade etc. all complete as directed.as directed Engineer-in-charge.					
	Fitting of Each door:					
	(a) SS matt finish Butt hinges 125mm x 30mm with Nylon washer - 3 Nos.					
	(b) SS matt finish Tower Bolt 150mm x 12mm - 2 No.					
	(c) SS matt finish Handles 'D' Type 150mm size - 2 Nos.(Security)	Sqm	1.65			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
28	Providing, fabricating and fixing Powder coated aluminium (Brown Colour) Openable Swing Shutter Windows with IMEX SS Hinges made out of HINDALCO/ INDAL / JINDAL or equivalent fabricated out of extruded sections 1.223Kg/m (12gauge frame & styles) conforming to BIS using sections / profile of specified size, shape and thickness with 20 micron anodizing including supplying and fixing necessary holding bolts / screws , handles, locking arrangement as per details, fixtures and fastenings of anodized aluminum as per requirement and 6 mm. Thk. Modiguard make tinted glass and imported beading shall be used with special gasket felt – EPDM gasket and aluminum beading, filling the gaps around the frame with white colour gun grade silicon sealant to ensure the joint water tight, complete as per drawing etc complete as directed by The engineer.					
	Note : rate shall be inclusive of necessary fittings, locks, handles necessary hardware items and all accessories etc.	Sqm	237.17			
29	Supplying and fixing Aluminium powder coated Louver Ventilators of approved colour shade , outer frame made out of 100mm x 45mm with Aluminum louvers as per drawing	Sqm	10.96			
	<b>MS GRILL</b>					
	<b>PREAMBLES</b>					
(a)	Samples to be got approved before fabricating / fixing					
(b)	All exposed framing shall be free from scratches and other serious blemishes					
(c)	All screws bolts, nuts and washers to be used be only of approved manufacturer					
(d)	The completed installation shall be free from vibration, wind whistling and noise due to thermal, structural movement and wind pressure					
30	Supply and fixing in position to design and pattern as per drawings, <b>MS grilles</b> to doors/ windows/ ventilators with square bars/ flats etc., including two coats of synthetic enamel paint over one coat of primer at all levels.	Kg	4756.26			
31	Providing and fixing of hand rail made of SS of grade 304, gauge 16. The baluster is made of 40mm dia pipe fixed to alternate tread using base plate of thickness 8mm and 3 nos of bolt with SS cap . Top hand rail is made of 50 dia SS pipe, 3 nos of horizontals of 20mm dia SS pipe is fixed in position as shown in drawing and all as instructed by engineer in charge at all levels.	Rmt	38.47			
32	Providing, fabricating and fixing in position M.S. Structure made out of M.S. rolled/hollow (rounds/rectangular/ square etc.) sections as per architect's details including shearing /cutting, riveting, welding, grinding to smooth surface of all works. MS fixing holdfasts / anchor bolts to be grouted in concrete 1:2:4 , providing and fixing nuts bolts fasteners as required as per architect's details, including painting with two or more coats of first quality synthetic enamel paint of approved quality and make over a coat of primer etc. complete as directed. ( MS standard section shall be measured and paid under relevant Item. Nuts, bolts, washers shall be deemed to have been included in the unit rates and nothing extra shall be paid for)	Kg	6857.59			
VIII	<b>FLOORING</b>					
	<b>PREAMBLES</b>					
i	Line and level to be checked and confirm prior to start of work					
ii	All the samples for stones, marbles, tiles etc shall be got approved prior to start of work and procurement of material in bulk quantity					
iii	Makes, quality, color, shade of the materials to be used in the work , be got approved prior to start of work.					
iv	All the flooring ceramic tiles are anti skid , until specified otherwise.					
v	Clearing and curing of area for work to be done one day in advance. Cleaning of flooring or cladding will be done at site on the same day of work					
vi	all the joints will be neatly finished, with matching color pigment mixed with white cement even if not specified in the item					
vii	Protection of all kinds of floorings with POP and polythene sheet etc. is included in item rate and nothing extra shall be paid for this.					
viii	chase cutting for flush skirting is included in rates					
ix	finishing and plaster repairing after fixing skirting is included in rates					
x	cleaning of POP and polythylene sheet at the time of handing over , washing floor with Mild Acid solution if required .					
xi	Repairing of all damages shall be made good/ replaced before handing over .					
xii	tolerance in thickness of granite / marble will be +/- will be 1mm					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
33	Providing and fixing <b>Vitrified tiles flooring</b> 10mm thick of approved make, quality, colour and shade, 800mm x 800mm over and including a base mortar of 20mm thk, C.M 1:4 and same colour pointing in all respects including cleaning with acid etc. complete. (Basic Rate - Rs.90/Sft) . Note: The rate to include cost of providing POP protective cover ,removal & disposl at all levels	Sqm	1317.92			
34	Providing and fixing 10mm thick <b>Vitrified tiles for Skirting</b> with approved shade and quality using jointed with grey cement slurry mixed with pigment to match the shade of the slabs over and including base of CM (1:4) rubbed, finally etc. complete.	Rmt	689.06			
35	Providing and laying 10mm thick <b>Vitrified Matt finish tiles</b> of approved make, shade and size and thickness in flooring over average 20 mm thick cement mortar 1:4 ( 1 part cement : 4 part coarse sand) bed laid to requisite, line, level and slope, fixed with cement slurry of honey like consistency, cleaning the joints with coir brush , filling the them with white cement or white cement mixed with requisite matching colour pigment, curing, cleaning the area with water or water with mild acid etc complete as directed. ( <b>Basic Cost - 60/-) Tile Size - 600mm x 600mm - in toilet.</b> Note: The rate to include cost of providing POP protective cover ,removal & disposl at all levels	Sqm	104.11			
36	Providing and fixing 10mm thick Vitrified tiles for Skirting with approved shade and quality using jointed with grey cement slurry mixed with pigment to match the shade of the slabs over and including base of CM (1:4) rubbed, finally etc. complete.	Rm	17.66			
37	Dadoing walls with coloured <b>Vitrified Glazed Wall Tiles</b> of sizes 300mm X 600mm X 10mm size of approved make and quality and colour Set in cement mortar 1:2 (one cement ,two sand) over 10 mm base layer plastering and pointing with white cement neatly and including Corner beeding etc., complete as directed. (Basic Cost - 65/-) - <b>toilet wall.</b>	Sqm	346.12			
38	Providing and laying 10mm thick Anti skid ceramic tiles of approved make, shade and size and thickness in flooring over average 20 mm thick cement mortar 1:4 ( 1 part cement : 4 part coarse sand) bed laid to requisite, line, level and slope, fixed with cement slurry of honey like consistency, cleaning the joints with coir brush , filling the them with white cement or white cement mixed with requisite matching colour pigment, curing, cleaning the area with water or water with mild acid etc complete as directed. (Basic Cost -50/-) Tile Size - 300mm x 300mm - in toilet (Security)	Sqm	3.68			
39	Dadoing walls with coloured Vitrified Glazed Wall Tiles of sizes 300mm X 600mm X 10mm size of approved make and quality and colour Set in cement mortar 1:2 (one cement ,two sand) over 10 mm base layer plastering and pointing with white cement neatly and including Corner beeding etc., complete as directed. (Basic Cost - 55/-) - toilet wall.(Security)	Sqm	11.10			
40	Supplying and fixing of best and approved quality of <b>DURAL PVC</b> beeding for dado on walls of size 20 x 20 mm wide.	Rmt	66.15			
41	Providing and fixing 20mm thick pre <b>Polished Granite stone slab</b> for staircase with 40mm thick edge nosing of approved shade and quality using 20mm thick granite beading, jointed with grey cement slurry mixed with pigment to match the shade of the slabs over and including a 20mm thick base of CM (1:4) rubbed, finally polished and providing 3 lines of anti skid grooves in treads etc.The rate shall include Transport, lead distance, loading, unloading, laying, complete as directed by the Engineer in charge. (Basic Cost - 200/-) - <del>Staircase stone</del>	Sqm	106.79			
42	Providing and fixing 20mm thick pre polished <b>Granite stone slab for Counter</b> with 40mm thick edge full nosing of approved shade and quality using 20mm thick granite beading, jointed with grey cement slurry mixed with pigment to match the shade of the slabs over and including a 20mm thick base of CM (1:4) rubbed, finally polished etc. complete.	Sqm	7.80			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
43	Providing and laying Cement concrete plinth protection around the building, formed of R.C.C. 1:2:4 precast slabs of size approximately 450 mm x 450 mm x 50 mm thick, using 12mm to 19mm gauge hard granite metal, laid over well consolidated river sand/murum sand and murum (fifty fifty) with Reinforcement with galvanised IRC mesh of 3mm thickness and 50x50 mm Size. include Transport, lead distance, loading, unloading, laying, complete as directed by the Engineer in charge.	Sqm	97.64			
IX	<b>WATER PROOFING</b>					
	<b>PREAMBLES :</b>					
i	Cutting chases in wall for loose mortar/concrete , and filling chases with cement concrete 1:2:4 (1cement: 2 coarse sand: 4 hard stone aggregate 12.5mm nominal size) is included in item.					
ii	The water-proofed surface shall be tested with 15 cms standing water for 72 hrs.					
iii	Providing required slope as directed.					
iv	The water proofing work must be executed by an approved specialised Agency. The Contractor shall give a 10 years guarantee as per instruction of the Engineer-in-charge. The Contractor through the specialist agency shall give a guarantee against any leakage for a period of 10 years. Any leakage during the period shall be made good by the contractor at his own cost.					
v	The work specified herein shall be executed as indicated in the drawings as per the technical specifications given in the tender documents and as per MANUFACTURER'S SPECIFICATIONS.					
vi	(Quoted Rates are for all heights, depths, levels, leads and lifts) The operations describe below are only indicative & the item is to be executed as per technical/ manufacturer's specification.					
44	<b>Terrace Waterproofing</b>					
i	Surface Treatment: Providing and laying water proofing treatment of podium including cleaning the surface with wire brush, treating all surface cracks, construction joints and honeycombs by grouting with specialised non shrink grout and preparation of surface in all aspects to receive the waterproofing.					
ii	Bore Packing / Core Cut Treatment: Providing and sealing the gaps in the core cuts around PVC pipes treated with ReArm Bond SBR 45 bonding agent & sprinkled sand; using a non shrink grout ArmGrout M 50 or equivalent of followed by sealing of the same joint by using Joint Tape SealArm Joint Tape 2000 or equivalent with Epoxy adhesive.					
iii	Coving: Providing and Applying at the junction of slab and vertical offsets with Cement Mortar 1:4 and admixed with ReArm Bond SBR 45 at dosage of 1Ltr per 50kg cement.					
iv	Application of Primer: Apply Water based Epoxy based primer FloArm Primer EPW 44 of MYK Arment or equivalent over well prepared surface at 200-400 gm per Sq.Mtr.					
v	Application of Polyurethane waterproof coating: Providing and applying Two coats of liquid applied single component polyurethane based waterproofing system AquaArm WPU-1K of MYK Arment or equivalent . It has to be applied 2.6 @kg/sqmt to achieve a thickness of 1.2 mm in two coats.The membrane will have the following technical parameters: Tensile Strength : 1.4 N/mm2 , Elongation at break : 600% , Adhesion To concrete: >1.5 N/mm2,	Sqm	997.12			
vi	Providing and laying 150 Gsm Geo fabric membrane as separation layer					
vii	Protection Scream: Horizontal Areas: Providing and Laying M25 grade screed concrete in 1:100 to a average thickness of 100 mm mixed with Integral Waterproofing admixture AquaArm Proof WP 10 at the dosage of 125 ml/bag of cement over waterproofing layer to a minimum thickness of 75 mm as per site requirement(Civil Contractor Scope) including control joints of 4M X 4M size and filling the panels with polyurethane sealant.	Sqm	997.12			
45	<b>WATER PROOFING (UG Sump)</b>					
	Providing and applying of swellable type water stop tape, 19mm x 25mm thick in linear meter (expansive nature) for construction joints treatment of RCC structure such as raft slab, retaining walls, water storage tank and at the junctions of raft slab with the retaining walls etc.. After cleaning the surface, one coat of required primer for swellable water stop tape shall be applied throughout the length of the joint @3.78 litre per 240 running meter. Over the primed surface swellable type water stop tape shall be placed. The work shall be carried out all complete as per specification and the direction of the Engineer-In-Charge. The product performance shall carry guarantee for 10 years against any leakage.	Rmt	84.00			
46	<b>TOILET SUNKEN WATER PROOFING</b>					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	Surface Preparation: Providing and laying water proofing treatment to horizontal and vertical surfaces of podium slabs, including cleaning the surface with wire brush, treating all surface cracks, construction joints and honeycombs by grouting with specialised non shrink grout, coving preparation at wall - slab joint and preparation of surface in all aspects to receive the waterproofing					
	Bore Packing / Core Cut Treatment: Providing and sealing the gaps in the core cuts around PVC pipes treated with SBR bonding agent & sprinkled sand; using a non shrink grout ArmGrout M 50 or equivalent of followed by sealing of the same joint by using Joint Tape SealArm Joint Tape 2000 or equivalent with Epoxy adhesive.					
	Coving: Providing and Applying at the junction of slab and vertical offsets with Cement Mortar 1:4 and admixed with SBR at dosage of 5 litre per 50kg cement. (cement and sand shall be supplied by the main contractor)					
	Waterproofing Coating-Providing and applying two component acrylic cementitious coating AquaArm TG of MYK Arment or equivalent with a coverage of 2.0 kg /m <sup>2</sup> . The coating shall be taken upto 300mm from finished floor level on the vertical walls. The coating shall have an elongation of 40%, Shore A hardness of 90, Tensile strength of 0.86 N/mm <sup>2</sup> .	Sqm	130.60			
	Protective Plaster: providing and laying avg. 15 mm thick, CM 1:4 plaster admixed with Integral Waterproofing Compound Aquaarm Proof WP 10 @ 150 ml / bag of cement. (cement and sand shall be supplied by the main contractor)	Sqm	130.60			
47	<b>Water Retaining Structure - OHT &amp; LIFT PIT</b>					
	Surface Preparation: Providing and laying water proofing treatment to horizontal and vertical surfaces of podium slabs, including cleaning the surface with wire brush, treating all surface cracks, construction joints and honeycombs by grouting with specialised non shrink grout, coving preparation at wall - slab joint and preparation of surface in all aspects to receive the waterproofing					
	Bore Packing / Core Cut Treatment: Providing and sealing the gaps in the core cuts around PVC pipes treated with ReArm Bond SBR 45 bonding agent & sprinkled sand; using a non shrink grout ArmGrout M 50 or equivalent of followed by sealing of the same joint by using Joint Tape SealArm Joint Tape 2000 or equivalent with Epoxy adhesive.					
	Coving: Providing and Applying at the junction of slab and vertical offsets with Cement Mortar 1:4 and admixed with ReArm Bond SBR 45 at dosage of 4Ltr per 50kg cement. (cement and sand shall be supplied by the main contractor)					
	Waterproofing Coating-Providing and application of a two component, cementitious acrylic polymer based high performance water proofing coating Aquaarm 2C of MYK Arment or equivalent. It offers seamless coating applied @ 2Kg /Sqm for 1 mm DFT. Technical Data: Elongation : 80% Crack bridging : up to 1mm Tensile Strength : 0.4 N.mm <sup>2</sup> , Pull out bonding strength : 1.5 N mm <sup>2</sup>	Sqm	519.73			
	Protective Plaster: providing and laying avg. 15 mm thick, CM 1:4 plaster admixed with Integral Waterproofing Compound Aquaarm Proof WP 10 of MYK Arment or equivalent @ 150 ml / bag of cement. (cement and sand shall be supplied by the main contractor)	Sqm	519.73			
	<b>MISCELLANEOUS</b>					
48	Providing and fixing in position PVC rain water pipes 4 kg/ sq. cm of approved quality with all necessary outlet bends, shoes, offset pieces, with standard GI clamp, TW fixing blocks, cutting and waste including painting two coats of synthetic enamel paint over an anticorrosive primer to GI clamps. Rate to include for providing and fixing suitable cast iron gratings at the entrances to rainwater pipes, each set at right angles to the other and fixed in CM (1:3) of diameter:					
	160mm dia	Rm	92.97			
49	Providing and laying <b>Pressed clay tiles</b> of size 200 x 200 x 18 mm (as per approved pattern 20 mm nominal thickness of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound, laid over a bed of 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete. (Basic Rate - Rs.20/Sft) at all levels.	Sqm	823.06			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
50	Providing & fixing for <b>Roofing and Cladding Single skin GALVALUME sheet with colour coated</b> made out of 0.47 mm TCT :550 Mpa cold rolled sheet with hot dip metallic coating of aluminium zinc alloy 150 gms / sq.m with 20 microns on top with silicon modified polyester and 5 microns back up epoxy coating at the bottom having 975/1000 mm cover width with 26 mm high crest at 195/200 mm c/c in length as approved by the architect and fixed with necessary suitable imported galvanised carbon steel, self drilling & self tapping screws of HILT / Bosch of required diameter and length all complete with EPDM sealing washers with sealant. Rate should include cost of plastic caps of approved colour of UV resistance and button bolts, all as per manufacturers specification, ridge, piece, aprons, large boards, etc all accessories, all complete as directed by the engineer.	Sqm	326.18			
51	Providing and fixing Exposed Brick work of required size (thickness as per manufactures specification) external wall jointed with cement mortar 1:4 (1 cement: 4 coarse sand) laid over a bed of 20mm thick cement mortar 1:4 (1 cement: 4 coarse sand) and finished neat complete including scaffolding , transportation loading and unloading etc., to all heights and (stone approved by architect) etc. complete as per directed by engineer in charge.	Sqm	327.30			
52	<b>WALL PANNELLING - Aluminium frame with ply and laminate finish</b>					
	Providing and fixing panelling on wall with Aluminium extruded sections of size 50x25mmx1.5mm thick in both horizontal and vertical direction at 600 mm c/c spacing. The framework shall be covered with single layer of 12mm thick BWR. ply finished with 1mm thick laminate finish of approved colour and shade. All concealed faces of BWRply painted with one coat of wood preservative paint before fixing.	Sqm	266.11			
53	Providing and applying walls with textured paint of required shade, New work (Two or more coats applied @ 3.28 ltr/10 sqm)over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	Sqm	59.10			
	<b>INTERIOR</b>					
54	<b>False ceiling</b>					
	<b>Gypsum Board False Ceiling</b>					
	Providing and fixing in position M / F suspended false ceiling to detail as per drawing with GI frame work and 12.5mm tapered type gyp board panels to form grids of 457 x 1220mm as per manufacturers specification including provision for stepped shaped ceiling for light trough comprising.					
	Frame work of intermediate channels (M.F.T.) at 1220mm centres along one direction M/F ceiling section MF5 at 457mm centres along other direction. Perimeter channels (MF 6A) along walls alround perimeter side of the ceiling, all to detail as per drawing.					
	The intermediate channels suspended from ceiling, through strap hangers 25 x 0.5mm (MF 8) at 1220mm centres connected to soffit cleats P534 (27 x 37 x 25 x 1.6mm) the cleats connected to ceiling through metal expansion rawl plugs 12mm dia and 17/16" long with necessary bolts and nuts etc. all connected with additional perimeter channels (MF 6A) for openings for light fixtures, AC ducts, vertical drops, offsets etc. wherever necessary all to detail and as per direction.					
	12.5mm thick gyp board with tapered edges fixed to underside of suspended grid with 25 mm screws to form grids of 457mm x 1220mm varied along wall ends etc. including Architectural boxing,design and painting the underside of gyp board with 2 coats of plastic emulsion paint of approved colour over a priming coat etc., complete.	Sqm	373.28			
55	<b>ARMSTRING GRID FALSE CEILING</b>					
	Providing & Fixing of Armstrong Mineral Fibre Acoustical Suspended Ceiling System with Classic Max Beveled Tegular Edge Tiles with Armstrong Suprafine 15mm Exposed grid. The tiles should have Humidity Resistance (RH) of 99%, NRC 0.7, Light Reflectance ≥85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Colour White, Fire Performance UK Class 0 / Class 1 (BS 476 pt - 6 &7) with pin-hole visual in module size of 600x600x17mm, suitable for Green Building application, with Recycled content of 65%. The tile shall be laid on Armstrong Suprafine 32 with 15 mm wide T - section flanges colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 32 mm and a load carrying capacity of 8.8 Kgs/M (as per standard installation layout mentioned below) & pull out strength of minimum 100 Kgs. The T Sections have a Galvanizing of 90 grams per M2 and need to be installed with Suspension system of Armstrong make.The Tile & Grid system used together should carry a 30 year warranty.					



S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
a	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg	No	4.00			
60	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :	No	60.00			
a	With 20x20 mm square bar					
	<b>MISCELLANEOUS (STP)</b>					
61	Providing and fixing heavy duty RCC manhole cover and frame size 80 x 80 cm (frame and cover) in top slab of sump, including providing locking arrangements complete.	Nos	6.00			
62	Water Stops for Joints : Supply and apply of WPM SW a swellable waterbar based on polymer technology and designed for use in construction joints.	Rm	44.00			
63	Providing and fixing 20mm dia PVC coated MS Rungs @ 300C/C	Nos	32.00			
64	Providing and fixing of 20mm thick Thermocol board for the expansion joints between the coulmns as per the drawing. (Compound Wall)	Sqm	10.00			
65	Providing and Fixing weep Holes - 50mm dia & 750mm long pvc pipe. (Compound Wall)	Nos	356.00			
66	Supply, handle, cut, fix in the position of 2.0" ft high approved G.I barbed wire(2.5mm dia) tying with M.S angle Post using 12 gauge GI binding wire, complete as per drawing. (Compound Wall)	Rm	1068.00			
	<b>Paaver Block</b>					
67	Preparation of formation, levelling and compaction prior to laying the sub base for floors and roads inclusive of any cutting/ filling necessary using available soil at site, watering and compaction etc., complete	Sqm	2060.00			
68	Providing and laying of 60mm thick factory made cement concrete interlocking paver block of M-25 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 75mm thick compacted bed of coarse sand / M-Sand, filling with machine compaction, joints filling with fine sand / M- Sand etc., all complete as per the direction of Engineer-in-charge. PARKING	Sqm	2060.00			
69	Providing and laying at or near ground level factory made kerb stone (450x300x100mm) of M-25 grade cement concrete in position to the required line. Level and curvature, jointed with cement mortar 1:3 (1 Cement : 3 coarse sand) with galvanised IRC mesh of 3mm thickness of 50 x 50mm size, including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including two coats of Emulsion painting with one coat of primer, making drainage opening wherever required complete etc., & Precast CC kerb stone shall be approved, as per direction of Engineer-in-charge	Rmt	185.00			
	<b>Perculation Pit</b>					
70	Providing 300mm dia anchor bore holes including all equipments, leads and liftsetc., complete. Each bore hole should be 3m deep.( Quoted rates to include disposal of surplus earth within a lead of 100m inside the site)	Rm	210.00			
71	Bore hole to be filled with medium sized pebbles to provide mechanical strength to the holes and enhance infiltration.	Cum	10.62			
72	providing and laying 160 mm diameter 6kg/cm2 UPVC slotted rain water line complete as directed.	Rm	210.00			
73	Providing and fixing removable MS grating Manhole cover with frame of minimum 600 x 600mm weighing minimum 30 kg with confirming to IS etc complete as directed.	Nos	43.00			
	<b>Landscape</b>					
	<b>Preambles</b>					
i	Rates mentioned in BOQ shall be inclusive of all taxes as of date including GST, Labour CESS etc. or any other tax as applicable in Delhi.					
ii	Rates quoted in this BOQ shall be applicable to any height & any location even if not specified in any item,Including steel ( H frame, Ledger system etc) scaffolding, curing, cleanning and rectification.					
iii	Details/ functions/ activities mentioned in preambles in each section are included in quoted rates and nothing extra shall be paid for it.					
iv	Watching and lighting arrangements, wherever necessary, whether ordered by the Employer/ Architects or otherwise is included in items.					
v	This bill of quantities is to be read in conjunction with the drawings, specifications, terms & conditions etc.					
vi	The quantities given are approximate and can vary up to any extent. The contractor will not be entitled to claim any extra on account of this quantity variation. Billing will be on actual measurement as executed and approved.					
vii	Contractor has quoted the rates after visting the site,and after considering all local factors.					
viii	Rates are inclusive of Carting away debris / Cleaning / Security / statutory/ approval for disposal of debris etc.					



S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
ix	Rates are quoted for finished items, wastage factor is on contractor part and measurement will be for finished item only .					
x	The rates shall remain firm till the completion of the work and the contractor shall not be entitled to claim any escalation on any account till the completion of the project, in any respect.					
xi	Where ever applicable all the material samples should be got approved from engineer incharge for its quality, makes, colour, pattern etc before start of work /mass procurement of material.					
xii	Manufacturer test certificates/testing from lab and test results will be provided along with the sample for all the materials procured at site. Testing will be got done by contractor at his own cost.					
xiii	Excavation beyond given depth will be made up by contractor with PCC 1:4:8 at his own cost and nothing extra will be paid on this account.					
xiv	Curing, slurry, scaffolding, etc wherever applicable are included in item .					
xv	All concreting to be done as per Mix Design (to be got done by contractor at his own cost) and got approved by him by EIC/Architect before hand.					
xvi	For all concrete, Brick, stone, flooring and other works except plastering, sand used shall be coarse sand and for plastering, it would be 50% coarse + 50% fine, unless specified otherwise.					
xvii	All surfaces to be plastered/tiled, hacking of surface after stripping of shuttering is included in items.					
xviii	All cement related works shall be cured for 7 days or more as applicable as per specifications.The rate shall be also inclusive with Hassian cloth and any other form of curing as directed.					
xix	Protection of all kinds of floorings with POP and polythene sheet etc. is included in item rate and nothing extra shall be paid for this. The rate is also inclusive of removing and cleaning the same after completion of work.					
xx	Holes or pockets in the Brick work for Rain water pipes and other pipes shall be kept or the pipes shall be provided at the time of raising the masonry. These holes or Zarries should be made good after fixing of pipes and nothing extra shall be paid for the same.					
xxi	Chiseling of brickwork, if required shall be done to flush the floor skirting with the wall. Nothing extra shall be paid on this account.					
xxii	Grooves with cement finish up to 12 mm X 6 mm shall be formed in plaster at the junction of slab and beam and slab & brick work without any extra charge. Similar grooves shall be made in plaster at the junction of masonry and wood or steel door or steel window frames or at bottom of beams or chajja, slab projections as drip moulds without extra charge.					
xxiii	Septic tanks, Soak pits, Underground sumps, cable trenches of various sizes, chambers having sizes other than specified in BOQ will be measured under relevant items of work.					
xxiv	For landscaping work the cost of supply and replacement of good earth, organic manure are included in item rate.					
xxv	Water and electricity for all the work including landscaping work shall be arranged by contractor at his own cost .					
xxvi	Bailing out, pumping out, continuous dewatering or otherwise removing all water which may accumulate in the working areas from any or all causes what so ever.					
74	Providing, stacking and laying of good Garden earth and manure, all of good quality, in proper mix(Vermi-composte Manure & red soil mixed in proportion (1:3)) as specified and laying in layers not exceeding 200mm etc complete as directed by Developer.	Cum	44.38			
75	Providing and fixing green grass in with necessary backing as details in drawings. The rate shall include all lead, lift, accessories, complete.	Sqm	355.00			
76	Providing and planting trees , plants shrubs ect	L.S	1.00			
76	WELL with MS Grill Covered	LS	1.00			
	<b>STP EQUIPMENT</b>					
77	Design, Supply, installation, testing & commissioning of STP capacity of 10 KLD (MBBR Type) with equipments and pumps. Treated water suitable for flushing and landscape purpose.	No	1.00			
	<b>LIFT WORKS</b>					
	<b>Preambles:</b>					
	Design, Supply, installation, testing & commissioning of Lifts shall be as per local statutory authority norms & NBC-2016 Codes:					
	Provide detail as under:					
	With Braille signs in Lift buttons					
	Location of lifts:ICAI Chengalpet					
	speed 1.5 MPS					
	floors - (G+2)					
	Stops and opening - 2					
	Controller : AC variable voltage and variable frequency.					
	Automatic rescue device complete with dry maintenance free batteries as required.					
	Operation : Triplex selective collective without attendant.					
	Power - 415 V, 3 phase, 50 HZ, 4-wires system					
	Type of doors:					
	Car : Automatic power operated Center opening, Clear toughened glass scratchproof & door in hairline finish.					
	Rear Side of car : 12 mm thick toughened Glass in S.S. Frame.					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	Landing Door : Automatic power operated Center opening, Clear toughened glass scratchproof & door in hairline finish. Door Size H X W= 2.3 X .9 (Mtrs)					
	A hand rail not less than 600 mm long at 900 mm above floor level to be fixed adjacent to control panel in the lift car.					
	Getting all the clearance from the concerned authorities alongwith Obtaining Lift License & other relevant certificates.					
	Operation and maintenance of lift which include routine, preventive break down maintenance including repair/replacement of worn out items with minimum downtime and warranty & guarantee of repaired/replaced items for defect liability period of one year as per maintenance schedule from the date of handing over of work.					
	Lift cost includes of 2 years of AMC from the date of expiry of Defect					
	Voice announcement system in the car.					
	Call button system in the car.					
78	Supply, erection , testing and Commissioning of Lift of 10 Person capacity having 2 Stops for G + 2 Floor of 4.05 M travel distance between floors in LIFT Well size of 1850 X 2000 mm including Floor level indicators in each floor, with Light, Mirror and wall finish of SS Grade 304Brushed finish, Brushed SS Handrail for rear wall , Door having SS Brush finish , Car Floor ,	No	2.00			
79	<b>ELEVATION Works</b>	LS	1.00			
	<b>CIVIL TOTAL A</b>					
	<b>B LT ELECTRICAL WORKS</b>					
80	Supply, installation testing & commissioning of wall mounted CT METERING panel as per Technical specifications.					
	<b>Incomer: 1</b> NO - 250A TPN HRC FUSE With PROVISION FOR MFm and CT WITH VIEW GLASS					
	<b>Outgoings: 1</b> NO 250A TPN MCCB					
81	<b>Supply,Erection &amp; Testing of MAIN panel</b> made out of 14/16SWG CRCA Sheet duly applied with Siemens Grey Texture Powder coating comprises of the following	NO	1.00			
	<b>Incomer:1 (EB Incomer)</b>					
	1 No- 400A FP MP MCCB 50KA with Releases					
	1 Set- RYB Indications lamp with Control MCB					
	1 Set- On/ Off/ Trip Indications lamps					
	1 No- Digital Multifunctional Meter with Port					
	1 Set- Tape wound CT+ CT Terminal block					
	1 No- Sensing CT					
	1 No- EF/OC/SC Protection					
	1No-Digital Load Manager with class accuracy of 1					
	<b>Incomer:2 (DG Incomer)</b>					
	1 No- 160A TP+NC MP MCCB 50KA with Releases					
	1 Set- RYB Indications lamp with Control MCB					
	1 Set- On/ Off/ Trip Indications lamps					
	1 No- Digital Multifunctional Meter with Port					
	1 Set- Tape wound CT+ CT Terminal block					
	<b>Interlock: Electrical interlock</b>					
	<b>Incomer:3 SOLAR INCOMER</b>					
	1 No- 250A TP+NC MP MCCB 50KA with Releases					
	1 Set- RYB Indications lamp with Control MCB					
	1 Set- On/ Off/ Trip Indications lamps					
	1 No- Digital Multifunctional Meter with Port					
	1 Set- Tape wound CT+ CT Terminal block, CONTACTOR /REVERSE POWER RELAY					
	<b>AUTO CHANGE OVER,annunciation panel for dg and transformer auto start logic for dg</b>					
	IDMT Earth Fault Relay ,IDMT over current Relay,indicator,Multifunction meter with RS port( Ammeter, Voltmeter, KWH & KVA Power Factor Meter), selector switches, CTs control fuses, RYB and "ON/OFF&TRIP indicating lamp with necessary CT's in incomer, for DG and transformer					
	Outgoings:					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	1NO 200A 35KA TPN MCCB					
	4 Nos- 100A 36kA TPN MCCB with FD kit					
	13 Nos- 63A 36kA TPN MCCB with FD kit					
	Busbar: Aluminium-400A	No	1.00			
82	Supply and Erection of 25KVAR APFCR panel (Non-Compartmentalised) made out of 14/16SWG CRCA Sheet duly applied with Siemens Grey Texture Powder coating comprises of the following-WALL MOUNT					
	Incomer:					
	1 No- 100 A 25kA TPN MCCB with Fd kit					
	1 Set- RYB Indications lamp with Control MCB					
	1 No- Digital VAF Meter with Port					
	25KVAR FIXED CAPACITOR					
	1 Set- Tape wound CT+ CT Terminal block					
	Busbar: Aluminium 100 A	No	1.00			
83	Supply and Erection of MLSB panel made out of 14/16SWG CRCA Sheet duly applied with Siemens Grey Texture Powder coating comprises of the following					
	Incomer:					
	1 No- 100A FP MCCB with FD kit					
	1 Set- RYB Indications lamp with Control MCB					
	Outgoings:					
	5 Nos- 40A TPN MCCB					
	Busbar: Aluminium-100A	No	1.00			
84	Supply and Erection of UPS panel made out of 14/16SWG CRCA Sheet duly applied with Siemens Grey Texture Powder coating comprises of the following					
	Incomer:					
	1 No- 100A TP MCCB with FD kit					
	1 Set- RYB Indications lamp with Control MCB					
	Outgoings:					
	8 Nos- 40/63A TPN MCCB					
	Busbar: Aluminium-100A	No	1.00			
85	Supply and Erection of HVAC panel made out of 14/16SWG CRCA Sheet duly applied with Siemens Grey Texture Powder coating comprises of the following					
	Incomer:					
	1 No- 200A TP MCCB with FD kit					
	1 Set- RYB Indications lamp with Control MCB					
	Outgoings:					
	5 Nos- 40/63A TPN MCCB					
	Busbar: Aluminium-200A	No	1.00			
86	Supply, laying & Testing of following size with 1.1kV grade multicore aluminium / Copper LT XLPE cables:					
i	3.5C X 185 sq.mm XLPE Alu Ar cable	Mtrs	15.00			
ii	3.5CX95SQMM A2XFY	Mtrs	70.00			
iii	4 C X 10sq.mm cu ar cable	Mtrs	415.00			
iv	3 C X 35 sq.mm cu ar cable	Mtrs	195.00			
v	4CX25SQMM A2XFY	Mtrs	256.00			
vi	3 C X 6 sq.mm cu ar cable	Mtrs	50.00			
vii	4CX6SQMM COPPER AR CABLE INCL PIT EXCAVATION	Mtrs	250.00			
viii	4x16sqmm copper cable for motors	Mtrs	40.00			
	Supply, Providing & End Termination of following size with 1.1kV grade multicore aluminium / Copper LT XLPE cables: DOUBLE COMPRESSION GLANDS					
xi	3.5C X 185 sq.mm XLPE Alu Ar cable	SET	2.00			
xx	3.5CX95SQMM A2XFY	SET	4.00			
xi	4 C X 10sq.mm cu ar cable	Nos	28.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
xii	3 C X 35 sq.mm cu ar cable	Nos	4.00			
xiii	4CX25SQMM A2XFY	Nos	16.00			
xiv	3 C X 6 sq.mm cu ar cable	Nos	8.00			
xv	4CX6SQMM COPPER AR CABLE	NOS	30.00			
xvi	4cx16sqmm copper cable for motors	no	2.00			
87	Supply, installing, testing and commissioning of maintenance free earth pipe of 3 mtr long GCE38, 38 mm dia EC grade Copper earthing Electrode buried in ground with Earth rite compound (CPRI Test report required) in an earth pit of 450 x 450 x 3000mm mixed with sand in alternate layers of 150mm each up to a height of 2550mm from bottom. The pipe shall have provision for connecting earth flats / wires. A masonry structure of wall thickness of not less than 230mm shall be constructed to a depth of 450mm and heavy duty SFRC cover shall be used to cover the pit. (For LT panels, , Cable Tray & DG and other earthing)	set	10.00			
	<b>Supply and laying of following size earth flats</b>					
i	25 X 3 Cu Flat	Mtrs	200.00			
ii	8 SWG Cu wire	Mtrs	150.00			
iii	Supply and erection of MS supports	kg	100.00			
iv	Supply and laying of 300 X 50mm ladder type cable tray	Mtrs	60.00			
v	415V Danger board	Nos	2.00			
vi	LIASIONING CHARGES	LS	1.00			
	<b>TNEB APPROVAL, contractor should have valid LICENCE</b>					
	Charges for Getting maximum Load Sanction getting EMD Advice					
	Preparation of necessary documents.					
	Submission to TNEB office.					
	Co-ordination with TNEB officials for registration application.					
	Getting processing the papers.					
	Getting EMD advice and getting service connection					
	Co-ordination with EB OFFICIALS at TNEB					
	Submission of development charges DD.					
	Co-ordination with EB official and complete the job.					
	fixing the meter connection					
	<b>TANGEDCO Approval for 112kW MD Load</b>					
	TANGEDCO Deposit					
	Development charges.					
	<b>LT WORKS</b>					
88	Supply, erection, earthing, testing and commissioning of the following MCB DB's IP 42 Protection Metal Door powder coated including all interconnections and accessories like bolts, nuts and associated civil works. MCB DBs shall have comprising as follows:					
i	VDB 6W TPN VERTICAL MCCB DB Incoming: 1no - 100A TPN MCCB, Outgoing: 6 NO 63A TPN MCB	no	1.00			
ii	LDB -6W TPN Phase segregated MCB DB Incoming: 1no - 40A TPN MCB Outgoing: 3nos - 40A DP MCB with 40amps DP 30mA ELCB, 18nos - 6/10A SP MCB	Nos	4.00			
iii	PDB -6W TPN Phase segregated MCB DB Incoming: 1no - 63A TPN MCB Outgoing: 3nos - 63A DP MCB with 63amps DP 100mA ELCB, 18nos - 16/20A SP MCB	no	8.00			
iv	UPS DB - 4W TP+2N Phase segregated MCB DB Incoming: 1no - 40A TP+2N MCB Outgoing: 3nos - 40A DP MCB with 40amps DP 100mA ELCB,12nos - 16/20A SP MCB	Nos.	4.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
v	8 Way SPN DB UPS AND EMG LIGHTS-Incoming:1no – 25A DP ELCB Outgoing: 6nos –25A SP MCB	Nos.				
vi	8 Way SPN DB FOR LIFTS AND EMG LIGHTS-Incoming:1no – 20A DP ELCB Outgoing: 6nos –6A SP MCB	Nos.	5.00			
vii	STREET LIGHT DB - TPN MCB INCOMER DB: SERVER ROOM-Supply, fixing, testing and commissioning of the double door type compartmental Phase segregated 4way MCB DB comprising of the following : INCOMER:25A TP +2N MCB 10kA with all necessary connected accessories – 1No. OUTGOING: 7nos,6\16\20\40 A 10KA TP MCB in a separate compartment with necessary phase segregation as required by the Electrical Inspectorate. With necessary tinned copper busbars, interconnections, separate earth bus, separate neutral bus for each phases. The board shall be powder coated type fixed with concealed system in wall/ fixed in column. The rate shall include necessary connected civil works like chipping, rough plastering etc.	NO	1.00			
	WIRING - CIRCUIT CUM POINT WIRING The rates for all point wiring items shall also include supplying and fixing of the Conduits, conduit specials, bushes and other fittings,Approved GI saddles and grouting the same for exposed conduit work,2 mm thick Outlet boxes and junction box,All fixing accessories such as clips, brass screws etc,All work & materials necessary for wiring a point circuit of any length from the Final Distribution Board to connector via switch and shall include the circuit wiring also except where identified.					
89	Primary Light / Fan Point Wiring: Supply, wiring, connecting & commissioning of 3Runs 1.5 Sq.mm. (Ph, Neutral & Earth) PVC insulated multistranded HR-FRLSH-LF copper wires in 1.8mm thick MS conduits fixed on ceiling partly and 1.8 mm thick PVC conduit concealed in the wall partly with necessary clamps, screws, etc., as required as per the site condition including supplying and fixing of modular 6A One way switch along with moulded front plate in GI anodised manufacturer's mounting box-Flat switches with indication fixed flush with the wall complete with all accessories including 3 plate ceiling rose.NOTE: Above false ceiling when it is open wiring it should be of MS conduit	PTS	280.00			
90	Secondary Light Points: The secondary light points will have to be wired from the primary light point as mentioned above.	PTS	29.00			
91	Lighting Circuit Mains: Supply and laying of 3 Runs 2.5 Sq.mm. (Ph, Neutral & Earth) PVC insulated multistranded HR-FRLSH-LF copper wires in 1.8mm thick MS conduits fixed on ceiling partly and 1.8 mm thick PVC conduit concealed in the wall partly with necessary clamps, screws, etc., as required as per the site condition., from LDB to Lighting Switch Boards and MCB to First Light Point.	MTR	1120.00			
92	TWO-WAY POINTS SITC of Concealed Point wiring (from Switch board) including Concealed Circuit Wiring (from DB to switch board) for two way like staircase points after cutting grooves on wall/ RCC, neatly filling the grooves with cement mortar, making good thereof, etc. using 3 x 1.5 Sq. mm. heavy duty PVC insulated copper conductor stranded cable (1 for earthing),2 Nos. Modular 2-way switch complete with non metallic inner & outer plates, suitable metal boxes, etc,IS marked (IS 9537 Part-3) suitably sized heavy duty rigid concealed MS conduits (20mm min), Saddles, junction boxes, bends, other accessories, ceiling roses, etc.	PTS	6.00			
93	Ceiling Fan Points: Supply,installation,testing and commissioning of ceiling fan points same as Primary Light Point Wiring but for ceiling fan points including supplying and fixing concealed type fan hook box and supply and fixing of electronic type 300W fan step regulator with moulded front plate in GI anodised manufacturer's mounting box fixed flush with the wall complete with all accessories as required as per the site conditions.	PTS	65.00			
94	Ex Fan Points: Supply,installation,testing and commissioning of Ex-fan points same as Primary Light Point Wiring but for exhaust fan points including supplying and fixing one no 6A switch with indicator in switch board and one no 6A socket near Ex fan location in wall with moulded front plate in GI anodised manufacturer's mounting box fixed flush with the wall complete with all accessories as required as per the site conditions. in MS conduits	PTS	10.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
95	Emergency Lighting Circuits: Supply and laying of 3 Runs 1.5 Sq.mm. (Ph, Neutral & Earth) PVC insulated multistranded FRLS copper wires in 1.8mm thick MS conduits fixed on ceiling partly and 1.8 mm thick PVC conduit concealed in the wall partly with necessary clamps, screws, etc., as required as per the site condition., from ELDB to Emergency Light fittings.	PTS	200.00			
96	Providing and fixing/ laying of conduit and wires for Light point wiring with 1.5 sq. mm PVC insulated, FRLS, copper conductor (stranded) 1100V grade wires alongwith earthing in 25mm dia. medium duty PVC concealed conduit system including providing and fixing one no. 10 Amp single pole modular switch grid plate mounted with moulded cover plate in zinc chromate passivated GI box suitable for modular switch, complete in all respect (wiring & conduiting up to switchboard not included in item cost), for one light point controlled by one switch. Including making zaries in the wall and finishing the same	PTS	40.00			
97	Secondary Light Points: The secondary light points will have to be wired from the primary light point as mentioned above.	PTS	7.00			
98	TWIN Providing and fixing/ laying of conduit and wires for Light point wiring with 1.5 sq. mm PVC insulated, FRLS, copper conductor (stranded) 1100V grade wires alongwith earthing in 25mm dia. medium duty PVC concealed conduit system including providing and fixing one no. 10 Amp single pole modular switch grid plate mounted with moulded cover plate in zinc chromate passivated GI box suitable for modular switch, complete in all respect (wiring & conduiting up to switchboard not included in item cost), for controlled by 2 nos. 2 way switch. Including making zaries in the wall and finishing the same	PTS	2.00			
99	Lighting Circuit Mains: Supply and laying of 3 Runs 2.5 Sq.mm. (Ph, Neutral & Earth) PVC insulated multistranded HR-FRLSH-LF copper wires in 1.8 mm thick PVC conduit concealed in the wall partly with necessary clamps, screws, etc., as required as per the site condition., from LDB to Lighting Switch Boards and MCB to First Light Point.	PTS	160.00			
100	Emergency Lighting Circuits: Supply and laying of 3 Runs 1.5 Sq.mm. (Ph, Neutral & Earth) PVC insulated multistranded FRLS copper wires in 1.8 mm thick PVC conduit concealed in the wall with necessary clamps, screws, etc., as required as per the site condition., from ELDB to Emergency Light fittings.	MTR	50.00			
101	Ceiling Fan Points: Supply, installation, testing and commissioning of ceiling fan points same as Primary Light Point Wiring but for ceiling fan points including supplying and fixing concealed type fan hook box and supply and fixing of electronic type 300W fan step regulator with moulded front plate in GI anodised manufacturer's mounting box fixed flush with the wall completewith 600mm down rod with all accessories as required as per the site conditions.	pts	2.00			
102	Ex Fan Points: Supply, installation, testing and commissioning of Ex-fan points same as Primary Light Point Wiring but for exhaust fan points including supplying and fixing one no 6A switch with indicator in switch board and one no 6A socket near Ex fan location in wall with moulded front plate in GI anodised manufacturer's mounting box fixed flush with the wall complete with all accessories as required as per the site conditions. in MS conduits	pts	8.00			
<b>SOCKETS</b>						
103	Supply, Installation, testing and commissioning of 1 no 6A switched socket and with moulded front plate, GI anodised enclosure, and mounting box in the wall(concealed/open)and other associated accessories including chasing embedding rough plastering as required as per the site conditions for FF all typical floors power points.	NOS	208.00			
104	Supply, Installation, testing and commissioning of 1 no 6/16A universal switched socket and with moulded front plate GI anodised enclosure in the wall/floor(concealed/open and other associated accessories including chasing embedding rough plastering as required as per the site conditions for F/F and all typical floors power points.	NOS	4.00			
105	Supply, Installation, testing and commissioning of 2 no 6A UPS switched socket and 2nos6a switches and with moulded front plate, GI anodised enclosure, and mounting box in the wall(concealed/open)and other associated accessories including chasing embedding rough plastering as required as per the site conditions for power points.	NOS	137.00			
106	Supply, Installation, Testing and Commissioning of 25A 1 Ph. 3Pin Metal clad Plug and socket with 25A DP RCBO100mA as control with enclosure, IP20 FOR AC	NOS	31.00			
107	Supply & Laying of 2R 2.5sqmm and 1R 1.5 Sq.mm. PVC insulated FRLS multistranded cu wires with laid in existing conduit or Raceways all accessories as reqd. (From DB to 6A Switch & Sockets)	MTR	1000.00			
108	Supply & Laying of 2R 4sqmm and 1R 2.5 Sq.mm. PVC insulated FRLS multistranded cu wires with laid in existing conduit or Raceways all accessories as reqd. (From DB to 6A Switch & Sockets)	MTR	400.00			
109	Supply, fixing of 'POPUP BOX : 6M - 2 Nos 6/16A Switch with Socket	NOS	2.00			



S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
113	Supply of IP65 4' LED luminaire with special application luminaire shall be designed to provide undisrupted lighting for dusty and humid indoor application. The luminaire shall be with all-weather polycarbonate housing and highly efficient electronics with LED system to offer long useful life even in adverse application and environmental conditions. The luminaire shall be with Co-extruded polycarbonate housing and mounded end caps. The system wattage shall be < 36W with system lumens of > 4400 lumens and system efficacy of > 100 lm / W. LED make: that satisfies IEC62471 Photobiological/RoHS Standards with and LED Efficacy of > 150lm/W, Colour Temperature-6500K or Higher with LED binning as per ANSI Bin C78.377A, 120Deg LED Beam Angle, CRI > 70, Life of LED as per L70 > 50000burning hours, Ambient temp-0 to 50DegC, Driver efficiency>85%, THD<10%, Power factor>0.95, Inbuilt Surge protection in CM ≥ 4.0KV, Constant Current - Constant Voltage LED Driver with APFC Construction, LED Driver Voltage range 150-270Vs Efficacy≥100lm/W. Driver shall be potted driver and both driver and luminaire shall be BIS compliance. driver shall be potted driver and both driver and lumi	NOS	22.00			
114	Supply, Installation, including assembling, testing and commissioning of Wall mounted down light fitting with 9W or 10W LED lamps and suitable drivers for Mirror light fitting.	NOS	17.00			
115	Supply, Erection, testing and commissioning of Cove/Strip light with 1 x 20W EACH 5M LED COOL white with driver and with all accessories and interconnecting with 3 core 1.5 sqmm PVC insulated multistrand wires and accessories as required.Crompton cat no LST20CDL/BL/WW	NOS	3.00			
116	Low glare, height efficiency 16W TUBE light - Crompton cat no LT8-20-865-(2) (Ultron)	NOS	4.00			
117	Low glare, height efficiency SURFACE mounted LED down light - CIRCULAR profile-LCRP-10-CDL (Royal Rimless)	NOS	4.00			
118	Supply, Installation, testing and commissioning of 1200mm sweep Ceiling fan and fixing the same with extended rod from roof, required clamps,bolts,fan hook , screws ,hardwares as required as per the site condition -BEE 5 Star rated white colour double ball bearing model no ORIENT make AEROQUIET OR EQVT	NOS	65.00			
119	Supply and fixing of Bulk head fitting of PHILIPS make CAT: Philips 10 W WT202W LED6S CW PSU S2 PC Endura LED Bulkhead, 6500 K (or) Crompton cat ICBH10 OR equivalent in the lift shaft.	NOS	14.00			
120	Supply, Installation, testing and commissioning of heavy duty motor totally enclosed with die cast aluminium rotor mounted on two ball bearings 300 mm dia1400 RPM single phase Exhaust fan with die cast Al body and CRCA steel blades and minimum air delivery of 1710 cum/hr. and fixing the same including making hole to suit the size of ex.fan and fixing the same in the wall with wooden blocks, screws ,hardware as required as per the site condition	NOS	10.00			
121	Supply and installation of 3w EXIT / toilet double sided signage LIGHT 180 min back up polite auto glo ip 44 or eqvt with CABLE and 5a pin incl hanging arrangement cat no LED EM(S)	NOS	4.00			
122	50MM Dia GI Pipe Wall bracket WITH Terrace lighting/Wall FLOOD Lighting WITH 50W led Crompton LIGHTLFLE-50-CDL- SECURITY AND OFFICE TERRACE FOR HVAC PANEL SERVICING	SET	2.00			
123	Supply, fixing ,testing and commissioning of AC chargeable emergency lamp with 2x4W led lamps with all connected accessories -PROLITE Self contained rechargeable emergency light 2x4watts with battery 12v 2.3 AH 120 MIN BACKUP -PEL LED LTBL With Cable and 5a pin	SET	3.00			
124	Supply erection of Integral decorative LED bollard with opal acrylic with IP65 Protection-Bajaj cat no BGBOM 650 9W LED ww - or eqvt incl concrete foundation as per item no 176, incl junction box WIPRO LB14-880-XXX-65-05	SET	5.00			
125	LED TRACK LIGHT FOR RECEPTION-WIPRO LD 57-251-036-40-XX OR EQVT with alu support	NOS	1.00			
126	Suspended type linear in sleek design CROMPTON LCLP54-72-CDLN OR EQVT	SETS	2.00			
127	20w tube	set	4.00			
128	40 w tube	set	7.00			
129	<b>RACEWAYS &amp; JUNCTION BOX</b>					
	RACEWAYS :Supply, installation & fixing of the following size of Raceways made out of 2,mm thick galvanized sheet steel with Rate shall be inclusive of all Civil works for concealing, floor finish, Curing, etc.					
130	100x38X2mm GI Race ways floor trunking Including required under floor access outlet, under floor cross overs, under floor vertical access units, single compartment as specified incl joint sleeves	MTR	190.00			
131	200x38X2mm GI Race ways floor trunking Including required under floor access outlet, under floor cross overs, under floor vertical access units, single compartment as specified incl joint sleeves	MTR	50.00			



S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
132	JUNCTION BOX :Supply, installation & fixing of the following size of junction boxes made out of 3 mm thick galvanized sheet steel junction boxes with top SS cover good finishing Rate shall be inclusive of all Civil works for concealing, floor finish, Curing, etc.					
i	110 mm X 50 mm	NOS	54.00			
ii	210 mm X 50 mm	NOS	1.00			
iii	310 mm X 50 mm	NOS	1.00			
	<b>UPS AND INVERTER</b>					
133	Supply & testing of 3 KVA INVERTER sPh-in/sph-out with 30Min backup with necessary mounting arrangement etc., Complete wiring required between the Inverter and it's battery banks & Battery Stands. The cost shall be inclusive of Structural steel supports etc.,	NOS	1.00			
134	Supply, Erection and Commissioning of S Phase input, S phase output UPS 6 KVA, online with 30 Minutes Battery backup (Maintenance free dry type batteries) with full protective devices in-built. & battery rack also. FOR SERVER-15 NO 26AH EXIDE STAND CABLES	NOS	1.00			
	<b>STREET LIGHTING</b>					
	<b>STREET LIGHTING -- MAIN ROADS</b> The rate includes excavation and foundation for erecting the referred street light pole as required at site and inclusive of necessary connected minor civil works if required and necessary supports as required at site. No extra payment will be made for the same. each arm with light- The pole shall be grouted inside ground pit (cross section 600 x 600 mm) with cement concrete 1:2:4 with necessary GI 'A' class pipes (not less than 38 mm dia, NB) to facilitate pulling of cables. Separate pipes shall be provided for incoming and outgoing cables. The cement concrete shall be protected from premature drying by curing for at least seven days after pouring. All concrete surfaces from 150 mm below ground level to top shall be finished smooth with cement mortar 1:4.-pole height above ground -7-m-top 70mm,bottom 130mm,thickness 3mm,with base plate size220x220x16mm-4nos foundation bolts,700 mm length 24mm dia.					
135	Supply, erection, testing and commissioning of street light fitting with 1x120W LED lamp, driver, fixed on 6m (above ground)MS OCTAGONAL poles confirming to IS1161, - and 1.5 m angle arm - Single arm conventional bracket for mounting fitting ,bracket assembly on to the pole top by means of angular rings , foundation base plate,ribs,4 fixing bolts (600mm anchoring bolt with 90 degree bend, including red oxide paint 24mm rod with 2nos PL Washers and 3nos nuts) anchoring bolt,cable entry pipe, poles treated for corrosion protection, earthing arrangement, excavation and back filling, supplying and laying cables through Hensel make weather proof junction box with DP 3 amps MCB ,wiring with 3x2.5 Sq.mm PVC insulated 1100 volts grade copper conductor wires from junction box to lighting fixture complete as required. finish to be of approved colour.Entire application shall confirm to IS2713 for Tubular Steel Poles for Overhead Power lines including numbering of poles. 4 way 30 A rated terminal block for loos Efficacy≥100lm/W. Driver shall be potted driver and both driver and luminaire shall be BIS compliance. driver shall be potted driver and both driver and luminaire shall be BIS compliance. Driver shall be compatible for auto cut off and restart with deviation to operating voltage also the ripple shall be less 5%.CAT REF.NO : PHILIPS S740B/RC LED30S/840 W60L60 PSU WH OR EQL	Nos	12.00			
136	Supply, erection, testing and commissioning of street light fitting with 1LED lamp same as above item but with Double Arm	Nos	2.00			
137	<b>FLOOD LIGHT:</b> Supply , Fixing, testing and commissioning of Integral flood light luminaire single piece pressure die cast aluminium housing, toughened glass cover with IP 65 protection with 1 x 45W led lamp for with driver and fixing the same on the outer column with necessary fixing hardwares as required as per the site condition. etc., (Crompton cat no LSFO 45 CDL OR equivalent)	Set	2.00			
138	<b>Facade Lighting:</b> Supply and erection of plinth / peripheral wall / Pole mounted 72W weather proof FLOOD LIGHT with necessary DRIVER etc.all complete for enlightens the elevation of the building. The scope includes construction of necessary plinth to the required height of Architect / Consultants and all other connected civil / other such work. The scope also includes providing necessary mounting brackets, lamp pilferage arrangement etc. to the satisfaction of the Architects / Building Managers.Assymetrical flood light fitting with IP: 65,	Nos	4.00			
139	Supply and fixing of weather proof loop in loop out box made out MS sheet steel enclosure with 4Way 20A rated terminal block for the above landscaping , Terrace, post top light fittings with necessary fixing hardwares required as per the site condition.	Nos	2.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
140	Supply erection of entrance gate light 45w LED K LITE Cat No Maughan/imperial/ crown- as per client choice	SET	2.00			
	<b>SAFETY EQUIPMENTS:</b>					
141	Supply and laying of LT 2mm thick electrolytic grade rubber mat as per ISI IS 15652-2006 of size 2000x1000 mm in front of the LT panel boards.	Nos.	1.00			
142	Supply and fixing of 440V AI Danger Boards of size 6"x 4" both in local language and English	No	1.00			
143	Supply and laying of 25mm dia 2mm thick MS Conduit with all connected accessories.	Rmt	1.00			
144	Supply and laying of 32mm dia 2mm thick MS Conduit with all connected accessories.	Rmt	1.00			
145	Supply and laying of 40mm dia 2mm thick MS Conduit with all connected accessories.	Rmt	1.00			
146	Supply and laying of 50mm dia 2mm thick MS Conduit with all connected accessories.	Rmt	1.00			
147	Supply and laying of 20mm dia Heavy duty PVC Conduit with all connected accessories.	Rmt	1.00			
148	Supply and laying of 25mm dia Heavy duty PVC Conduit with all connected accessories.	Rmt	1.00			
149	Supply and laying of 32mm dia Heavy duty PVC Conduit with all connected accessories.	Rmt	1.00			
150	Supply and laying of 50mm dia Heavy duty PVC Conduit with all connected accessories.	RMT	1.00			
151	Supply and laying of 25mm dia 2mm thick GI Conduit with all connected accessories. FOR flame proof lighting class A	RMT	1.00			
152	Supply & Erection of Cable Tags as per the Cable Schedule.	LS	1.00			
153	Towards professional charges for preparation of drawings in necessary formats for approval, follow up and arranging approval of drawings, scheme by Local electricity authority, arranging inspection, and arranging power connection. The Rate shall be including preparation and submission of as built drawings of entire installation of the works executed need to be submitted in the blue print of A1 size as required in 4 Sets of hard copy and two set sets of soft copy in CD.	LS	1.00			
	<b>NETWORKING</b>					
	<b>MOLEX MAKE</b>					
154	Supply and laying of Cat 6A 4Pair UTP Cable (Box of 500 Mtr) with all connected accessories for DATA-blue	Box	9.00			
155	Supply and Fixing of Cat 6A 48Port Unloaded Jack Panel for data	Nos	7.00			
156	Supply and Fixing of Cat 6A UTP Jack for Data -Blue Color for Rack Side	Nos	137.00			
157	Supply and Fixing of Cat 6A UTP Jack for Data -Blue Color for Workstation Side	Nos	137.00			
158	2Port Wall Plate Square Type Face Plates WITH BACK BOX	Nos	137.00			
159	1Port Wall Plate Square Type Face Plates with back box	Nos	20.00			
160	Cat 6A stranded Patch cord 1 Meter - Blue for Rack side	Nos	137.00			
161	Cat 6A stranded Patch cord 2 Meter - Blue for WS side	Nos	137.00			
162	Supply and laying of 25mm dia Heavy duty PVC Conduit with all connected accessories.	Rmt	50.00			
163	Cat 6A 4Pair Shielded net work Cable for connectivity BLUE	M				
	<b>Voice connectivity</b>					
164	Supply and laying of Cat 6A 4Pair UTP Cable (Box of 500 Mtr) with all connected accessories for VOICC	Box	2.00			
165	Supply and Fixing of Cat 6A UTP Jack for Voice -Yellow Color at Rack Side	Nos	25.00			
166	Supply and Fixing of Cat 6A 48Port Unloaded Jack Panel for Voice	Nos	3.00			
167	Cat5e UTP 50-port Non-Shutter Patch Panel, loaded ,resources (EBPAX) Side	Nos	2.00			
168	Supply and Fixing of Cat 6A UTP Jack for Voice -Yellow Color at User End	Nos	25.00			
169	Supply and Fixing of Cat 6A , stranded Patch cord 1 Meter - Blue for Rack side	Nos	25.00			
170	Supply and Fixing of Cat 6A , stranded Patch cord 2 Meter - Blue for User End	nos	25.00			
171	Cat.3 50pr UTP Cable 305m/reel Grey_CM/R	M	1.00			
172	50+50 MDF	Nos	1.00			
173	Hookup Wire-100 mtr	Roll				
	Fiber Back Bone Cabling					
174	Supply and laying of 12 core OFC fiber Single mode	mtr	40.00			
175	15U Wall Mounting rack, 600/500D with Front Glass door & Rear Plain Door with handle lock, 1 Shelf 400mm and mounting hardware packet of 20, Cable Manager, PDU 6sockets (1),Side panel mountable Rittal make	no	1.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
176	42U Rack Frame/800X1000/Steel/NRS/ CKD Assembled/Casters Type 3/Black,Levellers,19" Adopter Kit/42U/Closed/Door/100X150/2/Black,Glass Door/800/42U/NRS/Black,Metal Door/800/42U/NRS/Black,Side Panels/1000/42U/Vented/NRS/Black,Server /IT Rack mount power distribution unit, 1Ph, 230V, 32A, 50/60Hz, Zero U standard with 12 X Indian Round Pin 5/15A, 16A MCB X 2 Circuits- PDU Rating 7.3KVA/Bottom feed-3Mt/ Black/ Inlet Plug Not Installed,Horz. Cable Organiser/1U/ Channel On Front,Shelf/1000/Black,Shelf/Key Board/19"Rty/1000/Black,Mounting Hardware-CR (Pack of 20),ITE / Server Rack Air Circulation module/Tower Mount/360CFM.	no	1.00			
177	HDMI Cable 5 M Full HD	set	1.00			
178	VGA MALE TO MALE CABLE 5 M	set	1.00			
179	Audio Video Network POPUP box DESKTOP HYDRAULIC	set	2.00			
180	HDMI 2 X 8 Switcher Cum Splitter With Remote - 2 Input 8 Output - 3D Full HD	set	1.00			
	<b>LIGHTNING ARRESTER</b>					
181	Supply of 8 mm Aluminum Round Conductor complete as specified in drawing & Meets the requirements of DIN EN 50164-2 (VDE 0185 part 202) & VDE 0185-305 (IS/IEC 62305) , OBO Type No. RD 8/ALU I (5450 08 6)	Mtr	220.00			
182	Supply of Roof conductor holder for parapet- Polyamide Conductor holder: With M8 female thread or diameter 7mm, M8 Screw to connect the conductor holder. Weather and temperature resistant from -35 to +90 degree Celsius tested. Conductor holder @ 1 meter distance OBO Type No. 177 30 M8(5207 46 0)	Nos	180.00			
183	Polyamide roof cable holder for flat roof: DIN 48829 Form B1. Closed form with bottom. Filling weight 1Kg (frost-resistant concrete). Sleeve from polyethylene, black @ 1 meter distance. OBO Type No. 165 MBG 8-10 ( 5218 70 0)	Nos	15.00			
184	Supply of conductor holder for sheet as specified in drawing , Bottom section stainless steel (V2A) with Ø 8.5 mm slot made of Conductor holder of stainless steel (V2A) @ every 1mtr distance. OBO Type No. 159 VA-V (5217 07 5)	Nos	45.00			
185	Providing of cross universal connector: For T and cross connection, to route vertical down conductor /mesh formation made of hot dipped galvanised iron with necessary screws etc as required. Installed with 4 hexagonal bolts M8*25 with M8 hexagonal nuts . OBO Type No.251 8-10 ( 5312 03 5 )	Nos	20.00			
186	Providing of expansion piece with connector: For equalising temperature related length changes. Necessary on conductors length over 20 meters. For round conductor Rd 8/ALU. OBO Type No. 172 AR ( 5218 92 6 )	Nos	12.00			
187	Connector: For T cross and parallel connectors. Quick installation using hexage	Nos	12.00			
188	Vertical air terminal with accessories:Providing of Air terminals as per IS-IEC - 62305 part-3 16mm rod tapered to 10 mm aluminium rod : Meets the technical specification according to DIN EN 50164-2 (VDE 0815 part 202). Meets the requirement of VDE0185/305(IS/IEC 62305) 4Mtr Airterminal: semi-hard (E-ALMgSiO5 corresponds to DIN 48801) Suitable for high wind load. OBO Type No. 101 VL 4000 ( 5401 995).	Nos	4.00			
189	Accessories : System consist of Fang Fix with base and clamp, on the top air terminal is erected. OBO Type No. F-FIX 16 ( 5403 20 0 ).	Nos	4.00			
190	Fang fix clamp made of SS, lightning tested for 100 KA 10/350 micro sec waveform.16 KG stone of 365 mm diameter, high level of stability.Quick and easy mounting of interception rod using anchors.Concrete, frost-resistant, can be stacked.OBO Type No. F-FIX S16 I ( 5450 08 0 ) Fang fix clamp made of SS, lightning tested for 100 KA 10/350 micro sec waveform.16 KG stone of 365 mm diameter, high level of stability.Quick and easy mounting of interception rod using anchors.Concrete, frost-resistant, can be stacked.OBO Type No. F-FIX S16 I ( 5450 08 0 )	Nos	6.00			
191	Supply of 8 mm Aluminum Round Conductor complete as specified in drawing & Meets the requirements of DIN EN 50164-2 (VDE 0185 part 202) & VDE 0185-305 (IS/IEC 62305) , OBO Type No. RD 8/ALU I (5450 08 6)	MTR	125.00			
192	Supply of conductor holder for sidewall- Polyamide Conductor holder: With M8 female thread or diameter 7mm, M8 Screw to connect the conductor holder. Weather and temperature resistant from -35 to +90 degree Celsius tested. Conductor holder @ 1 meter distance OBO Type No. 177 30 M8(5207 46 0)	NOS	125.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
193	Supply of Test Joint (Folding Clamp) suitable to connect 8mm round conductor and max by 30x3 mm GI strip as specified in drawing and directed by Engineer <b>OBO Type No. 271 8-10 ( 5317 40 1 )</b>	Nos	4.00			
194	Lightning counter - To count no of lightning strike & it can record the date and time of the lightning incident also tested as per IEC 62561-6. <b>OBO Type No. LSC I-II ( 5091 72 2 )</b>	SET	1.00			
	<b>Earthing</b>					
195	Supply of Galvanised Steel Flat 30X3 mm thickness from earth electrode directly in ground as required. Flat conductor shall be of Hot Dipped & Cross sectional area of 90mm square According to DIN EN 50164-2 (VDE 0185 part 202) Meets the requirement of VDE0185/305(IS-IEC 62305) Zinc coating: 500 g/m square (Approx:70 micron coating) Should be tested and used exclusively for lightning protection earthing system and ring equipotential bonding. <b>OBO Type No. 5052 DIN 30X3(5450 436)</b>	Mtr	120.00			
196	Providing of Cross connector for Flat: Suitable for 30mm Galvanised steel strip. Installed with 4 nos of hexagonal plate. <b>OBO Type No. 255 FL30 FT (5314 53 4 )</b>	Nos	12.00			
197	Providing of flat conductor holder suitable for FL 30. Installed with 2 hexagonal bolts. <b>OBO Type No. 166 LS 70 (5226570)</b>	Nos	10.00			
198	Providing of Plastic Corrosion Protection strip: Approx 1.1 mm thick. Width 50mm. Made of petrolatum- coated chemical fibre fabric. <b>OBO Type No.356 50 ( 2360 05 5 )</b>	Nos	1.00			
		Nos	4.00			
		Nos	4.00			
		Nos	4.00			
199	Supply of CPRI tested maintenance free ,Low carbon copper coated earth rod of 3 metre electrode having diameter of 14.2 mm with copper coating thickness of 250micron tested as per IEC 62561-2 ( <b>OBO Type No. 14 3000 CCER</b> )& is provided with universal clamp made of SS to connect rod with flat conductor ( <b>OBO Type No. 14 25 RTC</b> ) . Earth conductivity enhancing compound shall be of 25 kg/pit tested as per IEC 62561-7,TCLP tested( <b>OBO Type No.OEC 2 25</b> ) . The above arrangements shall be provided with Heavy duty earth champer of 5000kg load bearing capacity to ensure the safety of earthing system ( <b>OBO Type No.UFE</b> ) .	Nos	4.00			
	<b>DG Set</b>					
200	Supply of Prime Rated <b>100 kVA DG Set with CUMMINS engine model BTAA 5.9 G13 developing 159 BHP</b> at 1500 RPM under NTP conditions complete with standard Accessories coupled to <b>STAMFORD make standard design alternator rated at 100 kVA / 80 KW, 0.8PF (lag), 415V, 3 phase, 4 wire</b> , mounted on a common iron base frame, suitable rated battery with leads, hospital silencer, 370 lts capacity sub-base mounted fuel tank, set of AVM pads, composite type Acoustic Enclosure and Isolator panel	No	1.00			
201	Supply of Double contactor AMF Panel suitable for 100 KVA DG Set	No	1.00			
	<b>EXHAUST SYSTEM</b>					
202	Unloading leading and positioning of DG set at ground level any leading and elevated level will require will charge additional.	No	1.00			
203	Unloading leading and positioning of AMF Panel	No	1.00			
204	Supply and installation of 100 mm dia MS class "B" pipe	Mtrs.	15.00			
205	Supply and insulation of 100 mm dia MS class "B" pipe with 50 mm thick mineral wool ,chicken mesh and 26 SWG Aluminium sheet	Mtrs.	15.00			
206	Supply and installation of Thermal Cladding for silencer with using 50 mm thick mineral wool ,chicken mesh and 26 SWG Aluminum sheet .	No.	1.00			
207	Supply and installation of MS supports for exhaust pipe supports ( Make -Re-rolled ) ( Not considered any kind of blasting, galvanizing and metalizing for supports)	Kgs	100.00			
	<b>ELECTRICAL SYSTEM</b>					
208	Supply and fixing of Pipe earth GI pipe GI watering funnel with 300 X 300 manhole and cover	Nos	4.00			
209	Supply and laying of 25 X 6 mm Cu flat for Netural earth	Mtrs.	25.00			
210	Supply and laying of 25 x 6 mm GI flat for Body earth	Mtrs.	25.00			
	<b>UPS</b>					
211	Supply, Erection and Commissioning of Three Phase input, three phase output UPS 30 KVA, online with 20 Minutes Battery backup (Maintenance free dry type batteries) with full protective devices in-built. & battery rack also. on line double conversion with BCB 12V 42 AH SMF Battery with 20 min backup-32 nos-exide-rackn plus interlink cables +dc cables	NOS	1.00			
	<b>SOLAR-6KW</b>					



S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
221	Supply of CAT 6 LAN Cable for CCTV	RM	2300.00			
222	Supply and installation of PVC Conduit 25mm	RM	1500.00			
223	24 Port POE Switch with required accessories for CCTV	Nos	2.00			
224	16 Port POE plus Switch with required accessories for PTZ	Nos	1.00			
225	6 U Rack to Mount POE Switches	No	1.00			
226	17 U rack	No	1.00			
227	BACK BOXES FOR CAMERAS	NO	55.00			
<b>C</b>	<b>SANITARY INSTALLATIONS</b>					
228	Supplying, fixing, testing and commissioning of approved make white colour European water closet wall mounted with dual flushing cistern The quoted price shall also include installation of 1no. CP angle cock, CP wall flanges, plastic solid seat cover with rubber buffers and flap, Heavy duty plastic hinges etc., complete. (All Toilets)					
	Closet with cistern : Cascade C0208 (Parryware Make)					
	CP Fittings : Jaquar Make	Nos.	21.00			
229	Supplying and fixing in position white colour glazed Orissa water closet size 580 x 440mm white glazed earthen arew of approved quality with 'P' or 'S' trap confirming to IS 2556 - part XII with sand cushion and forming flooring all around the closet using 40 mm broken brick jelly in time concrete 1:2:5 ( one part of lime,two parts of sand and five parts of bricks jelly)100 mm thick and finishing the top to required slope and including giving necessary connection to soil pipes by dismantling brick masonry,reinforced cement concrete roof/floor slab and making good the dismantled portion to original condition without leakage etc., complete complying with standard specification and as directed by the departmental officers.The water closet should be got approved by the Executive Engineer before use on work.					
	Parry ware make: Closet	Nos.	1.00			
230	Supplying, fixing, testing and commissioning approved make wash basin white colour fixed above counter with 32mm dia CP waste coupling, 32mm dia C.P.bottle trap with C.P. extension pipe, 1 No.15mm dia C.P. angle cock 1 No. C.P. flexible inlet connection pipe G.I. expansion bolts etc., complete including silicon sealant.					
	Wash Basin : Parryware					
	CP Fittings : Jaquar Make	Nos.	1.00			
231	Supplying, fixing, testing and commissioning approved make wash basin white colour fixed below counter with 32mm dia CP waste coupling, 32mm dia C.P.bottle trap with C.P. extension pipe, 1 No.15mm dia C.P. angle cock 1 No. C.P. flexible inlet connection pipe G.I. expansion bolts etc., complete including silicon sealant.					
	Wash basin : Parryware Make (Geneve N C0441)					
	CP Fittings : Jaquar Make Waste coupling – ALD 709, Bottle Trap – 769, Angle cock – 059KN	Nos.	15.00			
232	Supplying, fixing, testing and commissioning approved make pedestal wash basin white colour with CI brackets, 32mm dia CP waste coupling, 32mm dia C.P.bottle trap with C.P. extension pipe, 1 No.15mm dia C.P. angle cock 1 No. C.P. flexible inlet connection pipe G.I. expansion bolts etc., complete including silicon sealant. (Handicapped & Security Toilet)					
	Wash basin : Parryware Make					
	CP Fittings : Jaquar Make Waste coupling – ALD 709, Angle cock – 059KN	Nos.	2.00			
233	Supplying,fixing, testing and commissioning approved make white coloured large flat back urinals with 40mm C.P. dome type waste coupling 40mm C.P. bottle trap with C.P. extension pipe, 15 mm dia Pressmatic push cock with auto closing etc. valve, C.P. spreader unit GI expansion bolts etc., complete					
	Urinal : Parryware New Magnum					
	CP Fittings : Jaquar Make, push cock – PRS-CHR-077, Waste coupling – ALD 709, Bottle Trap – 769.	Nos.	14.00			
234	Supplying, Installing, testing and commissioning of approved make sink with single bowl only made of Stainless steel 1 No. 40mmdia Flexible pipe , CP waste coupling, sink cock with swinging spout, table mounted type , C.I.brackets etc.,complete.					
	Sink Make - Franke					
	CP Fittings : Jaquar Make FLR-5179B	Nos.	4.00			
235	Supplying & fixing of approved make 15mm CP health faucet with one no. of CP angle cock, CP flexible tube 1.0m long, CP crutch, nozzle etc., complete.					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	Jaquar Make - ALD-579	Nos.	21.00			
236	Supplying & fixing of approved make 15mm CP two way bib cock with necessary CP wall flanges etc., complete.					
	Jaquar Make - FUS-29041	Nos.	21.00			
237	Supplying & fixing of approved make 15mm CP bib cock with necessary CP wall flanges etc., complete.					
	Jaquar Make - FUS-29037	Nos.	5.00			
238	Supplying & fixing of approved make wash basin sensor faucet with necessary CP flanges etc., complete.					
	Jaquar Make - SNR-CHR -51021	Nos.	1.00			
239	Supplying & fixing of approved make wash basin pillar cock with necessary CP flanges etc., complete.					
	Jaquar Make - FUS-29021	Nos.	13.00			
240	Supplying and fixing approved make stainless steel paper holder with necessary fixing material paper roll etc.complete.					
	Jaquar Make - ACN-1151N	Nos.	21.00			
241	Supplying and fixing approved make C.P. Robe hook with C.P. screws etc., complete. Fixed on the toilet door					
	Jaquar Make - ACN-1161N	Nos.	21.00			
242	Supplying and fixing approved make C.P. towel ring with necessary fixing materials					
	Jaquar Make - AQN - 7721	Nos.	13.00			
243	Supplying and fixing approved make C.P. towel rail with necessary fixing materials					
	Jaquar Make - ACN-1111NM	Nos.	6.00			
244	Supplying and fixing approved make liquid soap dispenser with necessary fixing materials etc.					
	Jaquar Make - ACN-1135N	Nos.	3.00			
	Jaquar Make - SDR-WHT-DJ0010F (0.8L)	Nos.	6.00			
245	Supplying and fixing approved make Stainless Steel Tissue paper dispenser with necessary fixing materials etc.					
	Orchids Make	Nos.	5.00			
246	Supplying and fixing approved make electrically operated Stainless Steel automatic hand drier with necessary fixing materials etc.					
	Orchids Make	Nos.	5.00			
247	Providing and fixing Grab bar 450mm Long with necessary fixing materials					
	Jaquar Make - AHS-1503	Nos.	2.00			
248	Supplying and fixing approved make mirror of size 600 x 450mm / required sizes with necessary fixing screws etc complete.	Nos.	2.00			
249	Supplying and fixing approved make mirror of size required sizes with necessary fixing screws etc complete.	Sqmt	14.00			
250	Providing and fixing 10mm thick Granite of approved colour for urinal partition of size 1300mm high x 600mm wide with necessary accessories as required neatly and complete.	Nos.	14.00			
	<b>INTERNAL SOIL AND WASTE PIPE SYSTEM</b>					
	Supplying, laying, jointing, testing and commissioning approved make UPVC pipes class III 6 Kg/cm2 with solvent cement joints conforming to IS 4985 for Wash basin, Sink & Urinal outlets. The quoted rate shall include necessary chisling in walls making good the same in C.M. 1:4, encasing the pipes in toilet sunken and under ground in M-15 as per specifications 100 mm thk. all around with necessary shuttering arrangement, necessary fittings viz.,elbows,tees etc.complete.					
251	40 mm dia	Rmt	18.00			
252	50 mm dia	Rmt	20.00			
253	63 mm dia	Rmt	5.00			
	Supplying, laying, jointing, testing and commissioning approved make UPVC pipes SWR grade conforming to IS 13592 Class "B" with rubber ring joints conforming to IS 5382 for solvent jointing for Suspended piping in ceiling Lvl. The quoted rate shall include necessary fittings like Tees, 45 or 90 deg. Bends, Couplers, Offsets, etc., G.I. brackets with pvc coated GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc., complete. (internal piping in toilet slab). The quoted rate should include encasing the pipes in toilet sunken / below finished floor level in M-15 grade concrete as per specifications 100mm thk. all around with necessary shuttering arrangement, as directed by Engineer-in-Charge.					
254	75 mm dia (6kg/cm2)	Rmt	75.00			
255	110 mm dia (6kg/cm2)	Rmt	42.00			
256	160 mm dia (6kg/cm2)	Rmt	18.00			
257	Supplying, fixing and testing PVC Multi floor trap (heavy duty hinged type) with brass CP frame & cover (150 mm x 150 mm square / 125 mm round). Trap of 100 mm dia. Inlet and 75 mm dia outlet fixed on a bed of cement concrete etc., complete. (The frame and grating shall be approved by Architects)	Nos.	30.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
258	Supplying,fixing and testing of Urinal trap(Sealed Trap) used in sunken floors 110mm dia extension boss tee arrangements with female thread fix with the Staninless steel/upvc clean out plug in male thread with gasket and three ss screws for urinals, etc., complete	Nos.	6.00			
<b>VERTICAL SOIL, WASTE &amp; RAIN WATER PIPE SYSTEM</b>						
	Supplying, laying, jointing, testing and commissioning approved make PVC pipes SWR grade conforming to IS 13592 Class "B" with rubber ring joints conforming to IS 5382 for exposed piping in shaft .The quoted rate shall include necessary fittings like Tees, 45 or 90 deg. Bends, Couplers, Offsets, etc., G.I. brackets with pvc coated GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc., complete.(External piping in shaft ) . , as directed by Engineer-in-Charge.					
259	75 mm dia (6kg/cm2)	Rmt	30.00			
260	110 mm dia (6kg/cm2)	Rmt	5.00			
261	160 mm dia (6kg/cm2)	Rmt	25.00			
	Supplying, laying, jointing, testing and commissioning approved make PVC pipes SWR grade conforming to IS 13592 Class "B" with rubber ring joints conforming to IS 5382 for exposed piping in shaft .The quoted rate shall include necessary fittings like Tees, 45 or 90 deg. Bends, Couplers, Offsets, etc., G.I. brackets with pvc coated GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc., complete.(External piping in shaft ) . , as directed by Engineer-in-Charge.					
262	75 mm dia (4kg/cm2)	Rmt	6.00			
263	110 mm dia (4kg/cm2)	Rmt	10.00			
264	160 mm dia (4kg/cm2)	Rmt	65.00			
265	Supplying and fixing MS sloted angle iron brackets,hangers, supports with necessary drilling holes to suit the insertion of pipe clamps deburning etc., as per detailed drawing for supporting soil, waste and rain water pipes and water supply pipes in shafts with suitable MS clamps, bolts, anchor bolts, nuts and washers fixed on shaft walls / outer walls etc. The quoted rate shall include with the cost of brackets galvanizing with zinc alloy of 0.08mm thick conformed to IS 1239 etc., complete as directed by the employer.	KG	5.00			
266	Supplying and fixing MS grip bolts in columns / beams / walls ceiling for fixing soil, waste amd rain water pipe supports. The quoted rate shall include for necessary	Nos	10.00			
<b>INTERNAL &amp; VERTICAL (SHAFT) WATER SUPPLY SYSTEM</b>						
	Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) SDR.11, ASTM CTS, ASTM IPS. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc., with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in geru mixed cement mortar 1:1 restore the same original condition neatly as directed by the Engineer incharge. The quoted rate shall include pressure testing (Once at the time of fixing the concealed pipes and once pre tiling). Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D2846 and above 50mm dia primer P70, and solvent conforming to ASTM F4931 / 724.( Cold, Hot & RO water supply)					
267	20 mm dia	Rmt	55.00			
268	25 mm dia	Rmt	97.00			
269	32 mm dia	Rmt	11.00			
270	40 mm dia	Rmt	10.00			
271	50 mm dia	Rmt	20.00			
272	63 mm dia	Rmt	16.00			
	Supplying, installing, fixing, jointing, testing and commissioning of approved make sch 40 UPVC pipes and sch 80 fittings, ASTM CTS, ASTM IPS. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with necessary fittings & suitable solvent/rubber ring joints. The quoted rate shall includeG.I. brackets with GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc. Complete.					
273	50 mm dia (inlet to Flushing OHT)	Rmt	20.00			
274	63 mm dia (inlet to Fire/Domestic OHT)	Rmt	22.00			
	Supplying, installing, testing and commissioning of approved make full way lever operated forged brass ball valve of brass body with forged brass hard chromeplated steel ball tested to a pressure not less than 20 Kg / sqcm with threaded joints complete.					
275	20 mm dia	Nos.	3.00			
276	25 mm dia	Nos.	2.00			
277	32 mm dia	Nos.	1.00			
278	40 mm dia	Nos.	2.00			
279	50 mm dia	Nos.	6.00			



S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
<b>TERRACE WATER SUPPLY SYSTEM</b>						
	Supplying, installing, fixing, jointing, testing and commissioning of approved make sch 40 UPVC pipes and sch 80 fittings, ASTM CTS, ASTM IPS. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with necessary fittings & suitable solvent/rubber ring joints. The quoted rate shall include G.I. brackets with GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc. Complete.					
280	25 mm dia	Rmt	60.00			
281	32 mm dia (overflow pipe from tanks)	Rmt	5.00			
282	40 mm dia	Rmt	10.00			
283	50 mm dia	Rmt	5.00			
284	63 mm dia ( fws terminal main on terrace)	Rmt	30.00			
285	80 mm dia ( cws terminal main on terrace)	Rmt	32.00			
	Supplying, installing, testing and commissioning of approved make full way lever operated forged brass ball valve of brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 20 Kg / sqcm with threaded joints complete.					
286	25 mm dia	Nos.	7.00			
287	40 mm dia	Nos.	1.00			
288	50 mm dia	Nos.	2.00			
	Supplying, installing, testing and commissioning of approved make butterfly valve (upto 150mm dia with hand lever operation & above with gear box operation). Tested to a pressure not less than 16 Kg/Sq.cm. Including rubber gasket, G.I. flanges, G.I. nuts, G.I. bolts, G.I. washers & painting complete as required.					
289	65 mm dia	Nos.	6.00			
290	80 mm dia	Nos.	1.00			
	Supplying and fixing Non return valve of approved make with ISI make including fixing in position, making holes, restoring the damaged portions to original position and applying jointing compound at threaded ends and testing etc. complete as directed					
291	50 mm dia	Nos.	1.00			
292	65 mm dia	Nos.	1.00			
	Supplying, installing, testing and commissioning approved make electrically operated solenoid valve with level controller to be fixed in the OHT. The cost of valve shall also include necessary level switches, wiring upto control panel at terrace level, control panel, etc., complete					
293	50 mm dia	Nos.	1.00			
294	65 mm dia	Nos.	1.00			
	Supplying and fixing brass air release valve of approved make with ISI make including fixing in position, making holes, restoring the damaged portions to original position and applying jointing compound at threaded ends and testing etc. complete as directed.					
295	25 mm dia	Nos.	2.00			
296	Providing and Fixing Copper Float valve, etc, confirming to I.S.I specifications of approved make as per directions complete.	Nos.	2.00			
	Providing and constructing of masonry pedestals of size as mentioned below with bricks of class B50 designation in CM1:3 and finishing neat coat of floating cement and making good with necessary clamps, bolts and nuts etc.					
297	230x230x300mm	Nos.	20.00			
<b>EXTERNAL SANITARY SYSTEM:</b>						
	Supplying, laying, jointing, testing and commissioning approved make PVC pipes class III 6 Kg/cm2 with solvent cement joints confirming to IS 4985 for Under ground drainage works. The quoted rate shall include necessary earth work, fittings, pipe to be laid below ground level in trenches upto required depth, dewatering, jointing of pipes, water testing and setting/encasing the pipes in cement concrete M-15 as per specifications 150mm thk. all around, refilling, and making good the same complete as required.					
298	110 mm dia (6kg/cm2)	Rmt	8.00			
299	160 mm dia (6kg/cm2)	Rmt	130.00			
300	Supplying, fixing, testing and commissioning of glazed stoneware gully traps, 300x300mm, 100 mm dia outlet set in PCC 1:4:8 bed, 115 thick masonry chamber in CM 1:4, internal and external plastering 12mm thick in CM 1:6, necessary earthwork, C.I. cover (medium duty) etc., complete.	Nos.	6.00			
	Providing and constructing inspection chambers comprising burnt brick/solid block masonry walls of 230 mm thk., built in CM 1:4 over M-15 CC bed of thickness 100 mm, Heavy duty SFRC Covers, benching in CC M-15, internal faces plastered smooth in CM 1:4, 15mm thick and outside Rough Plastered with CM 1:6, 15mm thick including necessary earth work excavation returning and refilling and disposing surplus soil as directed by the Engineer in charge.					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
301	600x600 mm size internal and depth more than 450 mm but not exceeding 1000 mm	Nos	10.00			
302	900x900 mm size internal and depth more than 1200 mm but not exceeding 1500 mm	Nos	2.00			
	Excavation in trenches in ordinary hard soil (other than in rock requiring chiselling and blasting) for laying Sewer lines and refilling of trenches after pipes are laid in layers not exceeding 20 cm, watering and consolidation and disposing off surplus earth as directed by the Engineer incharge, providing necessary Shoring & Strutting while excavating etc., complete					
303	Depth of excavation up to 1.2m	Cum	5.00			
	<b>EXTERNAL RAIN WATER SYSTEM:</b>					
	Construction of catch basin of size mentioned below upto 600mm clear internal dimension for storm water with 230mm thick walls in well burnt table moulded bricks in CM 1:4 over a bed of 100 mm thick PCC 1:4:8 (M10) internal walls plastered smooth in CM 1:3 and external walls plastered in 1:3 with sponge finish. Fixing precast Heavy Duty RCC grating of size 400 x400mm on top surface flushed to the finished floor level with necessary excavation, back filling the selected excavated earth with all leads and lifts etc., complete.					
304	600x600mm (clear internal dimensions)	Nos.	11.00			
	Supplying, installing, testing and commissioning of R.C.C NP2 class Hume pipe laid to the required level and grade with collars joining in CM 1:3 and filling the excavated trench with approved quality saturated sand on sides, bottom and top surface of pipe (sand cushion at joints only) with all leads and lifts, making necessary connections as required etc., and Including Excavation.					
305	200 mm dia	Rmt	150.00			
	<b>EXTERNAL WATER SUPPLY SYSTEM</b>					
	Supplying, laying, jointing, testing & Commissioning of uPVC Schedule 80 pressure pipes as per ASTM D 1785 with Sch 80 Fittings as per specifications, jointing with hold tite / super tite & teflon tape and complete with fittings such as sockets, unions, reducers long or short bends, elbows, nipples flanges,checknuts,etc. Pressure testing of piping and back filling of trench complete as required. The quoted rate shall include necessary earth works, fittings like Tees, Bends, Offsets etc., G.I. brackets with pvc coated GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc., complete for external pipes. (For under ground or above ground external water supply piping.)					
306	80 mm dia (municipal / borewell water inlet to ug sump )	Rmt	50.00			
307	63 mm dia (DWS from pumproom to shaft/ inlet pipe to oht)	Rmt	95.00			
308	50 mm dia (FWS from STP & Basement drain PRM outlet to drain)	Rmt	75.00			
309	Excavating trenches of required width and depth for external underground water supply pipes, in all kinds of soil excluding soft rock and hard rock including excavation for sockets and dressing of sides, ramming of bottoms & getting out the excavated soil & then refilling the trench with soil as required in layers as per drawings, including consolidating each deposited layer by ramming, watering etc.including disposal of excess soil to all leads or as instructed by the site Engineer.	Cum	5.00			
	<b>LANDSCAPE WATER SUPPLY SYSTEM</b>					
	Supplying, laying, jointing, testing & Commissioning of uPVC Schedule 40 pressure pipes as per ASTM D 1785 with Sch 40 Fittings as per specifications, jointing with hold tite / super tite & teflon tape and complete with fittings such as sockets, unions, reducers long or short bends, elbows, nipples flanges,checknuts,etc. Pressure testing of piping and back filling of trench complete as required. The quoted rate shall include necessary fittings like Tees, Bends, Offsets etc., G.I. brackets with pvc coated GI clamps, nuts & bolts, anchor fasteners, grip bolts, GI threaded, rods, etc., complete for external pipes.					
310	80 mm dia	Rmt	45.00			
311	50 mm dia	Rmt	30.00			
312	20 mm dia	Rmt	30.00			
	Supplying, installing, testing and commissioning of approved make butterfly valve (upto 150mm dia with hand lever operation & above with gear box operation). Tested to a pressure not less than 16 Kg/Sq.cm. Including rubber gasket, G.I. flanges, G.I. nuts, G.I. bolts, G.I. washers & painting complete as required.					
313	80 mm dia	Nos.	1.00			
314	50 mm dia	Nos.	2.00			
315	20 mm dia	Nos.	6.00			
	<b>PUMPROOOM</b>					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	Supplying, laying, jointing, testing & commissioning approved make class 'B' G.I. pipes and fittings conforming to IS 1239 PI & II, malleable fittings viz., tees, elbows, flanges, unions etc., including cutting threading, fixing terrace floor etc., as per drawings. The quoted rate shall include necessary making bores in walls, etc., a coat of including Painting.					
316	100 mm dia	Rmt	1.00			
317	80 mm dia	Rmt	5.00			
318	65 mm dia	Rmt	5.00			
319	50 mm dia	Rmt	5.00			
	Supplying, installing, testing and commissioning of approved make butterfly valve (upto 150mm dia with hand lever operation & above with gear box operation). Tested to a pressure not less than 16 Kg/Sq.cm. Including rubber gasket, G.I. flanges, G.I. nuts, G.I. bolts, G.I. washers & painting complete as required.					
320	100 mm dia	Nos.	1.00			
321	80 mm dia	Nos.	8.00			
322	65 mm dia	Nos.	4.00			
323	50 mm dia	Nos.	2.00			
	Supplying and fixing Non return valve of approved make with ISI make including fixing in position, making holes, restoring the damaged portions to original position and applying jointing compound at threaded ends and testing etc. complete as directed					
324	80 mm dia	Nos.	1.00			
325	65 mm dia	Nos.	2.00			
326	50 mm dia	Nos.	2.00			
	Supplying and fixing of GI/MS puddle flanges of standard design of following sizes. etc. complete as directed. (for ug sump & oht)					
327	200 mm dia	Nos.	1.00			
328	150 mm dia	Nos.	1.00			
329	100 mm dia	Nos.	1.00			
330	80 mm dia	Nos.	4.00			
331	65 mm dia	Nos.	4.00			
332	50 mm dia	Nos.	4.00			
333	32 mm dia	Nos.	4.00			
334	25 mm dia	Nos.	3.00			
	<b>PUMPS</b>					
335	Supplying, installing, testing and commissioning approved make monobloc pump made of C.I Construction suitable for building application. The quoted rate shall also include providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph, with starter,					
	Duty of Pump :					
	5.5cum/hr @20.0m Head					
	1 No. Working + 1 No. Stand By					
	(Raw Water Pumps to WTP)	Nos	2.00			
336	Supplying, installing, testing and commissioning of approved make monoblock water transfer pumps for pumping domestic water from UG Sump to over head tank . The pump shall be coupled to the adequate 10 H.P. electrical motor ,mounted on a common base frame. The motor shall confirm to T.E.F.C. The rate quoted shall be inclusive of The pumps shall be provided with:					
	Suitable control panel indoor wall mounting type with change over switch including dry run protection.					
	Industrial type electronic automatic liquid level controllers, or float switch for automatic operation.					
	Alarm indicating with signal in the event of pumps failure etc.,					
	GI manifold made out of GI 'C'Class pipe with Collers, Tee and Flange provision for connection of the above items . GI manifold shall be finished with hot dip galvanizing to 100 microns.					
	The pumps shall be suitable for the requirements as mentions below:					
	5.0LPS @ 25.0m Head					
	1 No. Working + 1 No. Stand By					
	(From Domestic Water Sump to OHT)	Set	1.00			
337	Supplying, installing, testing and commissioning of approved make monoblock water transfer pumps for pumping STP treated water STP to flushing over head tank . The pump shall be coupled to the adequate 10 H.P. electrical motor ,mounted on a common base frame. The motor shall confirm to T.E.F.C. The rate quoted shall be inclusive of The pumps shall be provided with:					
	Suitable control panel indoor wall mounting type with change over switch including dry run protection.					
	Industrial type electronic automatic liquid level controllers, or float switch for automatic operation.					
	Alarm indicating with signal in the event of pumps failure etc.,					

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	GI manifold made out of GI 'C'Class pipe with Collers,Tee and Flange provision for connection of the above items . GI manifold shall be finished with hot dip galvanizing to 100 microns.					
	The pumps shall be suitable for the requirements as mentions below:					
	1.7LPS @ 35.0m Head					
	1 No. Working + 1 No. Stand By					
	(From STP Treated Water Sump to Flushing OHT)	Set	1.00			
338	Supplying, installing, testing and commissioning approved make submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for auto lvl.controller. providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph, with starter,					
	Duty of Pump :					
	1.0 Lps @ 20.0m Head					
	1 No. Working					
	(From pump room collection tank to drain)	Nos	1.00			
339	Supplying, installing, testing and commissioning approved make 3 HP submersible pump made of C.I Construction suitable for building application.rate shall also include for auto lvl.controller. providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 415V, 50Hz, 3Ph, with starter,	Nos	1.00			
	<b>WATER TREATMENT PLANT</b>					
340	Supplying, installing, testing and commissioning approved make Raw Water Pressure sand filter with necessary Accessories complete with Frontal piping, valves, suitable supports for mounting pressure gauges, orifice plates. The Filter shall be made of MS with necessary protective coating. The cost of filter shall also include initial charge of underbed & multi-grade filter media to suit the requirement etc., complete as per standards. Max. working Pressure = 3.0kg/sqcm. Max flow rate = 4.0cum/hr.@3hrs cycle	Unit	1.00			
341	Supplying, installing, testing and commissioning approved make activated carbon filter in MS vessel construction with internals, electrical control system complete with Frontal piping, valves, suitable supports for mounting, pressure gauge, orifice plate etc., complete as per the detailed specification for the efficient working of system. Max. working Pressure = 3.5kg/sqcm. Max flow rate = 4.0cum/hr.@6hrs cycle	Unit	1.00			
342	Supplying, installing, testing and commissioning approved make Water Softener with necessary accessories complete with Frontal piping, valves, suitable supports for mounting pressure gauges, orifice plates. The Softener shall be made of MS with necessary protective coating. The cost of Softener shall also include initial charge of Resin media to suit the requirement etc., complete as per standards. Max. working Pressure = 3.0kg/sqcm. Max flow rate =4.0 cum/hr.@6hrs cycle	Unit	1.00			
343	Supplying, installing, testing and commissioning approved make Electronic dosing system for dosing Chlorine into the Treated water with pre-set dosage based on the the quantity of water. The Dosing system shall consist of Electronic dosing pump with positive displacement type with adjustable Stroke length and frequency. The quoted rate shall also include FRP chemical solution tank, necessary electricals etc., complete to make the operation automatic. Max flow rate =1.0lpm	Unit	1.00			
	<b>D FIRE FIGHTING SYSTEM</b>					
	<b>FIRE HYDRANT SYSTEM.</b>					
344	Supply ,installation, testing and commissioning of electric driven terrace pump suitable for automatic operation and consisting of following : complete in all respect as reqd.					
i	Monoblock pump set with bronze impeller, stainless steel shaft ,mechanical seal ,cast iron body , 450 LPM ,30 meter head complete with induction motor TEFC type suitable for operation on 415volts, 3phase,50HZ AC, 2950 RPM for enclosure, horizontal foot mounted type with class B or F insulation. Note : Capacity of the motor shall not be less than 10 HP					
ii	M.S. fabricated common base plate, foundation bolts etc. as reqd.					
iii	Suitable cement concrete foundation duly plastered complete with anti vibration pads.	Nos.	1.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
345	Fabrication, Supplying, Installation, Testing & Commissioning of electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm. thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade, cable alley, inter-connection, having switchgears and accessories mounting and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for operation on 415 V, 3 phase, 50 HZ. AC supply with enclosure protection class IP 42 i/c P/F following accessories etc. as required.					
	Terrace pump control					
a	INCOMER					
i	4 pole 100 Amps. MCCB 25 KA. thermal magnetic release (Ics= 100 %Icu) - 1No.					
ii	Digital type Voltmeter (0-500 Volts) with inbuilt selector switch - 1 Set.					
iii	Digital type Ammeter with inbuilt selector switch & CT's etc. - 1 Set.					
iv	LED type indicating lights - 3 Nos.					
v	TP&N AL. bus bar 200 Amps rating - 1 Set.					
b	OUTGOING.					
i	40 Amps. TP MCB 'C' series with suitable HP fully automatic star / delta starter with over load protection, single phase preventer facility complete with all accessories and internal wiring required for manual operation, selector switch for local /remote, auto/manual/off operation with LED type indication lights to mark ON-OFF position of pumps :- 1 Set	Job	1.00			
346	Supplying ,laying and fixing of one number , XLPE insulated 3c x 10 Sqmm Aluminum armoured power conductor cable of 1.1 KV grade in the existing pipe trench/ surface/ in the existing cable tray etc. as reqd.	Rmt	15.00			
347	Supplying & laying of one number XLPE insulated , aluminum conductor armoured power cable of 1.1 KV grade of following size in the existing "GI pipe/SW pipe/PVC pipe" or in the existing trench or on surface or in the existing cable tray etc. as reqd.					
	3-1/2 x 25 sq. mm.	Rmt	25.00			
348	Supplying & making end termination with brass compression gland and Al lugs for following size of PVC /XLPE insulated and PVC sheathed aluminum conductor cable of 1.1 KV grade etc. as reqd					
	3-1/2 x 25 sq. mm.	Set	1.00			
349	Supplying and laying control wiring with copper stranded conductor of following sizes XLPE insulated armoured cable of 1.1 KV grade as per IS:7098 (Part-I) 1988 between various pressure switch and system controller / starter etc. on surface / existing cable tray /existing pipe complete with connections at both end with glands etc. as required.					
	2x2.5 sq.mm cu cable	Rmt	10.00			
350	Supplying , installation, testing & commissioning 0-10 Kg/cm2 ON/OFF pressure switch of pressure range as per specification in delivery line of pump along with control wiring for auto starting & auto stopping of terrace fire pump complete with all necessary accessories etc. as reqd.	Set	1.00			
351	Supplying, installation, testing & commissioning 100 mm dia dial type pressure gauges with all required accessories etc. as reqd.	Nos.	1.00			
	Providing, laying testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 1239/3589 (which ever is applicable) i/c fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. fixing the pipe on the wall / ceiling/floor with suitable clamps or any suitable arrangement as per site condition and painting with two of more coats of synthetic enamel paint of reqd. shade complete as reqd.					
352	100 mm dia	Rmt	55.00			
353	80 mm dia	Rmt	5.00			
354	25 mm dia	Rmt	3.00			
	Supplying, Installing, testing and commissioning CI butterfly valves suitable for 15 kg /cm2 pressure as per BS 5155 ( PN1.6) slim seal standard lever operated / gear operated type with required flanges, nuts, bolts etc. complete.					
355	100 mm dia	No.	4.00			
356	80mm dia	No.	1.00			
	Providing, installation, testing and commissioning of cast iron double flanged non- return valve of following sizes confirming to relevant IS:5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required.					
357	100 mm dia	No.	1.00			
	Providing, installation, testing and commissioning approved make Cast Iron body brass 'Y' strainer with necessary flanges, nuts & bolts etc., complete on to the suction line.					
358	100 mm dia	No.	1.00			
359	Supplying Installing, testing and commissioning of Gun metal AIR RELEASE VALVE SIZE OF 25mm dia complete	No.	1.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
360	Supply, Installation, Testing & Commissioning of Single headed, Stainless steel ISI marked oblique pattern hydrant landing valve with 80 mm dia flange inlet and 63mm dia instantaneous type female out let complete with stainless steel cap and G.I chain twist release type plug and all accessories as per IS:5290-1983	No.	2.00			
361	Providing & fixing swinging type First Aid hose reel in red colour with 36 mts long and 20 mm dia heavy duty rubber water hose, 20 mm dia globe valve stop cock, terminating with S.S. coupling & nozzle of 5mm outlet with shut off valve conforming to IS 8090 - 1976 complete with drum and brackets for fixing on wall, bolts & nuts conforming to IS:884-1969 complete as required.	No.	2.00			
362	Providing & fixing Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type Stainless steel 63 mm dia ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 mm copper wire.brusting pressure not less than 22 Kg/Sqcm. (two nos. for each hydrant-valve)	No.	4.00			
363	Providing & Fixing stainless steel 63 mm dia short size branch pipes with 20 mm dia nozzle with 63 mm instantaneous coupling ISI marked (IS:903)	No.	2.00			
364	Fire duct Shutter fabricated out of 14SWG M.S.sheet and frame, door shall be 900mm x 1200 mm min. & fixed with 4 mm thick Glass, suitable Rubber beedibg and Locking arrangement. Quoted rate shall be includes all fasteners etc. and complete shutter shall be powder coated of approved colour both inside and out side. (for fire duct in all upper floors)	No.	2.00			
365	Providing and fixing inlet breeching having C.I. body Two way Stainless steel 63 mm dia instantaneous inlets conforming to IS 903 fitted with non return valves, 25 mm dia Stainless steel drain cock, blank cap, brass chains and 150 mm dia flanges with all accessories suitable for local fire tender complete as required .	No.	1.00			
	<b>FIRE EXTINGUISHER</b>					
	Supplying, installing and commissioning first aid fire fighting appliances with signages					
366	ABC Multipurpose - Capacity : 6Kgs.	Nos.	8.00			
367	CO2 - Capacity : 4.5Kgs.	Nos.	1.00			
368	CO2 - Capacity : 2.0Kgs.	Nos.	2.00			
369	DCP - Capacity : 6.0Kgs.	Nos.	2.00			
370	Mechanical Foam- 9ltr	Nos.	1.00			
	<b>FIRE PUMPROOM EQUIPMENT</b>					
371	Supplying, installation, testing and commissioning of Electric Driven Main Fire Pump suitable for automatic operation and consisting of following complete in all respect as required.					
	Horizontal type centrifugal End Suction pump of cast iron body and bronze impeller with ss shaft, gland packing to ensure a minimum pressure of 3.5 kg/sq.cm. at highest and farthest outlet at specified flow of 97 m3/Hr (1620LPM) at 50.0m. head conforming to IS 1520. Suitable HP, Squirrel cage induction motor, TEFC, synchronous speed 3000 RPM, suitable for operation on 415 ± 6% volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure with Class-'F' insulation, conforming to IS-325, M.S.fabricated common base plate, coupling, coupling guard, foundation bolts, 2nos. of pressure guages fitted on suction & delivery pipe etc. as required. RCC foundation will be under clients scope Hydrant Pump & Sprinkler Pump	Set	1.00			
372	Supply, Installation, Testing and Commissioning of Main Pump set of Diesel engine driven of Horizontal End Suction, Centrifugal type of capacity 97 m3/Hr (1620LPM) at 50.0m head complete with Diesel Engine, Diesel tank as recommendations, safety pressure relief valve, waste cone, anchor bolts Accessories Standby Pump					
	The pump shall be direct connected through flexible coupling to a heat exchanger type diesel engine, for the above pump with synchronous speed, conforming to NFPA standards and complete set shall mounted on common base frame. The quoted rate shall includes providing & fixing of fuel storage tank of 200lts. with required accessories, cooling water circulation system, 2 sets of batteries, air release valve, coupling, coupling guard, Vibration isolator, anti vibration pad, Foundation bolts & 2nos. of pressure guages fitted on suction & delivery pipe etc. The fire pump shall be supplied along with UL fire pump controller as per manufacturer recommendation.The main fire pump controller shall be housed in a Standard enclosure rated enclosure. RCC foundation will be under clients scope	Set	1.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
373	Supply, erection, testing & commissioning of electrical motor driven Vertical multistage centrifugal Jockey pump capable to deliver 10.8 m <sup>3</sup> /Hr (180LPM) at 80.0m head. The pump shall be coupled to motor of suitable HP with speed of 2900RPM and complete set shall mounted on common base frame. The quoted rate shall includes providing & fixing of coupling and coupling gaurd. RCC foundation( Dimensions will be provided) will be under clients scope. NOTE: Control Panel, starter, cables & cable tray quantities for all pumps are included in electrical Scope & BOQ	Set	1.00			
	Supplying, fixing and testing of approved make Heavy quality ( Class 'C' ) GI pipes with ISI brand Malleable specials as per IS 1239 PI & II such as tees, elbows, checknuts, unions, flanges, nipples, etc. including cutting, threading, welding, fixing in/on walls, ceiling (using HI-TECH pipe supports/ M.S angles iron brackets), underground, above ground etc, as per drawing. The quoted rate shall include for chasing the walls, making bore in walls and making good the chased surfaces in cement mortar, painting the exposed fire hydrant pipes with one coat of primer and two coats of enamel paint (Fire red) of approved colour etc., complete.					
374	250mm nominal dia	rmt	10.00			
375	200mm nominal dia	rmt	15.00			
376	150mm nominal dia	rmt	15.00			
377	100mm nominal dia	rmt	15.00			
378	80mm nominal dia	rmt	10.00			
379	25mm nominal dia	rmt	10.00			
	Supply , Instalation of Resilient-Seated OS&Y Gate Valves, Ductile iron Body , (PN 16) flanged end , Red painted with required flanges, nuts, bolts etc complete FM Approved / UL listed.					
380	250mm dia	Nos.	1.00			
381	200mm dia	Nos.	4.00			
382	150mm dia	Nos.	3.00			
383	100mm dia	Nos.	1.00			
384	80mm dia	Nos.	2.00			
385	65mm dia	Nos.	2.00			
	Supplying, installing, testing and commissioning of Gun metal chrome finished Ball valves with fittings of screwed end type as per IS standards					
386	25mm dia	Nos.	4.00			
	Supplying, installing, testing and commissioning approved make Cast Iron body brass 'Y' strainer with ss mesh, necessary flanges, nuts & bolts etc., complete on to the suction line as per IS standards					
387	250mm dia	Nos.	1.00			
388	200mm dia	Nos.	2.00			
389	150mm dia	Nos.	1.00			
390	80mm dia	Nos.	1.00			
	Supplying, installing and testing approved make cast iron body Swing check valves (PN16) as per standards red painted with necessary flanges, nuts & bolts etc., complete as per IS standards.					
391	250mm dia	Nos.	1.00			
392	200mm dia	Nos.	1.00			
393	150mm dia	Nos.	2.00			
394	100mm dia	Nos.	1.00			
395	80mm dia	Nos.	1.00			
	Supplying, installing and testing approved make metallic expansion belows (PN16) as per IS standards with necessary fittings etc., complete					
396	250mm dia	Nos.	1.00			
397	200mm dia	Nos.	1.00			
398	150mm dia	Nos.	1.00			
399	100mm dia	Nos.	1.00			
400	80mm dia	Nos.	1.00			
401	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia ball valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required	Lot	1.00			
402	Test Array Arrangement for pumpset with pressure guage (1 No.), Digital pressure switch (5 Nos), air vent pipes and drain pipes with valves etc., as per IS standards	Lot	1.00			
403	Supplying, installing, testing and commissioning approved make GM 25mm dia AIR RELEASE VALVE with necessary Unions etc., complete. as per IS standards	Nos.	2.00			
404	Supplying, installing, testing and commissioning of Flow metre (Electronic type) on Test line to measure 150 % of pump flow and suitable to 150 mm dia. FM Approved / UL listed	Nos.	2.00			
	Exhuast pipe 150mm dia for Diesel engine pump					
405	150mm dia M.S. Medium grade with mineral wool insulation & aluminium sheeting.	rmt	50.00			

S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
406	Supplying & fabricating structural steel supports such as MS channels, angles, flats, rods as required at site with anchor fasteners, clamps, threaded rods, nuts, bolts, washers etc. complete with painting.	Kg	400.00			
	<b>SPRINKLER SYSTEM</b>					
	Supplying, fixing and testing of approved make Heavy quality ( Class 'C' ) MS pipes with ISI brand Malleable specials for 65mm dia & above and forged screwed/forged socket welded for upto 50mm dia as per IS 1239 PI & II such as tees, elbows, checknuts, unions, flanges,nipples, etc. including cutting, up to 50mm dia threading and above 50mm dia velatic coupling fixing in/on walls, ceiling (using HI-TECH pipe supports/ M.S angles iron brackets), underground, above ground etc, as per drawing. The quoted rate shall include for chasing the walls, making bore in walls and making good the chased surfaces in cement mortar, painting the exposed pipes with one coat of primer and two coats of enamel paint (Fire red) of approved colour etc.,complete.					
407	150mm nominal dia	rmt	65.00			
408	100mm nominal dia	rmt	20.00			
409	80mm nominal dia	rmt	30.00			
410	65mm nominal dia	rmt	25.00			
411	50mm nominal dia	rmt	48.00			
412	40mm nominal dia	rmt	45.00			
413	32mm nominal dia	rmt	5.00			
414	25mm nominal dia	rmt	165.00			
	Supplying, installing, testing and commissioning approved make CI body lever operated butterfly valves confirming to IS13095 with necessary nuts & bolts etc., complete.					
415	150mm dia	Nos.	2.00			
416	100mm dia	Nos.	2.00			
417	80mm dia	Nos.	2.00			
418	65mm dia	Nos.	1.00			
	Supplying, installing, testing and commissioning of Gun metal chrome finished Ball valves with fittings of screwed end type as per IS standards					
419	50mm dia	Nos.	2.00			
420	25mm dia	Nos.	2.00			
421	Supplying, installing, testing and commissioning approved make GM 25mm dia AIR RELEASE VALVE with necessary Unions etc., complete. as per IS standards	Nos.	1.00			
422	Supplying, installing, testing and commissioning approved make GM Test & Drain valve 50mm dia for sprinklers K 80 with necessary Unions etc., complete. as per IS standards	Nos.	1.00			
	Supplying, installing, testing and commissioning conventional Sprinkler quartzoid bulb type with 15mm screwed end connection of 68 deg. C. temperature rating K 80 and orifice shall not be less than 6mm.Sprinklers shall be as per IS standards with Chrome finished.					
423	Pendent type sprinkler	Nos.	95.00			
	Providing, fixing, testing & commissioning of corrugated SS-304 Braided flexible sprinkler pipe droplet with 1/2" BSP threaded outlet & 1" BSP threaded inlet with reducer nipple, snap, clamp, T-bar bracket etc. with necessary fitting complete as required as per IS standards					
424	1200mm length	Nos.	95.00			
425	Providing, installation, testing & commissioning of adjustable rosette plate(Recessed Type in Two Pieces) for sprinklers below false ceiling area in white finish as per IS standards complete as required.	Nos.	95.00			
426	Supplying, installing, testing and commissioning flow switch on sprinkler distribution header and shall be connected to fire alarm panel through cable. Cable shall be measured separately. (150mm dia)	Nos.	1.00			
427	Supply & installation of Instrument cables for flow switches. The cable should be 2 Core x 1.5 Sq.mm copper cable. (FRLS)	rmt	100.00			
	Supplying, installing, testing and commissioning of hydraulically operated sprinkler control valve with water motor gond bell and trims as required, pressure guages, drain valves, ball valves check valves, strainers etc. complete Alarm valve as per IS standards					
428	a) 150mm dia.	Nos.	1.00			
	Supply, Installation of as per IS standards Flow metre (Electronic type) suitable to					
429	150mm dia.		1.00			





S. No	Description	Unit	Total Qty	Rate (Incl of All Taxes)	Rate (in Words)	TOTAL
	TOTAL EQUIPMENT PRICE (A)					
	<b>DOWNSTREAM ITEMS-VRV REFRIGERATION PIPE</b>					
	Supply, Installation and Testing of 18G hard drawn refrigerant piping, fittings with 19mm thick Class "O" tubular nitrile rubber insulation and finished . Complete piping workmanship to be carried out as per recommended practice. Scope includes all refrigerant pipes shall be properly supported using Rods,Anchor bolts, Threaded rods,etc.(all external piping shall run in covered cably tray and wrapped with Poly shield coating for exposed piping only)					
438	9.5mm Dia Copper Pipe with 19mm thick insulation	Rmt	53.00			
439	12.7mm Dia Copper Pipe with 19mm thick insulation	Rmt	76.51			
440	15.9mm Dia Copper Pipe with 19mm thick insulation	Rmt	100.82			
441	19.1mm Dia Copper Pipe with 19mm thick insulation	Rmt	41.47			
442	22.2mm Dia Copper Pipe with 19mm thick insulation	Rmt	40.04			
443	28.6mm Dia Copper Pipe with 19mm thick insulation	Rmt	75.00			
444	34.9mm Dia Copper Pipe with 19mm thick insulation	Rmt	38.00			
445	41.3mm Dia Copper Pipe with 19mm thick insulation	Rmt	62.00			
446	Nitrogen Pressure Testing at site	lot	1.00			
447	Supply and Charging of R-410 Additional refrigerant gas	lot	1.00			
448	Supply and Installation of 2C x 1.0 Sqmm Communication cable in 20mm dia with PVC conduit for indoor & VRF out door Unit.	Rmt	487.00			
	Supply Installation of PVC drain pipe with 9mm thick Nitrile rubber tubular pipe insulation with necessary supports.					
449	25mm	Rmt	127.00			
450	32mm	Rmt				
451	40mm	Rmt	160.00			
	Supply and installation of 18 G GI perforated cable tray with cover for external copper					
452	100mm(W) x 50mm (H)	Rmt				
453	150mm(W) x 50mm (H)	Rmt	42.00			
454	Supply and installation of MS Frame for VRF ODU.	Nos	6.00			
	Supply, Instalaltion, balancing and commissioning of factory fabricated GSS sheet metal rectangular / round ducting complete with neoprene rubber gasket, elbows, splitter, dampers, vanes, hangers, supports etc. as per approved drawings and specification of following sheet thickness complete as required. etc.					
455	22G	Sqm	50.00			
456	24G	Sqm	85.00			
457	26G	Sqm	35.00			
458	Supply and fixing of acoustic lining of supply air duct with 25 mm thick resin bonded glass wool having density of 32kg/m³, with 25 mm X 25 mm GI section of 1.25 mm thick, at 600mm centre to centre covered with Reinforced Plastic tissue paper and 0.5 mm thick perforated aluminum sheet fixed to inside surface of ducts with cadmium plated nuts, bolts, stick pins, CPRXc ompound etc. complete as required and as per specifications.	Sqm	50.00			
459	Supplying and fixing of following thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (Class "O") insulation on existing duct after applying suitable adhesive for Nitrile rubber. The joints shall be sealed with 50 mm wide and 3 mm thick self adhesive nitrile rubber tape insulation complete as per specifications and as required.	Sqm	120.00			
	Supply and installation of Supply air Square Diffuser with collar damper .					
460	600x600 mm	Nos	12.00			
	Supply and installation of Return air Square Diffuser without collar damper.					
461	600x600 mm	Nos	12.00			
462	Supply, instalaltion, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts,screws linkages, flanges etc, as per specification complete all.	Sqm	1.00			
	<b>GRAND TOTAL</b>					