



**THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA  
(ICAI)**

**(Setup by an Act of Parliament)**

**TENDER**

**FOR**

**APPOINTMENT OF CONTRACTOR**

**FOR**

**CONSTRUCTION OF INSTITUTIONAL BUILDING AT NEW  
TOWNSHIP, LR 297(P) & 294(P), MOUZA KAWAKHALI, P.S.  
MATIGARA, SILIGURI, DISTRICT DARJEELING - 734012, WEST  
BENGAL**

**FOR**

**THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA  
(ICAI),  
NEW DELHI - 110002**

**BOOK- IV**

**FINANCIAL BID**

**CONSULTANTS:  
BIPLOB NANDY AND ASSOCIATES  
1<sup>ST</sup> FL., 10, NAZRUL SARANI,  
PAKURTALA MORE, HAKIMPARA, SILIGURI**

NAME OF THE WORK 'PROPOSED TWO (G+1) STORIED EDUCATIONAL BUILDING OF INSTITUTE OF CHARTERED ACCOUNTS OF INDIA. AT NEW TOWNSHIP,KAWAKHALI,P.S- MATIGARA, SILIGURI, DARJEELING.(STRUCTURE G+3)	
BILL OF QUANTITIES	
<b>Preamble</b>	
S.No.	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, cleanning 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 masonary. 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 masonary 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.
<b>Preambles for Different Works</b>	
<b>(A)</b>	<b>Site Development &amp; Earth Works</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 Eingeener Incharge beyond 50m intial 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 masonary or any adjacent structure.

<b>iv</b>	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.
<b>v</b>	Battering, benching, forming steps in the sides of foundations, and mass excavations where required and removal of slips and falls.
<b>(B)</b>	<b>Plain/Reinforcement Cement Concrete Works</b>
<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 concreting 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>( C)</b>	<b>Aluminium Works</b>
<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>iv</b>	all alumnium sections/ profiles shall be protected by using masking tapes, which shall be removed as and when required during installation
<b>v</b>	all screws bolts, nuts abd washers to be used be only stainless steel of approved manufacturer
<b>vi</b>	the glass shall be free from flaws, specks or bubbles and shall have square corners and straight line
<b>vii</b>	the completed installation shall be free from vibration,wind whistless and noice due to thermal, structural movement and wind pressure
<b>(D)</b>	<b>Masonry Work</b>
<b>i</b>	Work in English bond or any other bond or design as directed by the Architects
<b>ii</b>	Work in square, round and rectangular pillars, flower troughs, under floor drains, making curved and tapered surfaces steps etc.
<b>iii</b>	Forming openings, chases, grooves etc.
<b>iv</b>	Embedding conduits, boxes, other fixture of any descriptions, hold fasts of doors, windows, glazings etc., no deduction shall be made for cavities so formed.
<b>v</b>	Making all drip courses, projected courses of any description, offsets, setbacks, corbels, architraves or any other feature of any description.
<b>vi</b>	Raking out joints, for plastering or pointing or finishing joints flush as directed.
<b>vii</b>	Bonding with R.C.C. work.
<b>viii</b>	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.
<b>ix</b>	Work in narrow widths, small quantities etc.
<b>x</b>	Over lapping reinforcement and embedding reinforcement in adjoining walls in case of half brick masonry walls.
<b>xi</b>	Supplying moulds, taking briquettes, getting tested and any fees, costs etc., relating to the same.
<b>xii</b>	Providing 25mmx 300mm GI strips of 20 gauge for anchoring masonry with RCC columns/structural members.
<b>xiii</b>	Bricks to be tested for efflorescence, compressive strength and any other mandatory tests in the laboratory.
<b>xiv</b>	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
( E)	<b>Wall Finish</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 preperation, 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)
(F)	<b>Wood Work</b>
i	All the wood used should be well seasoned & free for knots, warping, twisting etc,any substandard material will be replaced free of cost.
ii	Antitermite treatment and protective paint is included in the reates.
iii	All the flush doors will be of water proof, termite proof quality
iv	All the fitting and fixtures will be of approved brand and quality
v	Providing and fixing door frames with Fastners or hold fast as approved are included in the rates
vi	Contractor to submit the anodising/ powder coating , EPDM/ Neoprene gaskets test reports / certificates
(G)	<b>Steel Works</b>
i	samples to be got approved before fabricating / fixing
ii	All exposed framing shall be free from scratches and other serious blemishes
iii	all alumnium sections/ profiles shall be protected by using masking tapes, which shall be removed as and when required during installation
iv	all screws bolts, nuts abd washers to be used be only stainless steel of approved manufacturer
v	the glass shall be free from flaws, specks or bubbles and shall have square corners and straight line
vi	the completed installation shall be free from vibration,wind whistless and noice due to thermal, structural movement and wind pressure
(H)	<b>Water Proofing Works</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 guarentee 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.
(I)	<b>Water Proofing Works for Sunken Portion</b>
i	First layer of slurry of cement @ 0.488 kg/sqm mixed with AT-CRETE/TAPECRETE @1:1:1(1cement:1 compound:1 water ) . This layer will be allowed to air cure for 4 hours.
ii	Second layer of slurry of cement @ 0.242 kg/sqm. Mixes with AT-CRETE/TAPECRETE @1:1:1(1cement:1 compound:1 water ) . This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.
iii	12 mm thick Rendering /plastering as protective layer of cement mortar 1:4 on the surface, with water proofing compound @ 0.2 kg per 50kg bag of cement .
iv	The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.
(J)	<b>Terrace Roof Slab Water Proofing</b>
i	Cleaning of surface and applying cement slurry @ 4.4 kg/sqm mixed with acrylic based water @1:1:1(1cement:1 compound:1 water ) proofing compound .
ii	Cement mortar 1:3 mixed (1 cement: 3 coarse sand) mixed with acrylic based water proofing compound@ 0.2 kg per 50kg bag of cement , or as per manufacturer specification
iii	Brick bats with 15mm to 20mm joints, grouted and jointed with cement mortar 1:3 (1 cement: 3 mixed) with acrylic based water proofing compound.@ 0.2 kg per 50kg bag of cement , or as per manufacturer specification
iv	Racking out of brick bat joints upto depth of 20mm

v	Cement mortar plaster 1:4 (1 cement: 4 coarse sand) mixed with non-shrinkage, water proofing compound@ 0.2 kg/ bag of cement finish neat ,complete with grooves pattern 300x300 or as specified
vi	treatment for vertical walls upto 300 mm height , gola / watta, junctions of pipes , sleeves, drain etc is part of item.
(K)	<b>Floor Finish Work</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
(L)	<b>Landscaping &amp; Horticulture Works</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, cleaning 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 visiting 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.
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.				
(M)	Electrical Work				
i	All works to be carried out according to relevant IS specifications whether so mentioned in description of works or not. Only electrically operated instruments including hammer drilling, core cutting, groove cutting and other equipment shall be used for chasing, cutting, drilling, threading etc.				
ii	The schedule of probable quantities may vary on the higher side or lower side. Hence, during material pocurement, the contractor shall workout the actual quantites based on the good for construction/shop drawings issued for execution as per the project manager's direction. The rate quoted in the tender is for finished actual work done. All extra and surplus material if any will be at contractor's risk and must be carried away from the site upon completion and hand over of the works.				
iii	Complete with suitable size modular type,metal switch boxes, modular type front plates etc. up to and including 6 A modular type SP switches and making good the surface of wall, colour washing etc. complete .				
iv	All the terminations in the switches and DB's shall be tinned and the wires shall be drawn and fixed along the periphery of the box using suitable ties, tie mounts etc as required.				
v	HT INSTALLATION				
vi	315kVA UNITISED SUBSTATION-INDOOR TYPE INTRANS/UNIPOWER EQUIVALENT				
vii	Supply, Installation, testing and commissioning of Unitised substation with HT load break switch, dry cast resin power transformer, cable end termination facility etc. as follows				
	HT load break switch fuse unit 400A,11kV,3pole -1no, with HRC fuse of 20A-3nos				
	Aluminium busbar with heat shrinkable insulation and support insulator ( SMC / DMC ) - 1set				
	Earthing switch interlocked with the main switch - 1no.				
	Mechanical and electrical on / off indictaion				
	315kVA, 11kV/433V, Delta/star connected cast resin copper wound outdoor transformer with H.T side connected with load break switch and cable entry box suitable for connecting single run of 3Cx300sq.mm 11kV XLPE cable, on L.T side cable end box suitable for connecting 2runx3.5Cx300Sqmm LT XLPE cable , with all standard accessories as per IS 11171:85 complete as per specifications, drawings and in conformity with requirement of Kerala State Eletrcical Inspectorate and K.S.E.B..				
	MV panel board made out of 16 SWG thick CRCA sheet steel dually rust inhibited, zinc passivated,and painted with approved colour epoxy paint on a coat of zincromatic primer. Fully compartmentalised with hinged and earthed front doors, name plate, heavy duty rubber gaskets, removable gland plates made of 3mm thick sheet steel etc, including mounting the 630A, 35 KA MCCB thermal magnetic having adjustable setting with isolation duty and E/F release and low set E/F relay.				
	250/5A, CI:0.5, 10VA CT with provision for fixing LT TOD meter				
(N)	PLUMBING				
	Note: The schedule of probable quantities may vary on the higher side or lower side. Hence, during material procurement, the contractor shall workout the actual quantities based on the good for construction/shop drawings issued for execution as per the project manager's direction. The rate quoted in the tender is for finished actual work done. All extra and surplus material if any will be at contractor's risk and must be carried away from the site upon completion and hand over of the works.				
SCHEDULE OF QUANTITY FOR CIVIL WORK					
S. NO	DESCRIPTION	UNIT	QUANTITY	RATE (In Rs.)	AMOUNT (In Rs.)
	Ground Floor Civil Works				
1	Earth Work in excavation of foundation trenches or drains , in all sorts of soil (including mixed soil but excluding lateritem or sandstone ) including removing, speading or stacking the spoils within a lead of 75 m. as directed . The item includes necessary trimming the sides oftrenches , levelling, dressing and ramming the bottom, bailing out water as requird complete. Depth of excavation not exceeding 1.500 mm.	Cum	945.00		
2	(b) Depth of excavation for additional depth beyond 1,500 mm. and upto 3,000 mm. but not requiring shoring.	Cum	362.00		
3	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm.including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)With earth obtained from excavation of foundation	Cum	425.00		
4	(A)Filling in foundation or plinth by Silver Sand in layers not exceeding 150mm as directed and consolidating the same by thorough saturation with water ramming complete including the cost of supply of sand. (payment to be made on measurment of finish quantity)	Cum	328.00		

5	Earth work in filling in compound, tank, low land, ditches etc. with good earth, in layers not exceeding 150 mm. including breaking clods and consolidating the same by ramming and dressing complete. (Payment will be made on profile measurement before and after the work) (ii) With carried earth arranged by the contractor within a radius exceeding 3 km. but not exceeding 5 km. including the cost of carried earth.	Cum	740.00		
6	<b>Pre-Constructional Anti-termite measures:</b> (a) Anti termite treatment to bottom surface ( in case of masonry foundation and basements) and the sides (upto a height of 300 mm. from bottom) of the excavation trenches with chemical emulsion by admixing chloropyrofos emulsifiable concentrates (1% concentration) with water by weight at the rate of 5 Litres per sq. m. area. The work shall be carried out as per specification described in 6.2.1. of code IS- 6313 (part -II) 1981. (Mode of measurment will be the plan area of foundation treated.)	Sq.m	629.00		
7	b) Anti termite treatment to back filling of the masonry foundation with chemical emulsion by admixing chloropyrofos emulsifiable concentrates ( 1% concentration) with water by weight at the rate of 7.5 Litres per sq. m. of the vertical surface of the substructure for each side of the foundation.. The work shall be carried out as per specification described in 6.2.2. of code IS-6313 (part -II) 1981. (Mode of measurment will be vertical area treated.)	Sq.m	629.000		
8	Supplying and laying polythene Sheet (150gm /msq.m) over damp proof course or below flooring or roof terracing or in foundation or in fondation trenches.	Sq.M	1291.000		
9	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor) (When the height of a particular floor is more than 4 m the equivalent floor height shall be taken as 4 m and extra for works beyond the initial 4 m ht. shall be allowed under 12 (e) for every 4 m or part thereof) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in Charge. Ground floor	Sq.m	403.00		
10	(c) Steel shuttering or 9 to 12 mm thick approved quality ply board shuttering in any concrete work.Ground floor	Sq.m	2016.00		
11	Cement concrete with 30 mm down graded shingles excluding shuttering. N.B. Variety (1:3:6)	Cu.m	73.00		
12	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement,if any, in ground floor as per relevant IS codes.(b) River bazree.Ground floor	Cu.m	57.00		
13	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes. (ii) River bazreeGround floor	Cu.m	1.00		
14	Controlled Cement concrete with well graded stone chips (20 mm nominal size) excluding shuttering and reinforcement with complete design of concrete as per IS : 456 and relevant special publications, submission of job mix formula after preliminary mix design after testing of concrete cubes as per direction of Engineer-in charge. Consumption of cement will not be less than 300 Kg of cement with Super plasticiser per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix founmula. In ground floor and foundation.[using concrete mixture] (i) M 25 Grade Ground floor	Cu.m	614.00		
15	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary),cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.For works in foundation, basement and upto roof of ground floor slab Fe-500D or more SAIL/TATA/RINL.	MT	79.500		
16	Brick work with 1st class bricks in cement mortar (1:6)(a) In foundation and plinth	Cu.m	40.00		
17	125 mm thick Autoclave aerated concrete block Work with size 625 mm x 250 mm x 125 mm- Grade- I, having drying Shrinkage less than 0.05% conforming to IS: 2185 ( Part-3)-1984 made up of fly ash (conforming to IS: 3812-1981, with permissible loss on ignition upto 6%), lime , cement and complete in all respect as per direction & satisfaction of Engineer -in Charge.a) laid in Cement Mortar (1:6) -In Super Structure, Ground Floor.	Sq.M.	104.00		
17.1	Providing and laying Jaffri wall of Teraracota Opal Jaali design Jaali size of 8"x8"x2.5" made of natural clay &Fixed to be fixed by tiles adhesive, Preferably by Fevimate XL or By Dr. Fixid, Colour is natural Terracota, including raking out joints, curing, scaffolding etc.complete in all respect..Make Ranuja Tiles (Gujrat) or Similar	each	375.000		
18	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary Ground floor).[Excluding cost of chipping over concrete surface](i) With 1:6 cement mortar. Ground floor . (15 mm thick plaster)	Sq.M	113.00		
19	(ii) With 1:4 cement mortar.Ground floor(10 mm thick celing plaster)	Sq.M	109.00		

20	40 mm. thick damp proof course with cement concrete (1:1.5:3) (with graded stone chips 20 mm nominal size) with water proofing compound of approved brand @ 0.2% weight of cement including cost of materials over two coats of non toxic acrylic polymer modified cementitious waterproofing slurry coat complete [cost of water proofing compound and non toxic paint to be paid seperately) for underground water retaining structures. [water proofing as per item no 9 and non toxic paint as per	Sq.m	5.00		
21	Frame less Glass Door: Providing and fixing Patch fitting glass door with 10mm thick egge machine polish toughened glass including all necessary hardware such as top and Bottom Patch fitting, floor spring,450mm High SS Handle (Satin),lock,etc.size:900mm x 2100mm in complete with all respect with all necessary labour and materials and as per drawing,design and instruction of EIC. Having area 4.m <sup>2</sup> of each	Sq.M	4.20		
22	Providing and fixing of factory made uPVC Sliding window (White Colour) complete, (U value=1.9-1.3 W/m <sup>2</sup> K, flame resistant, self extinguishing, lead free) comprising uPVC multi-chambered frame having in- built uPVC roller track on top and uPVC sash with wall thickness of 2.3mm (±0.2 mm) duly reinforced with G.I. section 1.6 mm (±0.2 mm), wherever required. All corners of frame and sash will be fusion welded. After placing 5 mm Clear Annealed glass in the sash, uPVC glazing bead, interlock, EPDM gasket, brush shall be provided including touch lock and rollers & proper drainage system shall be provided. Window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per as per approved drawing & direction of Engineer-In-Charge. (Note: Profile manufacturer & Window Manufacturer must be one & same, Only manufacturer Waranty is acceptable) <b>b) 3 Track 3 Sash window frame of size 122 x 54 mm</b>	sqm	7.11		
23	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987;(A) clear, toughened glass conforming to IS: 2553-1992 (part-II) (i) 6mm thick	sqm	7.11		
24	Providing and fixing 50 micron powder coated (of approved colour) aluminium (Indal / Hindal Co) sections to fixed glazing, , ventilators etc as per approved drawing / design with aluminium bead, neoprene gasket, handles, stays, etc all as per approved make and quality complete as follows: Fixed glazing with 12mm thick cleared toughened glass coforming to IS: 2553-1992 (Part-II	SqM	24.09		
25	Collapsible gate with 40mm x 40mm x 6mm Tee as top and bottom guide rail, 20mm x 10mm x 2mm vertical channels 100mm apart in fully stretched position 20mm x 5mm M.S. flats as collapsible bracings properly rivetted and washered including 38mm steel rollers including locking arrangements, fitted and fixed in position with lugs set in cement concrete and including cutting necessary holes, chasing etc. in walls, floors etc. and making good damages complete. In ground floor.	Sq.m	12.00		
26	Supplying, fitting and fixing Stainless Steel railing consist of 38mm dia and 900mm height vertical balustrade at every two alternative steps, 50mm dia top rail, 3 (three) nos 19mm dia horizontal Strainless steel pipe and base/cover plate with Strainless Steel GRADE 304 containing 7.5% nickle (Interior Grade) Brushed/Mat finish, complete as per direction of the Engineer-in-charge. Weight of Strainless Steel railing per metre 6.5 Kg (approx)	Mtr.	28.00		
27	<b>(a) M.S.or W.I. Ornamental grill</b> of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor.(Add extra @ 1% for each addl. floor upto 4th floor and @ 1.25% for each addl. Floor above 4th floor).Grill weighing above 16 Kg./sq.mtr and above.Ground floor	Qntl	1.42		
28	18 mm. to 22 mm. thick, kota stone slab set in 20 mm thick (avg) cement mortar (1:4) in floor, stair & lobby including pointing in cement slurry with admixture of pigment matching the stone shade, including grinding & polishing as per direction of Engineer - in - charge to match with the existing work. [Slurry for bedding @ 4.4 kg/Sq.m and pointing @2.0 kg/Sq.m]	Sq.M	13.00		
29	Extra cost of labour for prefinished and premoulded Nosing to treads of steps, railing, window sill etc. of Kota Stone.	m	28.80		
30	Extra cost of labour for grinding Kota Stone Floor in treads and riser of Steps.	Sq. M	32.00		
31	Supplying,fitting & fixing granite slab 15mm to 18mm thick in floor, lobby, stair, landing and treads etc. over 20mm (avg) thick base of cement mortar (1:2) laid with white cement slurry @ 4.40Kg per Square meter before placing of granite and jointed with white cement slurry @ 2.0 Kg per square meter with necessary pigments and complete as per direction of Engineer-in-charge including cost of all materials, labours, curing and roughening of concrete surface complete. In ground floor.(c) Area of each Granite slab above 1.00 Square meter.Ground floor	Sq.M	97.00		
32	Supplying, fitting and fixing Marble Slab/tile of 15 to 18 mm thickness in floor, lobby, stair, landing & treads etc. over 20 mm (av.) thck base of Cement mortar (1:2) laid with white cement slurry @ 4.4 kg/Sq.m before placing marble & jointed with white cement slurry @ 2.0 kg/Sq.m with necessary pigments including grinding and Granite polishing as per direction of Engineering -in -Charge in Ground Floor. {White cement and Pigment to be supplied by the Agency}(a) With Makrana plain pink / Adranga Pink / Garbh Gulabi / Udaypur pink / Udaypur Green / Black Bhaslana.(iv) Area of each slab/tile exceeding 1.00 sq.m (This item to be executed on specific permission of Superintending Engineer)	Sq.M	37.00		



33	Supplying and laying true to line and level Double Charge Vitrified Tiles of approved brand conforming to IS 15622: 2006 (Group B I a) and tested as per IS 13630:2006 (relevant parts) [Non-modular sizes for tiles with Water Absorption (av.) $\leq 0.08$ %] in floor, skirting etc. using polymerised adhesive of 6mm thick layer applied directly over finished artificial stone floor/Mosaic etc without any backing course and joints grouted with admixture of white epoxy grout materials of approved brand including spacer -2mm as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials,labour and all other incidental charges complete as per direction of Engineer-in- Charge. (Note: This work should not be executed without specific permission of Superintending Engineer) Add extra for each addl, floor over the rate for Ground Floor.(b) In Ground Floor:(size not less than 800mmX 800 mm X 10.2 mm thick) (I) upto 4 th floor- Rs. 12/-per Sq.m II) above 4th floor -Rs. 16/- per Sq.m.	Sqm	83.00		
34	Providing and fixing Tunch Clay Bricks Tiles (RUBIGO & KINGSPORT or approved equivalent ) cladding of dimension 60x240x11 having water absorbtion less than 5.5%, breaking strength minimum 1000N, modulus of rupture $\geq 20$ fixed in customize design as per direction of Engineer-in- Charge. The clay brick tiles to be fixed on the wall surface with the help of approved adhesive applied at the rate of 2.5 kg per sqm and grouting of the same over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with 2% integral water proofing compound. The rate is inclusive of all operation, material and required pattern approved by Engineer-in-Charge:	Sqm	37.00		
35	60 mm thick Grass concrete paver block M-20 grade for high traffic zone, bus terminus, industrial complex, mandi houses etc. as per IS: 15658- 2006 (over 20-40 mm medium sand bed on 250mm thk WBM/ WMM base course & 250 mm thk bound gnauar/ granular sub-base course & filling the interstices of blocks with fine sand by brooming & subsequent watering including cost of sand for sand bed but excluding cost of base, sub-base course & subgrade preparation.) complete as per direction of Engineer-in-Charge. [Note: Subgrade CBR shouldnot be less than 5].Colour Decorative	Sqm	929.00		
36	Supplying & laying as per IRC-SP:063-2004 paver unit of any shade of approved quality as per relevant IS code, laid in pattern as directed in pavement, footpath, driveway (paver block only), etc including necessary underlay complete in all respect with all labour and material. [Border concrete if necessary to be paid separately]. Note: Sub-grade CBR should not be less than 5.(c) <b>60 mm thick interlocking designer concrete paver block M- 35 grade</b> for light traffic zone,commercial & office complex,tourist resort as per IS: 15658-2006 (over 20-40 mm medium sand bed on 250mm thk WBM/ WMM base course & 250 mm thk bound gnauar/ granular sub-base course including cost of sand for sand bed but excluding cost of base ,sub-base course & subgrade preparation.) (ii) Coloured Decorative	Sq. M	239.000		
37	Providing and fixing at or near ground level precast cement concrete in kerbs (size: 450 mm x 350 mm x width 150 mm at bottom with bevelled nosing at top) of cement concreat M20 Grade without reinforcement, fixing as per approved pattern and setting in position at site after preparing the bed grade and slopes by laying Cement concrete with jhama khoa (1:4:8) as per specification and direction of Engineer-in- Charge including filling of joints with 10 mm thick cement mortar (3:1) and back filling the vertical piece properly with earth duly compacted and curing the mortar joints for atleast 3 days including cost and carriage of all materials complete.	Mtr.	128.00		
38	Supplying& laying 20 mm designer chequered tiles of any shade and of approved quality as per IS: 1237: 1980 laid in patterns as directed in pavement, footpath including necessary underlay 25 mm thick average cement mortar (1:3) complete in all respect with all labour and materials [using cement slurry @ 4.4 kg/Sq.m at back side of tiles. Cement of mortar & slurry will be supplied by the Department. Border concrete if necessary to be paid separately].	Sq. M	9.00		
39	Supplying profiles of required section made of Aluminium Alloy Extrusion conforming to IS: 732- 1983 and IS: 1285-1975; Anodised with required film thickness and specified colour/natural matt finished conforming to IS: 1868-1983 for fabrication of Structural Glazing, Curtain Wall formed of basic sections of any ISI embossed/certified make and brand as per direction of Engineer-in-charge. ( Payment will be made on finished length of the work). 15 micron colour anodising Structural glazing /Curtain Wall.i) Mulion & Transom (Weight @1.819 Kg per Meter)	Mtr	32.40		
40	ii) Sub frame for fixing Glass (Weight @0.31 Kg per Meter)	Mtr	28.44		
41	Supplying Glazing Silicon of approved make and brand for fixing of Glass on Sub-frame as per direction of Engineer-in-charge for Structural Glazing/Curtain wall etc..Glazing Silicon for fixing Glass on Sub frame	Mtr	88.32		
42	Supplying Weather Silicone sealant of approved make and brand for fixing of grove line between the Glasses as per direction of Engineer-in charge. for Structural Glazing/Curtain wali.Weather Silicone sealant for filling the Grove line between Glasses or any other material for facial work	Mtr	88.32		

43	Supplying profiles of required sections made of aluminium alloy extrusion conforming to IS 732-1983 and IS 1285-1975 anodised with required film thickness and specified colour / natural mat finished conforming to IS 1868-1983 for fabrication of structural glazing, curtain wall formed of basic section of any ISI embossed / certified make and brand as per direction of Engineer-in-Charge. (Payment will be made on finished length of the work). for Structural glazing / curtain wall with 15 micron Coloured Anodising .(i) Fixing Plate (Wt. @ 0.515 Kg per Mtr.	Mtr	32.40		
44	(ii) Fixing cap (Wt. @ 0.342 Kg per Mtr.)	Mtr	28.44		
45	Labour charge for fabrication and installation of structural Glazing/Curtain Wall made from annodized extruded allooy aluminium sections for the following units:Structural Glazing made of extruded and annodized alloy aluminium sections, fabrications including cutting to proper shape and size, drilling including cost of brackets, fastener bolt, mullion bolt, nuts & washers, maskin tape, double side adhesieve crosslink foam (used for guard of glazed silicon on sub-frame), tissue paper foam (used as filler between sub-frame and under backing of weather silicon), screws and other necessary hardwares, fixing of glass as per drawing, specification and direction of Engineer-in-Charge. (The rate includes hire charges of all tools and plants, including all incidental charges, adhesieve, joiners such as screw,cleate angle,etc. but excluded the cost of extruded aluminium sections, glass, glazed silicon, weather silicon etc.)	Sq.M.	34.13		
46	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987;(A) clear, toughened glass conforming to IS: 2553-1992 (part-II) (i) 6mm thick	sqm	34.13		
47	Supplying, fitting & fixing UPVC pipes A- Type and fittings conforming to IS:13592-1992 with all necessary clamps nails, including making holes in walls, floor etc. cutting trenches in any soil through masonry concrete structures etc if necessary and mending good damages including joining with jointing materails (Spun Yarn, Valamoid/Bitumen/M-Seal etc) complete.(iii) 160 mm. Dia.	Metre	47.00		
48	B) UPVC Fittings:c) Bend 87.5 degree (iii) 160 mm. Dia.	Nos	11.00		
49	d) Shoe(iii) 160 mm. Dia.	Nos	11.00		
50	(b) Rendering the surface of walls and ceiling with white cement based wall putty of approved make and brand(1.5mm thick)	Sq.M	221.00		
51	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or cencrete surface old or new surface to receive decorative textured(matt finish) or smooth finish acrylic exterior emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC.:One coats.Ground floor	Sq.M	102.00		
52	Protective and decorative Acrylic exterior emulsion paint of approved quality, as per manufactuer's specification and as per direction of EIC to be applied over acrylic primer as required. The rat includes cost of material, labour, scaffolding and all includental charges but excluding cost of primer in ground floor Two coat premium 100% Acrylic Emulsion.Ground floor.	Sq.m	102.00		
53	Applying Interior grade Acrylic Primer of approved quality and brand on plastered or cencrete surface old or new surface to receive Distemper/ Acrylic emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC. (In Ground Floor) One Coats.Water based interior grade Acrylic Primer.Ground floor	Sq.M	221.00		
54	Applying Acrylic Emulsion Paint of approved make and brand on walls and ceiling including sand papering in intermediate coats including putty (to be done under specific instruction of Superintending Engineer) : (Two coats)i) Standard Quality.Ground floor	Sq.M	221.00		
55	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	Sq.M	7.11		
56	A) Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary : On timber or plastered surface :With super gloss (hi- gloss) -Two coats (with any shade except white)	Sq.M	7.11		
57	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	Sq.M	1.00		
58	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary : On timber or plastered surface :With super gloss (hi- gloss) -Two coats (with any shade except white)	Sq.M	1.00		
A	<b>Total of Ground Floor Civil Works</b>				
	<b>Total in Words</b>				
B	<b>Ist Floor Civil work</b>				

i)	Civil (Complete)				
59	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor) (When the height of a particular floor is more than 4 m the equivalent floor height shall be taken as 4 m and extra for works beyond the initial 4 m ht. shall be allowed under 12 (e) for every 4 m or part thereof) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in Charge.Ground floor	Sq.m	128.00		
60	9 to 12 mm thick approved quality ply board shuttering in any concrete work.	Sq.m	1565.00		
61	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes. Pakur Variety	Cu.m	10.00		
62	Controlled Cement concrete with well graded stone chips (20 mm nominal size) excluding shuttering and reinforcement with complete design of concrete as per IS : 456 and relevant special publications, submission of job mix formula after preliminary mix design after testing of concrete cubes as per direction of Engineer-in charge. Consumption of cement will not be less than 300 Kg of cement with Super plasticiser per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix formula. In ground floor and foundation.[using concrete mixture] Pakur Variety (i) M 25 Grade Ground floor	Cu.m	176.00		
63	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary),cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.For works ground floor slab to terrace mummy Fe-500D or more SAIL/TATA/RINI.	MT	30.380		
64	250 mm th. Autoclave aerated concrete block Work with size 625 mm x 250 mm x 125 mm- Grade-I, having drying Shrinkage less than 0.05% conforming to IS: 2185 (Part-3)-1984 made up of fly ash (conforming to IS: 3812-1981, with permissible loss on ignition upto 6% ), lime , cement and laid in Cement Mortar (1:6) complete in all respect as per direction & satisfaction of Engineer -in Charge .In Super Structure. Ground Floor	Cu.m	72.00		
65	125 mm thick Autoclave aerated concrete block Work with size 625 mm x 250 mm x 125 mm- Grade- I,having drying Shrinkage less than 0.05% conforming to IS: 2185 ( Part-3)-1984 made up of fly ash (conforming to IS: 3812-1981, with permissible loss on ignition upto 6%), lime , cement and complete in all respect as per direction & satisfaction of Engineer -in Charge.a) laid in Cement Mortar (1:6) 1st floor	Sq.M.	540.00		
66	2nd floor	Sq.M.	222.125		
67	125 mm thic brick work with 1st class bricks in cement mortar (1:4).1st floor.	Sq.M	50.00		
68	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary Ground floor).[Excluding cost of chipping over concrete surface](i) With 1:6 cement mortar. Ground floor (20 mm thick plaster)	Sq.M	50.00		
69	1st floor. (15 mm thick plaster)	Sq.M	1575.00		
70	(ii) With 1:4 cement mortar.Ground floor(10 mm thick celing plaster)	Sq.M	760.00		
71	2nd floor	Sq.M	325.00		
72	Wood work in door and window frame fitted and fixed in position complete including a protective coat of painting at the contact surface of the frame exluding cost of concrete, Iron Butt Hinges and M.S clamps. (The quantum should be correted upto three decimals).Sal : Local (1st floor)	Cu.M	1.186		
73	Supplying, fitting and fixing M.S. clamps for door and window frame made of flat bent bar, end bifurcated with necessary screws etc. by cement concrete(1:2:4) as per direction. (Cost of concrete will be paid separately)40mm X 6mm, 125mm Length	Each	120.00		
74	Supplying solid flush type doors of commercial quality, the timber frame consisting of top and bottom rails and side styles of well seasoned timber 65mm wide each and the entire frame fitted with 37.5mm wide battens places both ways in order to make the door of solid core and internal lipping with Garjan or similar wood veneers using phenol formaldehyde as glue etc. complete, including fitting, fixing shutters in position but excluding the cost of hinges and other fittings in ground floor.a) Ground Floor. 35 mm thick shutters (single leaf)	Sq.M.	48.00		
75	Supplying fitting, fixing decorative lamination conforming to IS: 2046 : 1995 as per approved make, brand, finish and thickness with fitting, fixing the same on Particle/MDF / Ply Boards with recommended / approved adhesive with proper clipping the sides for better attachment as per direction of Engineer-in charge.The rate includes the cost of labour, adhesive and all incidental charges thereof. In ground floor.Glossy/Matt/Suede excluding surface texture or metallic lustre.(ii) Thickness of laminate 1 mm	Sq.M.	96.00		

76	Anodised aluminium barrel / tower / socket bolt (full covered) of approved manufactured from extruded section conforming to I.S. 204/74 fitted and fixed with cadmium plated screw.(iv) 150mm long x 10mm dia. bolt.	Each	24.00		
77	(x) 300mm long x 12mm dia. bolt.	Each	14.00		
78	Iron butt hinges of approved quality fitted and fixed with steel screws, with ISI mark.(Add Extra 30% for Oxidised Fittings)(iii) 75mm. X 40mm. X 1.12mm.	Each	24.00		
79	(vii) 100mm. X 58mm. X 1.90mm. for Oxidised Fittings)	Each	60.00		
80	Anodised aluminium barrel / tower / socket bolt (full covered) of approved manufactured from extruded section conforming to I.S. 204/74 fitted and fixed with cadmium plated screws:(vii) 225mm long x 10mm dia. bolt	Each	30.00		
81	(ii) 75mm long x 10mm dia. Bolt	Each	12.00		
82	ii) Brass hasp bolt of approved quality fitted and fixed complete (oxidised) with 16mm dia rod with centre bolt and round fitting.(a) 200mm long	Each	15.00		
83	(a) Supplying 'Godrej' mortice lock chromium plated with latch and keys 4 levers, including fitting and fixing complete.Ground floor	Each	15.00		
84	Anodised aliminium D-type handle of approved quality manufactured from extruded section conforming to I.S. specification (I.S. 230/72) fitted and fixed complete.With continuous plate base (Hexagonal / Round rod)(ii) 100 mm grip x 10 mm dia rod.	Each	30.00		
85	(vi) 150 mm grip x 10 mm dia rod.	Each	12.00		
86	(ii) Door stopper (Anodised aluminium)	Each	15.00		
87	i) Hydraulic door closer of approved quality as per I.S.I. standard fitted and fixed complete.(a) Heavy type (I.S.I. size 3)	Each	15.00		
88	Providing and fixing of factory made uPVC Sliding window (White Colour) complete, (U value=1.9-1.3 W/m <sup>2</sup> K, flame resistant, self extinguishing, lead free) comprising uPVC multi-chambered frame having in- built uPVC roller track on top and uPVC sash with wall thickness of 2.3mm (±0.2 mm) duly reinforced with G.I. section 1.6 mm (±0.2 mm), wherever required. All corners of frame and sash will be fusion welded. After placing 5 mm Clear Annealed glass in the sash, uPVC glazing bead, interlock, EPDM gasket, brush shall be provided including touch lock and rollers & proper drainage system shall be provided. Window frame will be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per as per approved drawing & direction of Engineer-In-Charge. (Note: Profile manufacturer & Window Manufacturer must be one & same, Only manufacturer Waranty is acceptable) <b>a) 2 Track 2 Sash window frame of size 67 x 54 mm &amp; Sash of size 64 x 47 mm both having wall thickness of 2.3 ± 0.2 mm</b>	sqm	6.50		
89	b) 3 Track 3 Sash window frame of size 122 x 54 mm & Sash of size 64 x 47 mm both having wall thickness of 2.3 ± 0.2 mm	sqm	77.22		
90	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987;(A) clear, toughened glass conforming to IS: 2553-1992 (part-II) (i) 6mm thick	sqm	167.00		
91	Frame less Glass Door: Providing and fixing Patch fitting glass door with 10mm thick egge machine polish toughened glass including all necessary hardware such as top and Bottom Patch fitting, floor spring,450mm High SS Handle (Satin),lock,etc.size:900mm x 2100mm in complete with all respect with all necessary labour and materials and as per drawing,design and instruction of EIC. Having area 4.m <sup>2</sup> of each	Sq.M	17.00		
92	<b>(a) M.S.or W.I. Ornamental grill</b> of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor.(Add extra @ 1% for each addl. floor upto 4th floor and @ 1.25% for each addl. Floor above 4th floor).Grill weighing above 16 Kg./sq.mtr and above.Ground floor	Qntl	15.10		
93	Supplying, fitting and fixing Stainless Steel railing consist of 38mm dia and 900mm height vertical balustrade at every two alternative steps, 50mm dia top rail, 3 (three) nos 19mm dia horizontal Strainless steel pipe and base/cover plate with Strainless Steel GRADE 304 containing 7.5% nickle (Interior Grade) Brushed/Mat finish, complete as per direction of the Engineer-in-charge. Weight of Strainless Steel railing per metre 6.5 Kg (approx)	Mtr.	29.00		
94	18 mm. to 22 mm. thick, kota stone slab set in 20 mm thick (avg) cement mortar (1:4) in floor, stair & lobby including pointing in cement slurry with admixture of pigment matching the stone shade, including grinding & polishing as per direction of Engineer - in - charge to match with the existing work. [Slurry for bedding @ 4.4 kg/Sq.m and pointing @2.0 kg/Sq.m]	Sq.M	13.00		
95	Extra cost of labour for prefinished and premoulded Nosing to treads of steps, railing, window sill etc. of Kota Stone.	m	29.00		
96	Extra cost of labour for grinding Kota Stone Floor in treads and riser of Steps.	Sq. M	32.00		
97	Supplying,fitting & fixing granite slab 15mm to 18mm thick in floor, lobby, stair, landing and treads etc. over 20mm (avg) thick base of cement mortar (1:2) laid with white cement slurry @ 4.40Kg per Square meter before placing of granite and jointed with white cement slurry @ 2.0 Kg per square meter with necessary pigments and complete as per direction of Engineer-in-charge including cost of all materials, labours, curing and roughening of concrete surface complete.(c) Area of each Granite slab above 1.00 Square meter.1st floor	Sq.M	76.00		

98	Supplying, fitting and fixing Marble Slab/tile of 15 to 18 mm thickness in floor, lobby, stair, landing & treads etc. over 20 mm (av.) thick base of Cement mortar (1:2) laid with white cement slurry @ 4.4 kg/Sq.m before placing marble & jointed with white cement slurry @ 2.0 kg/Sq.m with necessary pigments including grinding and Granite polishing as per direction of Engineering -in -Charge in Ground Floor. {White cement and Pigment to be supplied by the Agency}(a) With Makrana plain pink / Adranga Pink / Garbh Gulabi / Udaypur pink / Udaypur Green / Black Bhaslana.(iv) Area of each slab/tile exceeding 1.00 sq.m (This item to be executed on specific permission of Superintending Engineer)	Sq.M	37.00		
99	Supplying& laying 20 mm designer chequered tiles of any shade and of approved quality as per IS: 1237:1980 laid in patterns as directed in pavement, footpath including necessary underlay 25 mm thick average cement mortar (1:3) complete in all respect with all labour and materials [using cement slurry @ 4.4 kg/Sq.m at back side of tiles. Cement of mortar & slurry will be supplied by the Department. Border concrete if necessary to be paid separately].	Sq. M	39.00		
100	Supplying & fitting & fixing 1st quality Ceramic tiles in walls and floors to match with the existing work & 4 nos. of key stones (10mm) fixed with araldite at the back of each tile & finishing the joints with white cement mixed with colouring oxide if required to match the colour of tiles including roughening of concrete surface, if necessary or by synthetic adhesive & grout materials etc.(A) Floor (a) Area of each tile upto 0.09 Sq.m (i) Coloured decorativeGround Floor	Sq. M	33.00		
101	(B) Wall. With Sand Cement Mortar (1:3) 15 mm thick & 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg/Sq.m & joint filling using white cement slurry @ 0.20kg/Sq.m.Area of each tile upto 0.09 Sq.m Coloured decorative Ground Floor	Sq. M	109.00		
102	Supplying and laying true to line and level Double Charge Vitrified Tiles of approved brand conforming to IS 15622: 2006 (Group B I a) and tested as per IS 13630:2006 (relevant parts) [Non-modular sizes for tiles with Water Absorption (av.) $\leq 0.08$ %] in floor, skirting etc. using polymerised adhesive of 6mm thick layer applied directly over finished artificial stone floor/Mosaic etc without any backing course and joints grouted with admixture of white epoxy grout materials of approved brand including spacer -2mm as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials,labour and all other incidental charges complete as per direction of Engineerin- Charge. (Note: This work should not be executed without specific permission of Superintending Engineer) Add extra for each addl, floor over the rate for (I) upto 4 th floor- Rs. 12/-per Sq.m II) above 4th floor -Rs. 16/- per Sq.m(b) In Ground Floor:(size not less than 800mmX 800 mm X 10.2 mm thick)	sqm.	516.00		
103	Providing and fixing Tunch Clay Bricks Tiles (RUBIGO & KINGSPORT or approved equivalent ) cladding of dimension 60x240x11 having water absorbtion less than 5.5%, breaking strength minimum 1000N, modulus of rupture $\geq 20$ fixed in customize design as per direction of Engineer-in- Charge. The clay brick tiles to be fixed on the wall surface with the help of approved adhesive applied at the rate of 2.5 kg per sqm and grouting of the same over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with 2% integral water proofing compound. The rate is inclusive of all operation, material and required pattern approved by Engineer-in-Charge:	Sqm	193.00		
104	Supplying profiles of required section made of Aluminium Alloy Extrusion conforming to IS: 732- 1983 and IS: 1285-1975; Anodised with required film thickness and specified colour/natural matt finished conforming to IS: 1868-1983 for fabrication of Structural Glazing, Curtain Wall formed of basic sections of any ISI embossed/certified make and brand as per direction of Engineer-in-charge. ( Payment will be made on finished length of the work). 15 micron colour anodising Structural glazing /Curtain Wall.i) Mullion & Transom (Weight @1.819 Kg per Meter)	Mtr	36.00		
105	ii) Sub frame for fixing Glass (Weight @0.31 Kg per Meter)	Mtr	28.44		
106	Supplying Glazing Silicon of approved make and brand for fixing of Glass on Sub-frame as per direction of Engineer-in-charge for Structural Glazing/Curtain wall etc..Glazing Silicon for fixing Glass on Sub frame	Mtr	104.00		
107	Supplying Weather Silicone sealant of approved make and brand for fixing of grove line between the Glasses as per direction of Engineer-in charge. for Structural Glazing/Curtain wali.Weather Silicone sealant for filling the Grove line between Glasses or any other material for facial work	Mtr	104.00		
108	Supplying profiles of required sections made of aluminium alloy extrusion confirming to IS 732-1983 and IS 1285-1975 anodised with required film thickness and specified colour / natural mat finished conforming to IS 1868-1983 for fabrication of structural glazing, curtain wall formed of basic section of any ISI embossed / certified make and brand as per direction of Engineer-in-Charge. (Payement will be made on finished length of the work). for Structural glazing / curtain wall with 15 micron Coloured Anodising .(i) Fixing Plate (Wt. @ 0.515 Kg per Mtr.	Mtr	36.00		
109	(ii) Fixing cap (Wt. @ 0.342 Kg per Mtr.)	Mtr	28.44		

110	Labour charge for fabrication and installation of structural Glazing/Curtain Wall made from anodized extruded alloy aluminium sections for the following units: Structural Glazing made of extruded and anodized alloy aluminium sections, fabrications including cutting to proper shape and size, drilling including cost of brackets, fastener bolt, mullion bolt, nuts & washers, maskin tape, double side adhesieve crosslink foam (used for guard of glazed silicon on sub-frame), tissue paper foam (used as filler between sub-frame and under backing of weather silicon), screws and other necessary hardwares, fixing of glass as per drawing, specification and direction of Engineer-in-Charge. (The rate includes hire charges of all tools and plants, including all incidental charges, adhesieve, joiners such as screw, cleate angle, etc. but excluded the cost of extruded aluminium sections, glass, glazed silicon, weather silicon etc.)	Sq.M.	38.00		
111	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987;(A) clear, toughened glass conforming to IS: 2553-1992 (part-II) (i) 6mm thick	sqm	69.00		
112	Supplying fitting & fixing Glass film in all Complete.	sqm	84.00		
113	Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main 'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to form grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25 mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calicum silicate ceiling tiles of approved texture in the grid, including, cutting/ making opening for services like diffusers, grills, light fittings, fixtures,	Sqm	290.00		
114	(h) Supplying ,fitting & fixing Eco-friendly, Heat Resistance and Incombustable Gypsum plaster board/tiles ( Density > 700Kg per Cu.m.) confirming to IS 2095- Part 1, 2011 of size 595mm X595mm of approved design & brand placed in the Grid module to form a false ceiling, all complete as per drawing & direction of Engineer - in- Charge. False ceiling with.(i) 12.5mm thick Square edged heat resistance Gypsum Plaster Board/tiles with vapour control film	Sq.M.	65.00		
115	Providing and fixing of false ceiling with powder coated exposed G.I. grid suspension system (E- Grid U-1520 or equivalent load carrying capacity with mid span deflection not exceeding 1/360 span with hanger spacing of 1200mm c/c ) consisting of Main Runner 3600 mm long, Cross Tee 1200 mm / 600 mm long and Wall Angle. The Wall Angle shall be fixed on PVC Dash Fasteners on the perimeter of the wall by steel screws with distance 300mm c/c. The Main Runners to be placed @ 1200 mm. The Cross Tee 1200mm will be inserted in the pre-cut slots of Main Runner at a regular interval of 600 mm to form a modular grid of 1200mm X 600mm. Additional Cross Tees of 600 mm shall be placed perpendicular to the Cross Tee 1200 mm long to finally form a grid of 600 mm X 600 mm. Grid of module size 600 mm X 600 mm shall be supported by 6 mm dia G.I. wire from purlins / soffit. 15mm thick OW Acoustic Board (Mineral Fiber Acoustic Ceiling Tiles) of approved pattern and size 595mm X 595mm with NRC value > 0.65 should be placed in the Grid module to form a False Ceiling. All complete as per the drawing & directions of Engineer-in-charge. In ground floor.a) Acoustic False Ceiling (with 15mm thick OW Acoustic Board and E-Grid U	Sqm	226.00		
116	<b>Acoustic wall panel :</b> Supplying, fitting and fixing 25mm thk one layer ecofriendly magnesite bonded wood wool (PEFC certified) acoustic wall panel , of size 1200 x 600 x 25mm having edge detail AK-01, weight 11.30 Kg/Sqm, fire protection class B-s1,d0 as per EN 13501-1 & Humidity Resistance of 90%. Panels should be backed by 40 to 50mm thick rock- wool slabs packed in 1200 x 600 polythene bags having a gross density of 50kg/m3 over chicken mesh wire maintaining a distance of 85 mm from the wall to achieve a NRC of 0.9 as per ASTM C423 and be fixed as per architectural drawings using 0.60mm thick and 60mm wide GI cold rolled section frame work behind as per specifications using screws. The framework is formed by vertical and horizontal laying of GI section to form the grid modules of 600x1200mm or 600x600mm screw fixed using white beige 50mm Length / 4.5 mm dia screws or glue fixed as required, including the cost of cutting pocket/ slots of any size and shape and finishing the sides and edges for providing fittings or fixtures like electrical switch board, Air Conditioners, Sound system, Projector, Fire fighting equipments, closed circuit TV etc. & backfill all complete as per direction of Engineer-in Charge. Each edge of the panel should overlap 30mm width of the GI section framework.	Sqm	79.00		

117	Supplying & fitting of 55mm thick asbestos free - fire, heat and smoke resistant composite Fire check Door Shutter complying with fire performance FD120 as per IS:3614 (part -II)- comprising of 2x8 mm Calcium Silicate boards over Chemically treated (with Fire retardant chemicals in pressure impregnation vessels under 160 psi pressure as per IS:401 and kiln seasoned to moisture below 15% as per IS:1141) internal timber (Malaysian Hard Wood, densified to 810 kg/cum ) frame work of 100 mm x32 mm with 32mm thick infill of ceramic fiber (density 128Kg/cum), vermaculite mix faced with 3 mm Fire retardant High Density fire board, internally lipped with hardwood beading, and pasted in Hydraulic Press under 25 MPa, spray coated with 2 coats of in-tumescent paint of minimum 300 micron, and with single row of Brush-Type intumescent strip of size 10 mm x 4 mm affixed on peripheral slit on all edges of shutter except bottom for fire and smoke sealing, without any external lipping including fitting ,fixing shutters in position but excluding the cost of hinges & other fittings as per direction of Engineer -in -charge complete in all respect in Ground Floor. [Note : Specific permission of the Superintending Engineer is required for	Sqm	8.40		
118	M.S. structural works with hollow sections (square or rectangular shape) conforming to IS: 806-1968 & IS:1161-1998) connected to one another with bracket, gusset, cleat as per design, drawing & direction of Engineer-in-Charge complete including cutting to requisite shape & size, fabrication including metal arc welding conforming to IS: 816-1969 & IS: 9595 using electrodes of approved make and brand conforming to IS:814- 2004, haulage, hoisting and erection all complete. The rate includes the cost of all M.S. Hollow section, all consumables such as electrodes, gas and hire charges of all tools and plants and labour required for execution and all incidental chages (such as electricity, labour insurance) etc. complete. Payment to be made on the basis of calculated weight of structural memebtrs of MS Holow Section as specified in relevent IS code in finished work. Payment for gusset, bracket, cleat may be made by adding the actual weight of such items with weight of finished structural members. The rates are considered for a hight of erection 8 m. / 2nd floor level from the ground. Add 1.5 % extra over the rate for each additional floor or 4m. beyond the initial 8 m. or part thereof.B) Span beyond 12 Mtr and up to 20 Mtr (1st floor)	MT.	1.000		
119	Supplying, fitting & fixing Zn-Al alloy (55% Al & 45% Zn) coating of 150 grams per sq. metre (followed by colour coated on both side) steel sheet work having minimum yield strength of 550 Mpa of trapizoidal profile of approved make (excluding the supporting frame work) fitted and fixed with 55 mm & 25 mm self tapping screw, EPDM Washer 16 mm dia & 3 mm th. washer etc. complete with 150 mm end lap and one corrugation minimum side lap. (Payment to be made on area of finished work).(i) In Roof:-a) With 0.5 mm thick sheet	Sq.m	148.000		
120	Cement concrete (1:1.5:3) with graded stone chips 5.6 mm size with hexagonal square mesh wire netting, I.R.C. fabric mesh or X.P. M. fitted and fixed after tying the existing reinforcement on concrete without distributing the same and with proper scarping and cleaning the reinforcement and disturbed concrete with wire brush etc. after applying a coat of cement including the cost of wire netting I.R.C or X. P. M. & cost of all handling and scaffolding complete as per direction of Engineer-in -charge.c) 37.5mm thick	Sq.m	700.00		
121	(a) Applying 2 coats of bonding agent with synthetic multi functional rubber emulsion having adhesive and water proofing properties by mixing with water in proportion (1 bonding agent : 4 water : 6 cement) as per Manufacturer's specification [Cement to be supplied by the Department]	Sq.m	487.00		
122	(b) Applying 2coats of Non Toxic Acrylic Polymer modified Paint having adhesive & water proofing proper ties by mixing inproportion (1 liquid: 4 cementitious material) or as per manufacturer's specifi cation for water proofing layer in water tank etc. (No Departmental Cement is required)	Sq.m	880.00		
123	Extra rate for using water proofing and plasticising admixture @ 0.2% by weight of cement (or at manufacturer's specified rate) for concrete of various grades	kg	200.00		
124	Supplying, fitting & fixing UPVC pipes A- Type and fittings conforming to IS:13592-1992 with all necessary clamps nails, including making holes in walls, floor etc. cutting trenches in any soil through masonry concrete structures etc if necessary and mending good damages including joining with jointing materails (Spun Yarn, Valamoid/Bitumen/M-Seal etc) complete.(iii) 160 mm. Dia.	Metre	44.00		
125	(b) Rendering the surface of walls and ceiling with white cement based wall putty of approved make and brand(1.5mm thick)	Sq.M	2710.00		
126	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or cencrete surface old or new surface to receive decorative textured(matt finish) or smooth finish acrylic exterior emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC.:One coats.1st floor	Sq.M	649.00		
127	Protective and decorative Acrylic exterior emulsion paint of approved quality, as per manufactuer's specification and as per direction of EIC to be applied over acrylic primer as required. The rat includes cost of material, labour, scaffolding and all includental charges but excluding cost of primer in ground floor Two coat premium 100% Acrylic Emulsion.1st floor	Sq.m	649.00		

128	Applying Interior grade Acrylic Primer of approved quality and brand on plastered or concrete surface old or new surface to receive Distemper/ Acrylic emulsion paint including scraping and preparing the surface thoroughly, complete as per manufacturer's specification and as per direction of the EIC. (In Ground Floor) One Coats. Water based interior grade Acrylic Primer. Ground floor	Sq.M	2061.00		
129	Applying Acrylic Emulsion Paint of approved make and brand on walls and ceiling including sand papering in intermediate coats including putty (to be done under specific instruction of Superintending Engineer) : (Two coats) i) Standard Quality. Ground floor	Sq.M	2061.00		
130	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothing surfaces by sand papering etc.	Sq.M	120.00		
131	A) Painting with best quality synthetic enamel paint of approved make and brand including smoothing surface by sand papering etc. including using of approved putty etc. on the surface, if necessary : On timber or plastered surface : With super gloss (hi-gloss) -Two coats	Sq.M	120.00		
132	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothing surfaces by sand papering etc.	Sq.M	18.00		
133	Painting with best quality synthetic enamel paint of approved make and brand including smoothing surface by sand papering etc. including using of approved putty etc. on the surface, if necessary : On timber or plastered surface : With super gloss (hi-gloss) -Two coats (with any shade except white)	Sq.M	18.00		
<b>B</b>	<b>Total of 1st Floor Civil Works Complete</b>				
	<b>Total in Words</b>				
<b>B</b>	<b>1st Floor Civil Works</b>				
<b>ii</b>	<b>Sanitary &amp; Plumbing (Complete toilet)</b>				
134	Providing and fixing rimless single piece <b>water closet (European type W.C. pan)</b> with hydraulic UF soft close slim seat cover and lid, flushing cistern, including flush pipe, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required. <b>Product code: LYS-WHT-38851PSM / LYS-WHT- 38851SSM Product: LYRIC (Make:Jaquar or equivalent as approved by EIC)</b>	each	4		
135	Providing & fixing C.P. hand spray with lever control (health faucet) and flexible hose 1.2 m long connection with C.P. holder for hand spray complete in all respects. <b>(Make:Jaquar or equivalent as approved by EIC) Model: ALD-CHR-563</b>	each	4		
136	Providing and fixing <b>wash basin</b> with C.I. brackets, 15 mm PTMT pillar cock, 32 mm PTMT waste coupling of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required. White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm PTMT pillar cock.	each	4		
137	Providing and fixing 15 mm nominal bore & 65mm extension body of C.P. brass pillar cock with auto cleaning system of approved quality conforming to IS standards and weighing not less than 810 gms. <b>(Make:Jaquar, Model: PRS-CHR-031L65 or equivalent as approved by EIC)</b>	each	4		
138	Providing and fixing C.P. brass <b>long body bib cock</b> of approved quality conforming to IS standards. (15 mm nominal bore). <b>(Make:Jaquar, Model no.CON-CHR-107KN or equivalent as approved by EIC)</b>	each	10		
139	Chromium plated Bib Cock with wall flange (Equivalent to Code No. 5047 & Model - Florentine of Jaquar or similar brand). 1st floor	Each	4.00		
140	Supplying, fitting and fixing bib cock or stop cock. Chromium plated Bib Cock long body with wall flange with aerator (Equivalent to Code No. 512 & Model - Tropical / Something Special of ESSCO or similar brand). 1st floor	Each	6.00		
141	Chromium plated double coat Hook (Equivalent to Code No. 35761 & Model - KUBIX of Jaquar or similar). 1st floor	Each	4.00		
142	Providing and fixing uplasticised PVC connection pipe with brass unions. 45 cm length 15 mm nominal bore	each	12		
143	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in charge.	each	12		
144	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.				
144.1	15 mm nominal bore, weighing not less than 32 gms	each	10		
144.2	25mm nominal bore, weighing not less than 62 gms	each	10		
145	Providing & fixing C.P. brass concealed stop cock with C.P. brass wall flange with any other items complete including cutting and making good the walls wherever required. <b>(Make:Jaquar or equivalent as approved by EIC) Made: ALD-CHR-089COT &amp; COT-CHR-23069K</b>	each	8		
146	Providing and fixing C.P. brass <b>angle valve</b> for basin mixer and geyser points of approved quality & make and as per the direction of Engineer-in-charge. 15mm nominal bore <b>(Make:Jaquar or equivalent as approved by EIC) Made: OPP-CHR-15053PM</b>	each	8		



147	Providing and fixing 600x450 mm beveled edge <b>mirror</b> of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	each	4		
148	Providing and fixing 600x120x5 mm <b>glass shelf</b> with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	each	4		
149	Providing and fixing toilet paper holder :	each	4		
150	Providing and fixing CP Brass 32mm size Bottle Trap with 300mm & 190mm Long Wall Connection Pipes & Wall Flange of approved quality & make and as per the direction of Engineer-in-charge. <b>(Make:Jaguar,Model no.ALD -CHR-769L300X190 or equivalent as approved by EIC)</b>	each	4		
151	Providing & fixing C.P. brass <b>Towel Ring</b> fixed to wall with plastic rawl plugs and C.P brass screws including cutting and making good the walls wherever required <b>(Make:Jaguar or equivalent as approved by EIC) Model: ACN-CHR-1121BN</b>	each	4		
152	Providing & fixing C.P. Grab bar (Stainless Steel) 692mm Long White fixed to wall with plastic rawl plugs and C.P brass screws including cutting and making good the walls wherever required <b>(Make:Jaguar or equivalent as approved by EIC) Model: WAC-WHT-BR0600</b>	each	1		
153	Providing & fixing C.P.Grab bar (Stainless Steel) Vertical Swing ,White fixed to wall with plastic rawl plugs and C.P brass screws including cutting and making good the walls wherever required <b>(Make:Jaguar or equivalent as approved by EIC) Model: WAC-WHT-BG0800</b>	each	1		
154	Providing & fixing C.P. Hoteller Grab bar (Stainless Steel) 600mm Long fixed to wall with plastic rawl plugs and C.P brass screws including cutting and making good the walls wherever required <b>(Make:Jaguar or equivalent as approved by EIC) Model: AHS -CHR-1507</b>	each	1		
155	Providing and fixing PTMT liquid <b>soap container</b> 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	each	4		
156	Providing and fixing <b>Soap Dish Holder</b> fixed to wall with plastic rawl plugs and C.P brass screws including cutting and making good the walls wherever required <b>(Make:Jaguar or equivalent as approved by EIC) Model: ACN-CHR-1131N</b>	each	4		
157	Providing and placing on terrace (at all floor levels) polyethylene <b>water storage tank</b> , IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.18.48A Circular tank	per litre	10000		
158	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. <b>Internal work - Exposed on wall</b>				
158.1	15 mm nominal outer dia Pipes	metre	10		
158.2	20 mm nominal outer dia Pipes	metre	15		
158.3	25 mm nominal outer dia Pipes	metre	30		
158.4	32 mm nominal outer dia Pipes	metre	35		
158.5	40 mm nominal outer dia Pipes	metre	15		
159	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. <b>Concealed work, including cutting chases and making good the walls etc.</b>				
159.1	15 mm nominal outer dia Pipes	metre	25		
159.2	20 mm nominal outer dia Pipes	metre	47		
159.3	25 mm nominal outer dia Pipes	metre	12		
159.4	32 mm nominal outer dia Pipes	metre	5		
160	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. <b>External work</b>				
160.1	65 mm nominal dia Pipes	metre	5		
160.2	80 mm nominal dia Pipes	metre	5		
160.3	100 mm nominal dia Pipes	metre	25		
161	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
161.1	15 mm nominal bore	each	10		
161.2	20 mm nominal bore	each	15		
161.3	25 mm nominal bore	each	15		
164	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
164.1	40 mm nominal bore	each	5		

164.2	50 mm nominal bore	each	6		
	<b>Drainage &amp; Sewerage</b>				
165	Supply, installation, jointing and testing uPVC pipe class B (I.S.13592) ( <b>SWR drainage system</b> ) including injection moulded fittings with bosses where required e.g. w.c. connectors, door or plain tees / bends, PVC pipe clamps, cowls, etc. all fittings, wherever required, jointing the pipes and fittings with rubber rings cuttings and making good the walls and floors as required at site for vertical and horizontal soil waste and vent pipes (Vent and antisiphonage pipes may be solvent welded).				
165.1	75 mm OD	Metre	20		
165.2	110 mm OD	Metre	50		
166	Supply, installation, jointing and testing uPVC pipe 6 Kg/sqcm class III (IS 4985-1983) including injection moulded fittings with bosses where required e.g. tees, bends, plugs, clamps, couplings and adapters and jointing with PVC cement solvent adhesive approved by fittings manufactures including cutting and making good the walls and floors as required at site.				
166.1	40 mm O.D.	Metre	20		
166.2	50 mm O.D.	Metre	30		
166.3	63 mm O.D.	Metre	15		
167	Providing and fixing 125 mm nominal dia with 25 mm waste hole PTMT grating of approved quality and colour	Each	40		
168	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design : a)100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	6		
169	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :	Each	6		
170	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design. With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	2		
171	Construction of septic tank of different capacities as per approved drawing with 1st class brick work in cement mortar (1:4) including two 560 mm dia. R.C.C. manhole cover(heavy type)of approved make supplied, fitted and fixed in the 100mm thick R.C.C (1:1.5:3) top slab with necessary fittings, 20mm thick cement plaster (4 : 1) with neat cement finish to the internal surfaces and 15 mm thick cement plaster (4 : 1) to outside wall upto 200 mm below G.L floor finished with 25 mm thick grey artificial stone over 100 mm thick R.C.C(1:1.5:3) bottom slab including supplying, fitting and fixing all necessary specials, fittings, S.W. tees, C.I. foot rest etc. including excavation earth in all sorts of soil, shoring, bailing out and pumping out water as necessary, ramming, dressing the bed and refilling the sides of the tanks with earth, removing spoils, filling up the chamber with clear water, removing foreign materials from the chamber and including constructing attached inspection pit as per approved drawing and connecting all necessary pipes, joints etc. with internal plaster work and artificial stone flooring is to be done with admixture of water proofing compound @ 0.5% by weight of cement with all costs of labour and materials. Note:- (i) Finished level of Septic Tank should be 400 mm. from Ground Level. (ii) Height				
171.1	For 100 users	each	1		
	<b>Rain Water Pipes</b>				
172	Providing and fixing on wall face unplasticised Rigid 110 mm dia PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.	Metre	75		
173.00	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
173.1	Coupler	Each	25		
173.2	Bend 87.5°	Each	25		
173.3	Shoe (Plain)	Each	25		

174	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete. 110 mm	Each	20		
175	Making khurras 45x45 cm with average minimum thickness of 5 cm cement conc. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over PVC sheet 1 m x 1m x 400 micron, finished with 12mm cement plaster 1 : 3 (1 cement : 3 coarse sand) and coat of neat cement rounding the edges and making finishing the out let complete.	Each	10		
176	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	Each	20		
177	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	22		
178	Supplying, fitting and fixing in position reinforced cement polymer concrete manhole /gully pit cover with matching frame.As per I.S- 12592(M.D) For septic tank.1 MT load bearing capacity round manhole cover provided with two lifter hook with matching frame of size.Cover: 450 mm X 40 mm Frame: 540 mm X 80 mm opening: 360mm Weight: 34 Kg. (approx)	Each	10.00		
179	Supplying, fitting and fixing in position reinforced cement polymer concrete manhole /gully pit cover with matching frame.As per I.S-12592(M.D) (vi) 5 MT load bearing capacity round manhole cover provided with two lifter hooks fitted with matching frame of size Cover: 565 mm X 65 mm Frame: 665 mm X 125 mm opening: 470mm Weight: 90 kg (approx)	Each	20.00		
<b>Total of Ist Floor Sanitary &amp; Plumbing (Complete toilet)</b>					
<b>Total in Words</b>					
<b>C.</b>	<b>Miscellaneous work</b>				
<b>i</b>	<b>Boundary wall (2Side)</b>				
180	Earth Work in excavation of foundation trenches or drains , in all sorts of soil (including mixed soil but excluding lateritem or sandstone) including removing , speading or stacking the spoils within a lead of 75 m . as directed . The item includes necessary trimming the sides of trenches ,levelling , dressing and ramming the bottom , bailing out water as requird complete .Depth of excavation not exceeding 1.500 mm.	Cum	65.00		
181	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)With earth obtained from excavation of foundation	Cum	52.00		
182	Supplying and laying polythene Sheet (150gm/msq.m ) over damp proof course or below flooring or roof terracing or in foundation or in fondation trenches.	Sq.M	62.00		
183	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)(When the height of a particular floor is more than 4 m the equivalent floor height shall be taken as 4 m and extra for works beyond the initial 4 m ht. shall be allowed under 12 (e) for every 4 m or part thereof) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in Charge.	Sq.m	234.00		
184	Cement concrete with 30 mm down graded shingles excluding shuttering. N.B. Variety	Cu.m	6.50		
185	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes.N.B Variety	Cu.m	24.000		
186	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary),cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.For works in foundation, basement and upto roof of ground floor/upto 4 m.Fe-500D or more	MT	2.151		
187	Brick work with 1st class bricks in cement mortar (1:6)(a) In foundation and plinth	Cu.m	12.00		
188	125 mm. thick brick work with 1st class bricks in cement mortar (1:4) in ground floor.	Sq.M	105.00		

189	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface] 20 mm thick plaster With 1:4 cement	Sq.M	202.00		
190	15 mm thick plaster	Sq.M	193.00		
191	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or concrete surface old or new surface to receive decorative textured (matt finish) or smooth finish acrylic exterior emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC.(a) One Coat	sq.M	395.00		
192	Protective and Decorative Acrylic exterior emulsion paint of approved quality, as per manufacturer's specification and as per direction of EIC to be applied over acrylic primer as required. The rate includes cost of material, labour, scaffolding and all incidental charges but excluding the cost of primer.In Ground floor (Two Coat)a) Normal Acrylic Emulsion	Sq.M	395.00		
	<b>Total of Miscellenous (Boundary wall (2Side))</b>				
	<b>Total in Words</b>				
<b>ii</b>	<b>Drainage work (Underground)</b>				
193	Earth Work in excavation of foundation trenches or drains , in all sorts of soil (including mixed soil but excluding lateritem or sandstone ) including removing , speading or stacking the spoils within a lead of 75 m . as directed . The item includes necessary trimming the sides of trenches ,levelling , dressing and ramming the bottom , bailing out water as requird complete .Depth of excavation not exceeding 1.500 mm.	Cum	97.00		
194	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)With earth obtained from excavation of foundation	Cum	26.00		
195	Supplying and laying polythene Sheet (150gm /msg.m ) over damp proof course or below flooring or roof terracing or in foundation or in fondation trenches.	Sq.M	108.00		
196	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)(When the height of a particular floor is more than 4 m the equivalent floor height shall be taken as 4 m and extra for works beyond the initial 4 m ht. shall be allowed under 12 (e) for every 4 m or part thereof) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in Charge.	Sq.m	173.00		
197	Brick soling with picked jhama bricks including preparation of bed as necessary with brick joints properly filled in and packed with powdered earth and including necessary cushion of similar material below the soling (and in between layers when more than one layer is used) completes as per direction.a) Single brick flat soling (thickness 75 mm.)	Sq.M	101.00		
198	Cement concrete with 30 mm down graded shingles excluding shuttering. N.B. Variety	Cu.m	10.00		
199	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes.N.B Variety	Cu.m	23.00		
200	Supplying & laying Double Wall Corrugated (with external annular corrugation and smooth internal walls) High Density Polyethelene Pipes conforming to IS 16098 (Part-II):2013 having Stiffness Class of SN 8 with Ring Stiffness not less than 8.00 KN/Sqm. and Impact Resistance TIR value not more than 10% including necessary jointing materials for non pressure underground Drainage, Sewerage & Cross drainage application.(iv) 300mm internal dia	metre	48.00		
201	(v) 400mm internal dia	metre	132.00		
202	Supplying, fitting and fixing in position FRP/GRP/COMPOSITE UV stabilizer Manhole Cover with high abrasion surface of 7mm top thickness with density of 2KG/m <sup>3</sup> -approved make with rim of approved make (Heavy type) (iii)10 MT load bearing capacity round manholecover provided with wo lifter hooks fitted with matching frame of size. Frame: 600 mm (24")	Nos.	20.00		
203	Supplying, fitting and fixing in position FRP/GRP/COMPOSITE UV stabilizer Gully Pit Cover with high abrasion surface of 7mm top thicknes, density of 2KG/m <sup>3</sup> of approved make with rim of approved make (Heavy type) (iii) 10 M.T. Gully pit cover (yard gully) with arrangement for opening of size. Frame Clear Opening 640 mm X 240 mm. Cover Out to Out 700 mm X 300 mm.	Nos.	20.00		
	<b>Total of Drainage work (Underground)</b>				
	<b>Total in Words</b>				
<b>iii</b>	<b>Under Ground Water Tank (50000 Litre) for fire &amp; Storage)</b>				
204	Earth Work in excavation of foundation trenches or drains , in all sorts of soil (including mixed soil but excluding lateritem or sandstone) including removing, speading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of enches,levelling, dressing and ramming the bottom , bailing out water as requird complete. Depth of excavation not exceeding 1.500 mm.	Cum	49.00		

205	(b) Depth of excavation for additional depth beyond 1,500 mm. and upto 3,000 mm. but not requiring shoring.	Cum	48.00		
206	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)With earth obtained from excavation of foundation	Cum	36.00		
207	Supplying and laying polythene Sheet (150gm /msq.m ) over damp proof course or below flooring or roof terracing or in foundation or in fondation trenches.	Sq.M	32.00		
208	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)(When the height of a particular floor is more than 4 m the equivalent floor height shall be taken as 4 m and extra for works beyond the initial 4 m ht. shall be allowed under 12 (e) for every 4 m or part thereof) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in Charge.	Sq.m	130.00		
209	Hire and labour charges for shoring work (including necessary close plank walling, framing, Eucalyptus/Jhou bulla piling, strutting etc) complete as per direction of the Engineer-in- charge for foundation excavation (vertical surface are in contact with supported earth is to be measured.) (This item should be executed on specific direction of the Enginner in charge).	Sq.m	64.00		
210	Brick soling with picked jhama bricks including preparation of bed as necessary with brick joints properly filled in and packed with powdered earth and including necessary cushion of similar material below the soling (and in between layers when more than one layer is used) completes as per direction.a) Single brick flat soling (thickness 75 mm.)	Sq.M	32.00		
211	Cement concrete with 30 mm down graded shingles excluding shuttering. N.B. Variety	Cu.m	3.50		
212	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes.N.B Variety	Cu.m	25.000		
213	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc initial straightening and removal of loose rust (if necessary),cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction.For works in foundation, basement and upto roof of ground floor.Fe-500D or more SAIL/TATA/RINL	MT	3.500		
214	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface] 20 mm thick plaster With 1:4 cement mortar	Sq.M	162.00		
215	Neat cement punning about 1.5mm thick in wall,dado>window sill,floor etc. NOTE:Cement 0.152 cu.m per100 sq.m.	Sq.M	162.00		
216	(a) Applying 2 coats of bonding agent with synthetic multi functional rubber emulsion having adhesive and water proofing properties by mixing with water in proportion (1 bonding agent : 4 water : 6 cement) as per Manufacturer's specification [Cement to be supplied by the Department]	Sq.m	162.00		
217	Extra rate for using water proofing and plasticising admixture @ 0.2% by weight of cement (or at manufacturer's specified rate) for concrete of various grades	kg	120.00		
<b>Total of Under Ground Water Tank (50000 Litre) for fire &amp; Storage)</b>					
<b>Total in words</b>					
<b>iv</b>	<b>Boring (Deep Tuble Boring)</b>				
218	Sypply of E.R.W.M.S.(Electrical Resistant Welded M.S.) black pipe of TATA make(heavy quality) as per standard specification, 5 mm thick.150 mm dia.(Internal)	65.00	metre		
219	Supplying brass-strainer with brass socket of approved make. (Heavy type)100 mm dia.	6.00	metre		
220	Collecting sample of water for bacteriological and chemical test from any depth at any time during execution of work including hire and labour charges for tools and plants and sterilising the equipments, paying all charges and fees, testing etc. complete in all respect as per direction.	1.000	LS		
221	Supplying, fitting and fixing heavy type bell mouth reducing socket. ii)75mmx150mm)	1.00	each		
222	Supplying, fitting and fixing PVC pipes of approved make of Schedule 80 (medium duty) conforming to ASTMD - 1785 and threaded to match with GI Pipes as per IS : 1239 (Part - I). with all necessary accessories, specials viz. socket, bend, tee, union, cross, elbo, nipple, longscrow, reducing socket, reducing tee, short piece etc. fitted with holder bats clamps, including cutting pipes, making threads,fitting, fixing etc. complete in all respect including cost of all necessary fittings as required,joining materials and two coats of painting with approved paint in any position above ground. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for acces or painting will be made seperately) 50mm dia	25.00	metre		

223	Supplying, fitting and fixing gunmetal wheel valve of approved brand and make tested to 21 kg per sq. cm. (for water lines only).(iv) 50 mm dia	1.00	each		
224	Supply of PVC pipes & fittings Schedule 80 (medium duty) conforming to ASTM D - 1785 and threaded to match with GI Pipes as per IS : 1239 (Part - I).50 mm dia socket.	1.00	each		
225	Labour for drilling bore hole by "Odex 115"drilling method through any type of soil,boulder for sinking tube well of required dia. including hire charges and labour for machine, tools and plants, staging, force pumping set and making arrangement for lowering of pipes, strainers, blind pipes etc. complete.	61.000	metre		
226	Kirloskar make KS4 5014 /"KSB" make BPD 242/04A. 5HP submersible pump set	1.000	nos		
227	PVC column pipe 50 mm dia 10ft long.	12.000	metre		
228	Submersible flat cable 2.5 sqmm	75.00	metre		
229	2" adopter	1.000	Each		
230	Well cover 8" x 2"	1.000	Each		
231	Clamp 2"	1.000	pair		
232	panel 5 HP	1.000	Each		
233	Steel Wire rope (wire rope)	75.000	RM		
234	Labour charges for development of tubwell by 310 air cfm. Compressor and yield test by V-notch wire including transportation charges complete.	1.000	LS		
	<b>Total of Boring (Deep Tube Boring)</b>				
	<b>Total in Words</b>				
<b>v</b>	<b>Fire work (as per fire NOC)</b>				
235	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :25 mm dia	Metre	2		
236	40 mm dia	Metre	5		
237	80 mm dia	Metre	10		
238	100 mm dia	Metre	145		
239	Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required : <b>Single headed Stainless steel</b>	Each	4		
240	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal/Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required : <b>Single headed Stainless steel</b>	Each	4		
241	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required : <b>Stainless Steel (Grade 304)</b>	Set	4		
242	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket. <b>30 metre.</b>	Set	4		
243	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required : <b>Stainless Steel (Grade 304)</b>	Nos	4		
244	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required <b>100 mm dia</b>	Set	6		
245	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required : 2 way-100 mm dia M.S. Pipe	Set	4		
246	Providing, installation, testing and commissioning of non- return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required : <b>100 mm dia</b>	Set	6		
247	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange. <b>100 mm dia</b>	Each	2		

248	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.	Each	1		
249	Providing & fixing flow switch in following sizes M.S. pipe including connection etc as required. 100 mm dia	Each	1		
250	Providing & fixing dial type (100 mm dia) pressure gauge with isolation ball valve suitable for working pressure of 250 PSI. Cost shall be inclusive of providing any short pieces, nipples, elbows etc as required.	No.	1		
251	Providing and fixing liquid level controller for fire pump to cut off the pump in case low level of water in tank including cables, panel etc. and making necessary connection to panel and commissioning as directed by Engineering In charge.	Set	1		
252	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required. 700 mm	Set	1		
253	Supplying and fixing air vessel made of 100 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 gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade.as required.	Set	1		
<b>FIRE PUMP HOUSE</b>					
254	Supplying, installation, testing and commissioning of <b>Electric driven Main Fire Pump</b> suitable for automatic operation and consisting of following, complete in all respects, as required :Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.Suitable cement concrete foundation duly plastered with anti vibration pads. <b>1620 lpm at 70 m Head</b>	Set	1		
255	Supplying, installation, testing and commissioning of <b>diesel engine driven main fire pump</b> suitable for automatic operation and consisting of following, complete in all respects, as required : (Diesel Driven Pump)Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12/24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required. M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required. Suitable cement concrete foundation duly plastered and with anti vibration pads. <b>1620 lpm at 70 m Head</b>	Set	1		
256	Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : <b>(Jockey Pump)</b> Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS: 1520.Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325. M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required. Suitable cement concrete foundation duly plastered and with anti vibration pads. <b>180 LPM at 56 Mtr Head</b>	Set	1		
<b>CONTROL PANELS</b>					
257	Fabrication, supply, Insallation 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 after 7 tank treatment process, cable alley, inter- connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required :				
258	<b>Incomings:</b> 250A, 50kA 4 Pole MCCB, Ics=100% Icu rating .Digital Voltmeter 0-500V with selector switch.Digital Ammeter (0-250 A) with selector swtich & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps.Set of Copper Bus Bar 300A				
259	<b>Outgoings:</b> ( Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED typeON, OFF, trip indicating lamps)				
260	<b>Main Fire Pump:</b> 125 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 HP pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.				

261	<b>Jockey Pump:</b> 63 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote. auto/manual/OFF operation.				
262	<b>DIESEL ENGINE CONTROL:</b> Control for diesel engine comprising -Automatic/Manual selector switch & 3 attempts starting,device, timers and relays as required, push buttons,start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0 20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine				
263	<b>System Controller:</b> Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation	Set	1		
264	Providing, fixing, testing and commissioning of M.S <b>Ball valve</b> of approved make & sizes: 25 mm dia. <b>(Make : kartar/ Ravel/Hochiki or Similar approved by EIC.)</b>	Nos.	10.00		
265	Providing and fixing Fire Extinguishers, Hand appliances: "ABC" type Fire Extinguisher of 6 Kgs. Capacity with ISI <b>(Mark Ceasefire/Ravel/HOCHIKI or Similar approved by EIC.)</b>	Each	6.00		
266	"CO2 " type Fire Extinguisher of 4.5 Kgs. Capacity with ISI <b>(Mark Ceasefire/Ravel/HOCHIKI or Similar approved by EIC.)</b>	Each	6.00		
267	Supplying and installing at approved location approved make fire buckets of 20 gauge galvanized steel sheet, standard 9 litre capacity and of round bottom shape, painted white inside and red outside and black on the bottom, inscribed with letters "FIRE" in black and gold. Cost shall be inclusive of providing MS stand duly painted over a coat of primer. (One stand shall be suitable for hanging 4 buckets).	Each	1.00		
268	Photolumiscent AUTOGLOW (Glow in Dark) Signages with UV lacquered in Composite Sheet / Acrylic sheet , as per confirming to IS standard as per instruction of engineer-in- charge / CFO / Consultant CO2 extinguisher (8"x16") <b>(Mark Ceasefire/Ravel/HOCHIKI or Similar approved by EIC.)</b>	Nos.	4.00		
269	ABC extinguisher (8"x16")	Nos.	4.00		
270	No smoking	Nos.	4.00		
271	Fire hose reel	Nos.	4.00		
272	Man Run with Down Arrow (4" x 12")	Nos.	4.00		
273	Man Run with Up Arrow ( 4" x 12")	Nos.	4.00		
274	Supply, Installation, Testing & Commissioning of based <b>6 zone</b> fire alarm control panel fully networkable with each loop capable of taking 4 Detectors & Modules, 2 line X 10 character alpha-numeric liquid crystal display. As per VDS guideline, panel should have Hot Redundancy both in CPU and Power supply. The panel shall be soft address type. All the Intelligent Detectors as applicable for various areas based on application and design considerations shall be sitting on Loop along with Loop powered Alarm Devices; MCPs and Input /output Modules.The panel shall be able to give pin point location of all fire/ fault conditions with address. Further, the panel must be able to automatically switch off respective control switches whenever any alarm is triggered. The Panel shall be able to provide minimum 6000 History Events at any point of time. The panel shall have in built rectifier, Loop cards, provision for external ( if required ) LCD unit to indicate Fire/Fault Signal with address and analog output, built in printer to log all fire or fault events complete in all respect, integral lead acid batteries with sealed cell of 24 V capable of running for a minimum of 24 hours and then be capable of operating the system for 2 hours during an emergency conditions as required with integral battery charger complete as required.	No.	1.00		
275	Supply, Installation,Testing & Commissioning of Conventional Manual Call Point soft addressable type with inbuilt fault isolator as per NFPA style 7 wiring complete with base as required.	No.	2.00		
276	Supply, Installation, Testing & Commissioning of Conventional Loop Powered Hooter (sound output of minimum 90 db )cum strobe (strength of light 10 cd) with inbuilt fault isolator as per NFPA style 7 wiring complete with base as required.	No.	4.00		
277	Supply, Installation,Testing and Commissioning of Conventional control modules for Sounder cum Strobe.	Nos	4.00		
278	Supply Installation,Testing, Commissioning of 2 core 1.5 sqmm Copper flexible Cable with 20 mm PVC Conduit (FR grade). (MakeFinolex/ Havels/ Polycab/ Retco/MEM)	MTR	150.00		
	<b>Total of Fire work (as per fire NOC)</b>				
	<b>Total in Words</b>				
<b>vi</b>	<b>Landscaping</b>				
279	Surface Dressing of the ground in any kind of soil including removing vegetation inequalities not exceeding 15 cm depth and disposal of the rubbish within a lead upto 75m as directed.	Sqm	53.00		



280	Preparation of beds for hedging and shrubbery by excavating 60cm deep and trenching the excavated base to a further depth of 30cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 ( 8 parts of stacked volume of earth after reduction by 20%, one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary watering and finally fine dressing, levelling etc., including stacking and disposal of materials declared unserviceable and surplus earth by spreading and levelling as directed, within a lead of 50m lift upto 1.5m complete. This includes supply of labour, tools & plants including materials.Planting hedge plants in two rows at 30cm apart	Sq.M	53.00		
281	Supplying and Planting of different plant / trees ( Supplying well grown plants bushy and healthy, minimum height as specified i.e. exposed height including all leads & lift, carriage, handling, manuring, applying presticide and fertilizer etc.				
282	Ficus blakii ( F. Vivicon ) well branched ( Bushy ) of height 120cm - 135 cm in earthen pot of size 30cm.	Each	5.00		
283	Bougainvillea (mix variety) of height 30cm- 90cm in polybag of size 10cm-15cm.	Each	100.00		
284	xxvii) Areca Palm 4 - 5 suckers of height 120 cm to 135 cm in earthen pots of size 25 cm.	Each	250.00		
285	Supplying and stacking of good earth (adequate for horticulture work) at site including royalty (earth measured in stack will be reduced by 20% for payment)	Cu.m	16.00		
286	Supplying and stacking sludge (adequate for Horticulture work) at site in dry cake form from approved disposal work site including royalty, all lead and lift etc. (Sludge measured in stack will be reduced by 8%).	Cu.m	16.00		
287	Spreading of sludge, dump manure,/farm yard manure/animel dung manure and good earth in required thickness. This includes supply of labour, tools & plants excluding materials.	Sq.M	53.00		
288	Supplying and fixing grasses tiles of grass Maxican Carpet/Selection No. 1 Healthy & fresh grasses (size 1'x1' or bigger) including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth as required by Engineer-in-charge. (Rate includes supply of labour, tools & plants including materials).	Sq.M	53.00		
<b>Total of Landscaping</b>					
<b>Total in Words</b>					
<b>D</b>	<b>Electrical Works</b>				
289	Fabrication, supply, installation, testing and commissioning of <b>MV Distribution Panel</b> , 415V/240V, 3-phase and neutral, 50HZ, cubicle type, dust and vermin proof with rubber gaskets, floor mounted (on ISMC), LT Electrical Panel fabricated out of <b>14SWG CRCA sheet</b> and powder coated to <b>Siemens gray</b> shade after undergoing <b>7-tank process</b> , provisions for cable entry at bottom for incomer and at bottom & top for outgoing, hinged lockable doors with interlock switchgear interlock with each I/C & O/G feeder, cable alleys with hinged lockable doors, interconnections, small wiring, name plates, DANGER plates, earth bus, etc. The bus bar chamber shall be fitted with <b>250A rated TPN Aluminium bus</b> having colour coded sleeves, supported with SMC (Sheet Moulded Compound) supports and rated 36kA for 1 second and comprising of the followings:- <b>Incoming:</b> 2 Nos. of incomer feeders, each with 200A, 4Pole, MCCB, 50				
	kA with built in thermal, magnetic and earth fault releases, each with trip free feature, ON/OFF/TRIP indications, 2NO+2NC Aux. contacts, terminal shrouds, adjustable OL & SC protection, etc. <b>L&amp;T make d-sine, Type DN2-250N, Cat No.CM921060ON10G or equivalent</b> of other approved /acceptable make .(For EB Raw and DG Supply) 1 No. of ON- LOAD Manual Change Over Switch of 200A, 4Pple, <b>L&amp;T make, Type C02-200, Cat. No.CO22000000A or equivalent</b> of other approved/acceptable make with 2 C/O AUX. contacts. 1 Set of 3 Phase-4 Wire, 50Hz., 415V, 250A, 36kA, AL Busbars 1 Set of 3 Nos. of Copper wound resin cast CTs of ratio 200/5A, class-1, 10 VA burdon for metering. 1 No. of Copper wound CT of ratio 200/5A, class-1 on the R bus for APFC sensing relay. 1 No. of Digital Multifubction meter capable of reading, phace & line Voltages & Currents, PF, Frequency, kVA, kWh, etc. CL- 1.0, flush mounting with RS 485 communication port.LED type RYB indication lamps controlled by Fuse/MCB 1 Set of ON, OFF, TRIP Indications <b>Outgoing feeders:</b> 9 Nos. of 63A, 4 Pole MCCB, 25 kA, <b>L&amp;T make type DN0-100C, Cat. No. CM917120OH00G or Equivalent</b> of other approved/ acceptable make. (For DBs & Spares) 4 Nos. of 40A, 4 Pole MCCB, 25 kA, <b>L&amp;T make Type DN0-100C, Cat. No. CM917120OFOOG or equivalent</b> of other approved/ acceptable make (For Normal Pump, Feeder Pillar, Fire Pump & Spare) 2 Nos. of 100A, 4 Pole MCCB, 36 kA, <b>L&amp;T make, Type DN0-100D, Cat. No. CM979190OK20G or equivalent</b> of other approved/ acceptable make (For APFC Panel & Spare) 1 or 2 Empty Cubicals for future requirement. Panel lengthwise continuous GI earth bus, etc. complete.All incoming & outgoing MCCBs/Feeders will have front operating handles, door interlocks, R,Y,B, On, Off, Trip Indication Lamps (LED Type), Control fuses/MCBs, name plates, etc.	1	No.		
<b>APFC Panel</b>					

290	<p>Supply, installation, testing &amp; commissioning of Wall / Floor Mounted <b>APFC Panel of 50kVAr, 525V rating with AUTO / MANUAL facility</b> comprising of the followings:-</p> <p><b>1No. of 100A, 3 Pole, 25kA MCCB, L&amp;T make, Type DN0-100C, Cat. No. CM9161200K00G or equivalent</b> of other approved/ acceptable make with thermal Magnetic (O/L &amp; S/C) release, Extended Operating Handle, Aux.+Trip Contacts, R/Y/B/ON/OFF/Trip LED Indications, 6 Step Microprocessor based APFC Relay with single input from 200/5A Resin Cast CT(Class-1.0), <b>200A AL. busbars of 36kA rating</b></p> <p><b>2Nos. of 15kVAr PFI Capacitor each with</b> 32A, 3P, 10kA, C-curve MCB. Capacitor Duty Contactor ( AC6b) for 15kVAr PFIC. <b>MPPH Type Cylindrical Heavy Duty Capacitor 20.3 kVAr, 525V</b>15kVAr, 7% Detuned Reactor, 440V Start/Stop Push Buttons, On/Off Indicating Lamp, 6A SP 10KA MCB, Auto-Manual Switch, etc.</p> <p><b>1No. of 10kVAr PFI Capacitor each with</b> 25A, 3P, 10kA, C-curve MCB. Capacitor Duty Contactor ( AC6b) for 10kVAr PFIC. <b>MPPH Type Cylindrical Heavy Duty Capacitor 13.8 kVAr, 525V</b> 10kVAr, 7% Detuned Reactor, 440V Start/Stop Push Buttons, On/Off Indicating Lamp, 6A SP 10KA MCB, Auto-Manual Switch, etc.</p> <p><b>2Nos. of 5kVAr PFI Capacitor each with</b> 16A, 3P, 10kA, C-curve MCB. Capacitor Duty Contactor ( AC6b) for 5kVAr PFIC. <b>MPPH Type Cylindrical Heavy Duty Capacitor 7.5 kVAr, 525V</b>15kVAr, 7% Detuned Reactor, 440V Start/Stop Push Buttons, On/Off Indicating Lamp, 6A SP 10KA MCB, Auto-Manual Switch, etc</p> <p><b>Note: The contractor is supposed to supply a branded APFC Panel out of acceptable makes and not a fabricated one.</b></p>	1	No.		
	<b>Feeder Pillar</b>				
291	<p>Fabrication, supply, installation, testing &amp; commissioning of <b>Out Door, weather proof type LT Feeder Pillar</b> with Crown type canopy, floor mounting, free standing on MS legs/Stool type footig suitable for outdoor installation, dust, vermin &amp; weather proof construction of IP-55 rating of required size and made out of <b>14SWG CRCA sheet</b> &amp; angle iron base frame with hinged double door on front &amp; rear side and godown locks, powder coated, inter-connections with suitable rating PVC insulated FRLS copper wire, etc. Providing brick / CC foundation of required size including plastering &amp; neat cement plastering, etc. is included in the scope of work and in the item rate. The Canopy of the Feeder Pillar should be made out of at least 3 mm thick CRCA sheet. CPRI approved fabrication. <b>The Feeder Pillar shall comprise of the followings:-</b></p> <p>1 No. of 40A, 4P MCB(25kA) as incomer &amp; provided with LED ON/OFF indication lights.</p> <p>1 Set of 3 Phase, 4 Wire, 50Hz, 415V, 100A, 10KA, AL. Busbars</p> <p><b>Outgoing as follows:-</b></p> <p>2 Nos. of 25A, 3P MCB, 10kA</p> <p>18 Nos. of 16A, SP MCB, 10kA (6 MCBs per phase)</p>	1	No.		
	<b>MV cables</b>				
292	<b>Supply</b> of Aluminium Conductor, XLPE insulated, PVC Sheathed, armoured cable, 650-1100V grade with ISI mark out of approved makes				
292.1	3.5C x 150 Sqmm, AL., XLPE, armoured cable (As a Main Feeder) <b>(To be opareted only if requered &amp; on specific instruction)</b>	85	Mtrs.		
292.2	3.5C x 50 Sqmm, AL., XLPE, armoured cable <b>(Main Panel to APFC Panel)</b>	25	Mtrs.		
292.3	4C x 25 Sqmm, AL., XLPE, armoured cable <b>(Main Panel to Normal Pump, Fire Fighting Pump, OD WP FP)</b>	100	Mtrs.		
292.4	2C x 6 Sqmm, AL., XLPE, armoured cable <b>(APFC sensor CT, OD WP FP to Bollards &amp; Light Poles)</b>	100	Mtrs.		
293	<b>Laying</b> of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size <b>direct in ground</b> including excavation, <b>sand cushioning, protective covering</b> and refilling the trench. etc. as required.				
293.1	Above 95 sq. mm and upto 185 sq. mm	90	Mtrs.		
293.2	Above 35 sq. mm and upto 95 sq. mm	25	Mtrs.		
293.3	Upto 35 sq. mm	150	Mtrs.		
294	<b>Laying</b> of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size <b>in the existing RCC/ HUME/ METAL/ DWC pipe</b> as required.				
294.1	Above 95 sq. mm and upto 185 sq. mm	30	Mtrs.		

294.2	Above 35 sq. mm and upto 95 sq. mm	10	Mtrs.		
294.3	Upto 35 sq. mm	100	Mtrs.		
<b>295</b>	<b>Laying and fixing</b> of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size <b>on wall surface as required.</b>				
295.1	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	15	Mtrs.		
295.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	10	Mtrs.		
295.3	Upto 35 sq. mm (clamped with 1mm thick saddle)	50	Mtrs.		
<b>296</b>	Supply and making <b>end termination</b> with brass compression gland and aluminium lugs for following sizes of PVC insulated and PVC shaethed/ XLPE alumnum conductor cable of 1.1 KV grade as required.				
296.1	3.5 x 150 Sqmm (50mm)	4	Nos.		
296.2	3.5 x 50 Sqmm (35mm)	4	Nos.		
296.3	4 x 25 Sqmm (28mm)	8	Nos.		
296.4	2 x 6 Sqmm (19mm)	44	Nos.		
<b>297</b>	Supplying and laying of following size <b>DWC HDPE pipe ISI marked</b> along with all accessories like socket, bend, couplers, etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. in the existing trench, complete as required.				
297.1	90 mm dia (OD-90 mm & ID-76 mm nominal)	50	Mtrs.		
297.2	160 mm dia (OD-160 mm & ID-135 mm nominal)	50	Mtrs.		
<b>298</b>	Supplying and laying of following size <b>DWC HDPE pipe ISI marked</b> along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc.direct in ground (75 cm below ground level) <b>including excavation and refilling</b> the trench <b>but excluding sand cushioning and protective covering etc..complete as required.</b>				
298.1	90 mm dia (OD-90 mm & ID-76 mm nominal)	20	Mtrs.		
298.2	160 mm dia (OD-160 mm & ID-135 mm nominal)	20	Mtrs.		
	<b>MCCB / MCB DB :</b>				
299	Supply and installation of 415/240V <b>MCB Distribution Board, IP 43 / 54 in sheet steel enclosure (2mm thick), double doored</b> , internally wired with provision for 4 pole MCCB/RCCB/MCB as per SLD as incomer and SP/TP MCB as outgoing and each comprising of following MCBs (min. 10kA), phase, neutral & earth busbars, gland plates, etc., recessed mounted in wall including cutting of brick wall and mending good the damage, etc. <b>complete as required.</b>				
299.1	<b>12 WAY TPN Vertical (VTPN) DB (12+12+12 O/G modules)</b> with Modular Incomer, provision for FP MCB/ Isolator/ RCCB/ RCBO as incomer and SP/TP MCBs as outgoing, metallic CRCA sheet construction, powder coated, double doored (IP43), Ready to use DBs provided with 100A insulated vertical phase busbars, neutral bar/s with shroud/s, earth bar/s, sticking saddles, cement spill protector, color- coded interconnecting wire set, cable ties, blanking plates and circuit identification labels, etc. complete and recessed mounted. <b>L&amp;T make Cat. No.DBVTL012DD or equivalent</b> of other approved/ acceptable make and comprising of followings :-Incoming : 1 No. of 63A (25KA), 4 Pole MCB per DB, <b>L&amp;T make D-curve, Cat. No. BB40630D or equivalent</b> of other approved make Outgoings : 8 Nos. of 32A (10kA), 3 Pole MCBs per DB, <b>L&amp;T make D-curve, Cat. No. BB30320D or equivalent</b> of other approved make Outgoings : 12 Nos. of 20A (10kA) SP MCBs per DB <b>L&amp;T make D-curve, Cat No. BB10200D or equivalent</b> of other approved make (4 MCBs per phase for AC PPTs) Complete DB as above L&T/Havells/Legrand Make) (ACDB)	4	No.		
299.2	<b>6 WAY TPN Horizontal DB (6+6+6 O/G modules)</b> with Modular Incomer, provision for FP MCB/ Isolator/ RCCB/ RCBO as incomer and SP MCBs as outgoing, metallic CRCA sheet construction, powder coated, double doored (IP43), Ready to use DBs provided with 100A insulated phase bus-bars, neutral bar/s with shroud/s, earth bar/s, sticking saddles, cement spill protector, color-coded interconnecting wire set, cable ties, blanking plates and circuit identification labels, etc. complete and recessed mounted. <b>L&amp;T make Cat. No. DBTPN006DD or equivalent</b> of other approved/ acceptable make and comprising of followings :- Incoming : 1 No. of 63A (25KA), 4 Pole MCB per DB, <b>L&amp;T make C-curve, Cat. No. BB40630C or equivalent</b> of other approved make Outgoings : 9 Nos. of 10A (10kA) SP MCBs per DB, <b>L&amp;T make Cat. No. BB10100C or equivalent</b> of other approved/ acceptable make (3 MCBs /phase for LTG) Outgoings : 9 Nos. of 20A (10kA) SP MCBs per DB, <b>L&amp;T make Cat. No. BB10200C or equivalent</b> of other approved/ acceptable make (3 MCBs/ phase for PPT) Complete DB as above L&T/Havells/Legrand Make) <b>(DB#1 to DB#6)</b>	4	Nos.		
	<b>SUB-MAINS &amp; CIRCUIT WIRING (IN CONSEALED PVC CONDUITING)</b>				
300	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required <b>including necessary recessed/consealed conduiting</b> with all required accessories.				
300.1	4 x 10 Sqmm + 2 x 6 Sqmm earth wire <b>(Main panel to all MCB DBs)</b>	135	Mtrs.		
300.2	4 x 16 sq. mm + 2 x 6 sq. mm earth wire <b>(Main Panel to AC DB)</b>	135	Mtrs.		

300.3	4 x 6 sq. mm + 2 x 6 sq. mm earth wire <b>(Provn.)</b>	50	Mtrs.		
300.4	2 x 2.5 sq. mm + 1 x 2.5 sq. mm earth <b>(Lighting/SB Circuit wiring)</b>	1200	Mtrs.		
300.5	2 x 4 sq. mm + 1 x 4 sq. mm earth wire <b>(DB to Primary PPT)</b>	500	Mtrs.		
300.6	2 x 2.5 sq. mm + 1 x 2.5 sq. mm earth <b>(Primary PPT to Secondary/Looped PPT)</b>	250	Mtrs.		
300.7	4 x 4 sq. mm + 2 x 4 sq. mm earth wire <b>(AC DB to Split AC Stator)</b>	275	Mtrs.		
	<b>LIGHT &amp; FAN POINTS' WIRING (IN CONSEALED PVC CONDUITING)</b>				
301	Wiring for <b>light point/ fan point/ exhaust fan point/ call bell point</b> with 1.5sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable, etc. <b>including required size consealed PVC conduiting</b> with all necessary accessories, etc. complete as required. <b>Group C (Light Points, 1Lx1S)</b>	60	Points		
302	<b>Wiring for light point/ fan point/ exhaust fan point/ call bell point</b> with 1.5sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable, etc. <b>including required size consealed PVC conduiting</b> with all necessary accessories, etc. complete as required. <b>Group C (Ceiling / Wall Bracket / Exhaust fan Points, 1Ptx1S)</b>	20	Points		
303	<b>Wiring for group controlled (looped) light point/ fan point/ exhaust fan point/ call bell point (without independent switch etc.)</b> with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. <b>including required sized consealed PVC conduiting</b> with all necessary accessories, etc. complete. <b>Group C</b>				
303.1	2 or 3 or 4 or 5 Light Points controlled by 1 Switch	80	Points		
303.2	2 or 3 or 4 Ceiling Fan / Wall Fan Points controlled by 1 Switch	60	Points		
304	Supplying and fixing <b>two module stepped type electronic fan regulator on the existing modular plate switch box</b> including connections but excluding modular plate etc. as required.	27	Nos.		
	<b>DOMESTIC &amp; POWER POINTS AND ACCESSORIES</b>				
305	Supplying and fixing following <b>modular switch/ socket on the existing modular plate &amp; switch box</b> including connections but excluding modular plate etc. as required.				
305.1	5/6 A switch (for domestic socket on SB)	60	Nos.		
305.2	3/5 pin 5/6 A socket outlet (for domestic socket on SB)	10	Nos.		
<b>306</b>	Supplying and fixing suitable size <b>GI box with modular plate and cover in front on surface or in recess</b> , including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required. <b>(6&amp;16A Power Points)</b>	50	Nos.		
	<b>LIGHT FITTINGS</b>				
<b>307</b>	Supply and Fixing/Installation of following light fittings either directly mounted on wall/ceiling with ceiling plate, nipples as required or in recessed manner by making necessary cut-outs in the false ceilings including supply & termination with 3Cx1.5sq.mm. stranded Copper conductor, PVC insulated & sheathed flexible cable/wire for inter- connection, etc. complete as required. <b>Note:</b> Light output colour requirement (WW / BW / CDL) may be ascertained from the ICAI authority before actually procuring the light fittings for the project..				
307.1	Supply and Fixing <b>LED Tube light 4', Philips Cat No. - BN170C LED20S-6500 PSU L120, 20W</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED TL fitting complete with tube lamp on wall or ceiling.	7	Nos.		
307.2	Supply and Fixing <b>Surface mounted 2'x2' LED Panel Light, Philips Cat No. - SM366C LED32-6500 PSU OD WH, 32W</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska with high transmittance, micro linear frosted (MLF) PMMA curved diffuser for glare free light.	60	Nos.		
307.3	Supply and Fixing <b>slim design LED 20W recessed/ Surface round down lighter, Philips Cat No. - SM251C LED20S- 6500 PSU WH</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED with superior light output and integral driver to be fixed on ceiling as per dwg. with all arrangement and necessary connection. etc. complete	20	Nos.		
307.4	Supply and Fixing <b>slim design LED 12W recessed/ Surface round down lighter, Philips Cat No. - SM250C LED12S- 6500 PSU WH</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED with superior light output and integral driver to be fixed on ceiling as per dwg. with all arrangement and necessary connection. etc. complete.	71	Nos.		

307.5	Supply and Fixing <b>slim design LED 7W recessed/ Surface round down lighter, Philips Cat No. - SM250C LED7S- 6500 PSU WH</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED with superior light output and integral driver to be fixed on ceiling as per dwg. with all arrangement and necessary connectio, etc. complete.	25	Nos.		
307.6	Supply & installation of <b>Robustly designed IP65/IK10 Bollard</b> , easy to install with base plate, <b>Philips Cat. No. BCP150 LED150 or BCP151 LED150 in WW or NW colour</b> as directed or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED with a <b>nominal system lumen output of 900 lumens</b> and system luminous efficacy of 59lm/W. <b>System Wattage should not be more than 17W.</b> The luminaire should have a color temperature of 6500K and CRI 70. Driver of the luminaire shall have PF>0.95 .Luminaire housing should be made of high pressure die cast Aluminium. Luminaire should be IP65 & IK08 rated. <b>Note :</b> The scope of work in the given cost is inclusive of excavation, making CC Foundation of required size as per the manufacturer's installation instruction manual with proper plaster finish and refilling, etc. complete.	6	Nos.		
307.7	Supply and fixing of <b>EXIT signage</b> (GREEN for Normal and RED for Fire Exit) with standalone back up of 3 Hrs with required battery, fixed on wall above exit doors. <b>Prolite Make Cat No.PEL 111 E/M Exit E Maintained</b> or Similar of other approved/acceptable make	2	Nos.		
307.8	Supply & fixing <b>LED 2' Tube light, Philips Cat No. - BN 021 LED12S 6500 PSU GR, 10W</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED with anti-glare diffuser, energy efficient driver & superior lighting quality, etc. complete directly on wal/ceiling.	2	Nos.		
307.9	Supply & fixing <b>LED Bulkhead Light Philips Cat No. - WT202W LED6S NW PSU S2 PC, 10W</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska. LED with anti-glare diffuser, energy efficient driver & superior lighting quality, etc. complete directly on wall/ceiling.	3	Nos.		
307.10	Supply, erection, testing & commissioning <b>30W LED POLE LIGHT fitting Philips Cat No. - BRP046 LED 30 CW MR S1 PSU GR, 30W</b> or similar of other approved/ acceptable make like CG/ Havells/ Syska on appropriate bracket on 4M GI LIGHT POLE for internal road/pathway lighting with IP 65 protection including <b>supplying &amp; erecting 50mm dia G.I. pipe/pole (medium class) &amp; suitable Pole bracket</b> as required and also including making <b>excavation, CC foundation</b> , finishing with cement concrete (1:3:6) layer on top and refilling for the pole erection, as also making <b>local pole earthing arrangement with 8SWG GI wire</b> , etc complete.	4	Nos.		
307.11	Supplying and Fixing of <b>Thermoplastic Poly Carbonate, IP 66 rated Street Light Pole Box</b> of size 200mm (H) x 160mm (B) x 98mm (D) mm with 2 Nos. of MS Clamps made out of 25 mm x 3 mm MS flat including S & F of following accessories per pole box:- (a) 16 sqmm, 4-Way Terminal Block : 1 No. (b) 4 sqmm, 2-Way Earth Terminal Block : 1 No. (c) 6 Amp, 250V, SP MCB = 1 No. Make: HENSEL or other approved/acceptable make	4	Nos.		
307.12	<b>Supplying and fixing stiff pendent for suspending light fittings with 2Nos. of 300mm long x 20 mm dia x1.6 mm thick MS/ERW steel conduit</b> , aluminium cast back plate and brass holder (wall/ceiling socket), etc. complete, including wiring the down pipe with 3cx1.5sq. mm FRLS PVC insulated, copper conductor cable and painting etc. as required. <b>(To be operated only if required &amp; on specific instruction)</b>	20	Sets		
	<b>CEILING, EXHAUST AND WALL FANS</b>				
308	Supply, Installation, Testing and Commissioning of <b>1200 mm sweep, BEE 5 star rated ceiling fan with Brush Less Direct Current (BLDC) Motor, B-</b> class insulation, 3 nos. of blades, S & F of 30 cm to 100 cm long down pipe as per the site requirement, 2 nos.of canopies, shackle kit, safety rope, copper winding, Power Factor more than 0.9, Service Value (CMM/W) minimum 6.85, Air delivery minimum 215 CMM, 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, with remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise 75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for operation on 1Ph, 230V, 50Hz, AC Supply, earthing etc. complete as required. <b>USHA make Cat No. - TECHNO AIR - BLDC 5 Star (without remote)</b> or equivalent of other approved/acceptable make in approved colour.	6	Nos.		
309	Supply & Installation of <b>Metal Exhaust Fan</b> Light Duty for operation on 1Ph, 230V, 50Hz, AC Supply complete with mounting brackets & ring, jali/ louvers, interconnection wiring with 3Cx1.5sq.mm. stranded Cu. conductor, PVC insulated copper flexible cable/wire, etc. The scope of work also includes making cut-out in brickwork, grouting arrangements and making good the damage etc. complete as required. USHA make <b>Cat No. 300MM AEROCLEAN PLUS DBB GBD</b> or equivalent of other approved/acceptable make	3	Nos.		
310	Supply and fixing of <b>400mm Oscillating type Wall mounted Bracket fan USHA make Cat No. 400MM STRIKER HI-SPEED</b> or equivalent of other approved/acceptable make, to be fixed on wall with allied arrangement.	17	Nos.		
311	Cleaning and Installation of <b>Existing Ceiling fan</b> .	27	LS		
	<b>EARTHNG</b>				

312	<b>Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia</b> including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/ coke and salt as required. <b>(Main Panel: 2, FP: 2, Lift:2)</b>	6	Nos.		
313	<b>Supplying and laying 25 mm x 5 mm G.I strip at 0.50 metre below ground</b> as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	60	Mtrs.		
314	Providing and fixing <b>25 mm x 5 mm G.I. strip on surface or in recess</b> for connections etc. as required.	100	Mtrs.		
315	Providing and fixing <b>6 SWG dia G.I. wire on surface or in recess for loop earthing</b> along with existing surface/recessed conduit / submain wiring / cable as required.	350	Mtrs.		
	<b>TELEPHONE WIRING</b>				
316	Supplying and fixing of following sizes of <b>medium class PVC conduiting</b> along with accessories in surface/recess manner including cutting the wall and making good the same in case of recessed conduit as required.				
316.1	20mm dia.	50	Mtrs.		
316.2	25mm dia.	200	Mtrs.		
316.3	32mm dia.	40	Mtrs.		
316.4	40mm dia.	30	Mtrs.		
316.5	50mm dia.	20	Mtrs.		
317	Supply and drawing <b>following pair 0.5mm dia FRLS PVC insulated annealed copper conductor, unarmoured telephone cable</b> in the existing surface / recess steel / PVC conduit as required				
317.1	2 Pair	200	Mtrs.		
318	<b>Supplying and fixing metal box of following sizes</b> (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required.				
318.1	75mm x 75mm x 60mm deep (1 or 2 Modue)	2	Nos.		
319	<b>Supplying and fixing modular switch/ socket</b> on the existing modular plate and switch box including connections but excluding modular plate etc as required				
319.1	Telephone socket outlet	2	Nos.		
320	Supply and fixing of 40-pair telephone Krone terminal fixed in engineering plastic box with transparent hinged & lockable cover fixed in recessed manner including making cutting and mending good the surface	1	No.		
	<b>LIGHTNING PROTECTION</b>				
321	Providing and fixing of <b>lightning conductor finial, made of 25 mm dia 900 mm long, G.I. tube</b> , having single prong at top, with 85 mm dia & 6 mm thick G.I. base plate including holes etc. complete as required.	2	Nos.		
322	<b>Jointing copper / G.I. tape</b> (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering. etc. as required.	20	Nos.		
323	Providing and fixing <b>G.I. tape 20 mm x 3 mm thick</b> on parapet or surface of wall for lightning conductor complete as required. <b>(For horizontal run)</b>	75	Mtrs.		
324	Providing and fixing <b>G.I. tape 20 mm x 3 mm thick</b> on parapet or surface of wall for lightning conductor complete as required. <b>(For vertical run)</b>	30	Mtrs.		
325	Providing and fixing <b>testing joint, made of 20 mm x 3 mm thick G.I. strip, 125 mm long</b> , with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	2	Nos.		
326	Providing and laying <b>G.I. tape 32 mm x 6 mm</b> from earth electrode directly in ground as required.	30	Mtrs.		
327	<b>Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia</b> including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/ coke and salt as required.	2	Nos.		
	<b>Total</b>				
	<b>Total in Words</b>				
	<b>AIR-CONDITIONING - SPLIT Acs</b>				
328	Supply, standard Installation, Testing and commissioning of <b>Non- Inverter type, Hi-wall Split Air-conditioner with 1 ODU &amp; 1 IDU</b> , with 3 speed evaporator fan motor, fan, DX type cooling coil (Cu. condensor), electronic expansion valve, thermostat, std. fittings, cleanable fabric filter and insulated drain pipe pan enclosed in plastic casing, etc. complete with eco-friendly refrigerent gas, suitable for operation on 1PH, 230V, 50Hz. AC supply with cordless Remote and inclusive of standard length (upto 3Mtrs) of copper refrigerant pipe, drain pipe, IDU to ODU Electric cable, etc. <b>Hitachi, 1 Ton, 3-Star Split AS CSFG312HEDO</b> or equivalent of other acceptable makes like Blue Star / Voltas / Carrier / Mitsubishi.	2	No.		

329	Supply and fixing of <b>Angle Iron Frame of suitable size</b> or Standered mounting bracket for outdoor units suitable for above machine as required.	13	No.		
330	Supply & installation of Single Phase <b>Voltage Stabilizer of 4 KVA rating, suitable for 1.5Tr. Split AC</b> , Input : 140-280V AC, Output : 230V AC, Hi & Low auto cut off features, wall mounted. Make : <b>Crompton / Voltas / V.Guard / Microtek.</b> <b>Note : To be operated if essential &amp; on seeking prior consent.</b>	2	No.		
331	Supply, installation, testing & commissioning of additional <b>Refrigerant Copper piping of required size between IDU &amp; ODU covered with elastometric nitrile rubber tubular insulation</b> neatly clamped & dressed up on on wall, etc. complete.	65	Mtrs.		
332	Supply, installation, testing & commissioning of <b>UPVC drain piping</b> complete with all accessories duly fitted on wall from indoor unit to nearby water drain pipe/outlet as directed. <b>Supreme / Astral / Finolex or Equivalent make</b>	65	Mtrs.		
333	Supply, installation, testing & commissioning of <b>3Cx2.5 Sqmm stranded Cu. Conductor, PVC insulated &amp; sheathed flexible cable / wire from IDU to ODU</b> as directed. <b>Polycab / Finolex / Other equivalent make with ISI mark</b>	65	Mtrs.		
334	Supply and installation of <b>25A, 3Pin modular socket</b> consealed in wall near Split AC IDU and <b>25A modular starter with adjustable Overload Relay unit</b> at operating height, mounted in consealed manner in wall including 2 numbers four (04) module box, cover plates & dummy caps, etc. complete. <b>North-West / Legrand Make.</b>	15	No.		
335	Cleaning and installation of <b>1 ton/ 1.5 ton Existing Split Air- conditioner.</b>	15	LS		
	<b>AIR-CONDITIONING - CASSETTE Acs</b>				
336	Supply, installation, testing and commissioning of air-cooled, stand-alone, <b>INVERTER Cassette Split Air-conditioner of following capacity / rating, with Ceiling mounted / suspended IDU with 4- way/8-way (360 Deg.) air flow grill</b> , equipped with synthetic washable media pre-filter, fan section with low noise fan, dynamically balanced blower, multi-speed motor, coil section with DX <b>Copper condensor / coil</b> , electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration isolation, <b>cordless remote control unit</b> , etc. IDU being suitable for operation on Single phase, 230V±10%, 50Hz. AC supply & ODU on 3Phase, 415V, 50Hz. AC supply, refrigerent being <b>eco-friendly R-32 or R-410A gas</b> , Rotary / Scroll compressor, etc. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. <b>4.0 TON Ceiling Mounted Inverter type cassette AC</b> <b>Daikin / Voltas / Hitachi / Mitsubishi / Carrier/ Blue Star make</b>	1	Nos.		
337	Supply and fixing of <b>Angle Iron Frame of suitable size</b> or Standered mounting bracket for outdoor units suitable for above machine as required.	1	Nos.		
338	Supply, installation, testing & commissioning of additional <b>Refrigerant Copper piping of required size between IDU &amp; ODU covered with elastometric nitrile rubber tubular insulation</b> neatly clamped & dressed up on on wall, etc. complete.	6	Mtrs.		
339	Supply, installation, testing & commissioning of <b>UPVC drain piping</b> complete with all accessories duly fitted on wall from indoor unit to nearby water drain pipe/outlet as directed. <b>Supreme / Astral / Finolex or Equivalent make</b>	6	Mtrs.		
340	Supply, installation, testing & commissioning of <b>4Cx2.5 Sqmm stranded Cu. Conductor, PVC insulated &amp; sheathed flexible cable / wire</b> for main power supply to Cassette AC ODU or IDU to ODU. <b>Polycab / Finolex / Other equivalent make with ISI mark</b>	6	Mtrs.		
341	Supply, installation, testing & commissioning of <b>3Cx2.5 Sqmm stranded Cu. Conductor, PVC insulated &amp; sheathed flexible cable / wire from IDU to ODU</b> as directed. <b>Polycab / Finolex / Other equivalent make with ISI mark</b>	6	Mtrs.		
	<b>Total</b>				
	<b>Total in Words</b>				
	<b>COMPUTER DATA SYSTEM/LAN WIRING</b>				
342	Supplying and laying of <b>CAT-6 cable</b> through suitable size PVC casing capping from <b>server to HUB,HUB to Computer Data Socket</b> including interconnection mending good etc. as required ( <b>Make - Havells / Finolex / Polycab/ KEI</b> )	135	Mtrs.		
343	Supply and fixing on wall/furniture/partition recessed non-modular type <b>Computer data socket (D-Link make)</b> with mounting box & front plate as shown in the drawing complete with mending good etc. as required. ( <b>Make - L&amp;T / Anchor-Panasonic/ Crabtree/ Legrand</b> )	6	Each		
344	Supply of CAT-6, <b>24 Port Patch Panel</b> of GD Sole/D-Link Make	1	Nos.		
345	Supply of <b>9U. Metal Rack with Glass door.</b>	1	Nos.		
346	Supply of CAT-VI 1 Mtr. <b>Patch Cord</b>	6	Nos.		
347	Supply of CAT-VI 2 Mtr. <b>Patch Cord</b>	6	Nos.		
348	Installation with crimping of of CAT-6, 24 Port Patch Panel of GD Sole/D-Link Make	1	Nos.		
349	Installation with fixing of of 9U. Metal Rack with Glass door.	1	Nos.		

	<b>Total of Electrical works</b>				
	<b>Total in Words</b>				
<b>E</b>	<b>WBSEB</b>				
350	Apply to WBSEB through ICAI and cordinate with WBSEB for Supply of Transformer, HT Panel and WBSEB Meter with installtion of armoured cable , pay the WBSEB charges required for the Same and facilate the installtioin and get electricity connection for the ICAI siliguri campus.	1	each		
	<b>Total of WBSEB works</b>				
	<b>Total in Words</b>				
<b>F</b>	<b>Solar Panel</b>				
351	Supply and Installation of 6KW Solar Panel with inverter,modular mounting galvanised structure, Pedestral , Ligting arrestor , required MCCB, DC and AC Cable 4 C x 6Sqmm, Earting strip , AC & DC DB, MC\$ connectors, Conduit for cable. Misc Items incl signage and total comissioning.	1	each		
	<b>Total</b>				
	<b>Total in Words</b>				
	<b>Grand Total of Works (A+B+C+D+E+F)</b>				
	<b>Grand Total For The Works in Word</b>				