

TENDER

FOR

**Construction of Tertiary Cancer Care
Centre at Government Medical College,
Kozhikode**

**PART-III
PRICE BID**

TENDER NO. HLL/ID/15 /24

August 2015

**HLL LIFECARE LIMITED
INFRASTRUCTURE DEVELOPMENT DIVISION**

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1. COMMERCIAL CONDITIONS

1.0.1 THE ABSTRACT OF BILL OF QUANTITIES IN THE PRICE BID SHALL BE INVARIABLY FILLED. THOSE WHO BIDDERS DO NOT FILL WILL BE NON-RESPONSIVE AND WILL BE DISQUALIFIED FROM EVALUATION AND WILL BE TREATED AS TECHNICALLY NOT QUALIFIED.

1.0.2 The tendered rate shall inter alia be deemed to include for the provision of all materials, process, operation and special requirements detailed in the particular specification irrespective of whether these are mentioned in the description of equipment schedule and Bill of quantities or not. It is an express condition of the contract that the tendered rates for various items in the Bill of Quantities shall be deemed to include for the full, entire and final condition of the contractor respective items of the works in accordance with the provision of the contract.

1.0.3 The tendered rate shall include for all taxes, duties, etc. as applicable and shall be quoted on the works contract basis for the **Construction of Tertiary Cancer Care Centre at Government Medical College, Kozhikode**. The tendered rate shall remain firm and free from variation due to rise in the cost of materials/equipment, labour or any other reasons whatsoever during the contract period and valid extension on the case may be.

1.0.4 The quantum of excise duty included in the tendered price, the rate at which they were assumed etc. shall be indicated in the tender.

1.1 UNIT RATES

1.12 Only approved work will be measured on completion and priced as per rates quoted against the respective items.

1.2 BRIEF DESCRIPTION OF PRICING

1.2.1. Unforeseen difficulties for which provision has not been made in the tender will in no way relieve the successful tenderer from the full execution of the work.

1.2.2 The price quoted shall be the final amount for this finished work.

1.2.3 The quoted price shall be inclusive of all taxes and duties whether payable by the contractor or to be deducted at source. This shall include those applicable among

VAT, Sales Tax, Income Tax, Customs Duty, Excise Duty, Turnover Tax, Service Tax, Work Contract Tax, Octroi, Labour Welfare Cess or any other Taxes and Duties prevailing in respect of this contract. **ANY BID STATING THAT TAXES ARE EXTRA WILL BE SUMMARILY REJECTED.**

1.3 INCOME TAX

Any payment to the contractor as per contract will be made after deducting income tax as per the rules and regulations.

1.4 SALES TAX AND EXCISE DUTY

The tenderer shall clearly indicate sales tax, Excise and other duties as applicable in his offer for carrying out this work.

1.6. SUBMISSION OF BILL

1.6.1. The contractor shall from time to time prepare and submit interim bills of the work executed and on completion of the contract, he shall prepare and submit the final bill. The measurements sheets in support of the interim and final bills shall be prepared by the contractor on the basis of measurements taken by him jointly with the project engineer and the said measurement sheets shall be submitted by him with the relevant bill.

1.6.2. Within the above frame work of the terms of payment the contract's interim bills will have to be of a minimum value of Rs.100.00 Lakhs only.

1.7. EXTRA ITEMS

The contractor is bound to carry out any items of work necessary for the completion of the job even though such items may not have been included in the schedule of probable quantities or rates, such items being necessary or essential for completing the job. Variation order in respect of such additional items and their quantities will be issued in writing by the employer.

1.7.1 All shavings, cuttings and other rubbish as it accumulates from time to time during the progress of work and on completion including that of the sub-contractors and

special tradesman and all materials condemned by the project engineer shall be cleared and removed from the site by the contractor without any extra charge.

- 1.7.2 All measuring steel taps, scaffolding, ladders instruments and tools that may be required for taking measurements shall be supplied by the contractor.

1.8. OVER TIME WORK

If the contractor is required to work night or on holidays in order to maintain the time schedule he shall take prior approval from the Engineer-in-charge. He should also provide and maintain at his own cost sufficient lights as may be necessary to enable the work to proceed satisfactorily during the night.

- 1.8.1. The contractor shall give full facilities to all other contractors working on site. He shall also arrange his programme of work so as not hinder the progress of other trades. The decision of the Engineer-in-charge on any point of dispute between the various parties shall be final and binding.
- 1.8.2. It is specifically pointed out that the contractor shall not be entitled to any compensation whatsoever on account of delay in procurement or supply of controlled materials and the rates quoted in the contract are fixed till the completion of the contract.
- 1.8.3. The contractor shall co-operate with other agencies appointed by the owners for the work to proceed smoothly with the least possible delay and to the satisfaction of the owners, architects and the consultants.
- 1.8.4. The owners shall provide a source for power supply at one convenient point at site. The contractor shall at his own cost install a separate meter at the said source and lay additional cables from the said source also at his own cost. For the electricity consumed by the contractor he shall pay the owner the actual cost at the rate charged by the local authority for power for constructional purposes. The contractor shall also obtain the necessary permit for utilizing power for constructional purpose

2. SPECIAL CONDITIONS

2.1. EXECUTION OF WORK

- 2.1.1. The whole of the work as described in the contract (including bills of materials, specification and all drawings pertaining thereto) and as advised by the Engineer-in-charge from time is to be carried out and completed in all parts to the entire satisfaction of the Employer. Any minor details of construction which are obviously and fairly intended, or which may not have been definitely referred to in this contract, but which are usual construction practice and essential to the work, shall be included in this contract.

2.2. CERTIFICATE OF COMPLETION

- 2.2.1 The contractor shall intimate to the Engineer-in-charge in writing as and when the works are completed and put into beneficial use in order to enable the consultants to check certify to the owners to take over the plants.
- 2.2.2 The work shall not be considered as completed and put into beneficial use until the consultants have certified in writing that the same has been completed and put into beneficial use.
- 2.2.3 The defects liability period shall commence from date of such completion or any specific date mentioned therein.

**ALL ROWS SHALL BE FILLED, THIS IS MANDATORY
(IF NIL OR NA, THAT MAY ALSO BE SHOWN)**

BILL OF QUANTITIES

ABSTRACT

Sl. No.	Item	Estimated cost
Part I	CIVIL WORKS	
Part II	PLUMBING WORKS	
Part III	SUMP WORKS	
Part IV	ELECTRICAL WORKS	
Part V	HVAC SYSTEM	
Part VI	FIRE PROTECTION works	
a)	Service tax component to be paid by the bidder	
b)	Service tax component to be directly paid by the HLL in case the bidder is a Proprietary firm	
	GRAND TOTAL [INCLUDING 100% SERVICE TAX (a +b)]	

Signature of the Contractor with date

**CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL
COLLEGE HOSPITAL, KOZHIKODE**

PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
1	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the	4200.00	m2		
2	Felling trees of the girth (measured at a height of 1 m above ground level) including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.				
a	Beyond 30 cm girth upto and including 60 cm girth	5.00	Each		
b	Beyond 60 cm girth upto and including 120 cm girth	5.00	Each		
c	Beyond 120 cm girth upto and including 240 cm girth	2.00	Each		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
3	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil	3250.00	m3		
4 (a)	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed. Ordinary rock	7750.00	m3		
4 (b)	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift 1.5 m to 3.0m, disposed earth to be levelled and neatly dressed.	10.00	m3		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
5	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and	1700.00	m3		
6	Supplying and filling in plinth with quarry dust under floors, including watering, ramming, consolidating and dressing complete	140.00	m3		
7	Conveying and disposing off excavated excess earth from the side	7300.00	m3		
8	Supplying chemical emulsion in sealed containers including delivery as specified Chlorpyriphos/ Lindane emulsifiable concentrate of 20%	755.00	litre		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
9	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor : With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	1360.00	Sqm		
10	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	340.00	m3		
11	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand including finishing the top smooth	210.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
12	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of 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				
	(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
a	All works upto plinth level.	1200.00	m3		
b	All works above plinth level upto floor V level.	1720.00	m3		
13	Add for using extra cement in the items of design mix over and above the specified cement content therein	1460.00	ql.		
14	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement : 1:2:4 (1 cement : 2 coarse sand : 4	20.00	m3		
15	Centering and shuttering including strutting, propping etc. and removal of form for :				

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
a	Foundations, footings, bases of columns, etc. for mass concrete.	1120.00	Sqm		
b	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	2360.00	Sqm		
c	Suspended floors, roofs, landings, balconies and access platform.	3570.00	Sqm		
d	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	3600.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
e	Columns, Pillars, Piers, Abutments, Posts and Struts.	1680.00	Sqm		
f	Stairs, (excluding landings) except spiral-staircases.	135.00	Sqm		
g	Edges of slabs and breaks in floors and walls.Under 20 cm wide	730.00	Rm		
h	Edges of slabs and breaks in floors and walls Above 20 cm wide	145.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
i	Weather shade, Chajjas, corbels etc., including edges.	210.00	Sqm		
16	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc. including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured) Suspended floors, roofs, landing, beams and balconies (Plan area to be measured).	3410.00	Sqm		
17	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete Thermo-Mechanically Treated bars.	358680.00	kg		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
18	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:6 (1 cement : 6 coarse sand)	960.00	m3		
19	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in.cement mortar 1:4 (1 cement : 4 coarse sand)	660.00	Sqm		
20	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry.	660.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
21	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, flooring, vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade: Area of slab over 0.50 sqm.(Lowest retails price not less than Rs. 2000/m2)	1140.00	Sqm		
22	Stone tile (polished) work for wall lining over 18mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and cement slurry @ 3.3 kg/sqm including pointing in white cement complete.:Granite of any colour and shade.to the front side of lift room	50.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
23	Providing edge moulding to 18mm thick granite stone including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge: to the front side of lift room	50.00	Rm		
24	Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/Granite/stone work including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	19.00	Each		
25	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.Fixed to openings /wooden frames with rawl plugs screws etc.	2330.00	kg		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
26	Providing and fixing bright finished brass handles with screws etc. complete: 125 mm	240.00	Each		
27	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	240.00	Each		
28	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	125.00	Each		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
29	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	190.00	Each		
30	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :				
a	300 mm weighing not less than 330 gms	115.00	Each		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
b	250 mm weighing not less than 280 gms	36.00	Each		
c	200 mm weighing not less than 240 gms	36.00	Each		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
31	Providing and fixing fire resistant door frame of section 143 x 57 mm having built in rebate made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/sqm) duly filled with vermiculite based concrete mix, suitable for mounting 60 minutes fire rated door shutters. The frame is fitted with intumescent fire seal strip of size 10x4 mm (minimum) around the frame and fixing with dash fastener of approved size and make, including applying a coat of approved brand fire resistant primer etc. complete as per direction of Engineer-in-charge (Dash fastener to be paid for separately).	30.00	Rm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
32	Providing and fixing 50 mm thick glazed fire resistant door shutters of 60 minutes fire rating conforming to IS:3614 (Part-II) tested and certified as per laboratory approved by Engineer-in-charge with suitable mounting on door frame, consisting of vertical styles, lock rail, top rail 100mm wide, bottom rail 200mm wide, made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/m2) duly filled FR insulation material and fixing with necessary stainless steel ball bearing hinges of approved make, including applying a coat of approved fire resistant primer etc. all complete as per direction of Engineer-in-charge (panneling to be paid for separately).	10.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
33	Providing and fixing glazing in fire resistant door shutters, fixed panels, ventilators and partitions etc., with G.I. beading of appropriate size made out of 20 SWG G.I.sheet (zinc coating not less than 120 gm/m2), fire resistant sealant, including applying a coat of approved fire resistant primer on G.I. beading etc. complete all as per direction of Engineer-in-charge. With clear fire resistant glass panes 6mm thick of approved brand, having minimum 60 minutes fire resistance	10.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
34	Providing and fixing PVC Door Frame of size 50x47mm with a wall thickness of 5 mm (\pm 0.2 mm) made out of single piece extruded PVC profile, with mitred cut joints and joint with 2nos of PVC bracket of size 190 mm x 100 mm long arms of cross section size 35 x 15mm & self driven self tapping screws, the vertical door profiles to be reinforced with 40x20mm M.S. rectangular tube of 0.8 mm , including providing EPDM rubber gasket weather seal throughout the frame, including jointing 5mm PVC frame strip with PVC solvent cement on the back of the profile. The door frame to be fixed to the wall using 8 x100mm long anchor fasteners complete, all as per manufacturer's specification and direction of Engineer -in-charge.	134.00	Rm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
35	35 mm thick factory made Solid panel PVC Door shutter made out of single piece extruded solid PVC profiles, 5 mm (\pm 0.2mm) thick, having styles & rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles & rails to be mitered cut & joint with the help of PVC solvent cement, self driven self tapping screws & M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner.				

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
	Single piece extruded 5mm thick solid PVC Lock rail of size 115 mm x 35 mm x 35 mm, out of which 95 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles & rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of	40.00	Sqm		
36	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer:Using M.S. angels	36.00	Sqm		
37	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	70.00	Each		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
38	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	460.00	kg		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
39	Providing and fixing 1st quality ceramic glazed wall tiles 300x450mm size conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.(Lowest retail price not less than Rs. 400/m ²) Make: NITKO, KAJARIA, ORIENT.	2385.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
40	Providing and laying rectified Glazed Ceramic floor tiles 300x300 mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigments etc., complete (Lowest retail price not less than Rs. 500/m ²) Make: NITKO, KAJARIA, ORIENT.	160.00	Sqm		
41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete. Size of Tile 600x600 mm: (Lowest retail price not	1630.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
42	Providing and laying Vittrified tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make in all colours & shade in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete. Size of Tile 600x600 mm: (Lowest retail price not less than Rs. 900/m ²) Make: NITKO, KAJARIA, ORIENT.	90.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
43	Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized @ 120 gsm/sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet, spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of size 24x24x0.3 mm				

**CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL
COLLEGE HOSPITAL, KOZHIKODE**

PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
	and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x 1.6 x mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-charge.				

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COLLEGE HOSPITAL, KOZHIKODE**

PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
a	GI Metal Ceiling Lay in plain Tegular edge Global white color tiles of size 595x595 mm, and 0.5mm thick with 8mm drop; made of G I sheet having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending.	1570.00	Sqm		
b	12.5mm thick square edge PVC Laminated Gypsum Tile of size 595x595mm, made of Gypsum plasterboard; manufactured from natural gypsum as per IS 2095 part I and laminated with white 0.16mm thick fire retardant PVC film on the face side and 12micron metalized polyester on the back side with all edges sealed with the face side PVC film which goes around and wraps the edges and is bonded to the edges and the back side metalized polyester film so as to make the tile a completely sealed unit.	180.00	Sqm		

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COLLEGE HOSPITAL, KOZHIKODE**

PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
44	Providing and laying roof insulation with 40 mm thick impervious sprayed, closed cell free Rigid Polyurethane foam over deck insulation conforming to IS - 12432 Pt. III (density of foam being 40-45 kg/cum), over a coat of polyurethane primer applied @ 6-8 sqm per litre, laying 400 G polythene sheet over PUF spray and providing a wearing course of 40 mm thick cement screed 1: 2 : 4 (1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size) in chequered rough finish, in panels of 2.5 m x 2.5 m and embedding with 24 G wire netting and sealing the joints with polymerized mastic, all complete as per direction of Engineer-in-Charge.to the top of roof slab	1580.00	Sqm		
45	12 mm cement plaster of mix 1:4 (1 cement: 4 fine sand) for inside walls	7525.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
46	15 mm cement plaster on the rough side of single or half brick wall of mix :1:4 (1 cement: 4 fine sand) for outside walls	2700.00	Sqm		
47	6 mm cement plaster of mix : 1:3 (1 cement: 3 fine sand) for under side of roof slab	3500.00	Sqm		
48	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement. 12 mm cement plaster including providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers. to the top surface of sunshade	290.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
49	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof. 10m to 13m	200.00	Sqm		
50	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof. 13m to 16m	110.00	Sqm		
51	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	11025.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
52	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :	11025.00	Sqm		
53	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm).	2700.00	Sqm		
54	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work.	11025.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
55	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two or more coats on new work.	110.00	Sqm		
56	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	300.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
57	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand) including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	7.00	m3		
58	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand). Dark shade using ordinary cement.	50.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
59	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to	4640.00	kg		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
60	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately). Powder coated aluminium (minimum thickness of powder coating 50 micron)	3100.00	kg		
61	Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge. Pre-laminated particle board with decorative lamination on both sides.	150.00	Sqm		

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COLLEGE HOSPITAL, KOZHIKODE**

PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
62	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.50 mm thickness	245.00	Sqm		
63	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg., for doors, including cost of cutting floors , embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge. With brass cover plate minimum 1.25 mm thickness.	2.00	Each		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
64	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.Powder coated minimum thickness 50 micron aluminium tubular handle bar	240.00	Each		
65	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete	88.00	Each		
66	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	5.00	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
67	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry	160.00	Sqm		
68	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately). Second class teak wood	0.10	m3		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
69	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked Stainless Steel butt hinges bright finished of required size with necessary screws excluding, panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. Second class teak wood: 35 mm thick shutters	3.10	Sqm		
70	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick : Second class teak wood	2.60	Sqm		

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PART I CIVIL WORKS

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
71	Providing and fixing Pre-laminated medium density fibre board IS: 14587:1998 marked, with one side decorative lamination other side balancing lamination Grade-I(exterior grade) in shelves with screws and fittings wherever required, edges to be sealed with PVC edge bending tape 2.00 mm thick of approved brand (fittings to be paid separately).: Pre-laminated with decorative lamination one side and other side balancing lamination exterior Grade - I MDF Board 18 mm thick confirming to IS:14587	115.00	m2		
72	Providing and fixing 2mm thick lead lining over inner side of the door shutter including all fixing accessories and fixuerse etc complete	4.00	Sqm		
	Total Amount - PART I				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required : White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests. (Make: Hindware, Jaquar, Parryware)	1	Each		
2	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I.brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required : W.C. pan with ISI marked white solid plastic seat and lid.(Make: Hindware, Jaquar, Parryware)	22	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
3	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required : (Make: Hindware, Jaquar, Parryware):Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.	4	Each		
4	Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.Granite Stone of approved shade.	0.75	Sqm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
5	Providing and fixing wash basin/counter wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps. (Make: Hindware, Jaquar, Parryware)	21	Each		
6	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete. Flexible pipe 40 mm dia	21	Each		
7	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :Rectangular shape 453x357mm	15	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
8	Providing and fixing toilet paper holder :C.P. Brass	25	Each		
9	Providing and fixing PTMT Bottle Trap for Wash basin and sink. Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 263gms	21	Each		
10	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm 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.	15	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
11	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	25	Each		
12	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. Make: Supreme, Finolex, Astral Internal work - Exposed on wall				
a	15 mm nominal outer dia .Pipes.	10	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
b	20 mm nominal outer dia .Pipes.	10	Rm		
c	25 mm nominal outer dia .Pipes	50	Rm		
d	32 mm nominal outer dia .Pipes.	50	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
e	40 mm nominal outer dia .Pipes.	15	Rm		
f	50 mm nominal outer dia .Pipes	300	Rm		
13	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				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
a	15 mm nominal outer dia .Pipes	20	Rm		
b	20 mm nominal outer dia .Pipes	150	Rm		
c	25 mm nominal outer dia .Pipes.	150	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
d	32 mm nominal outer dia .Pipes.	20	Rm		
14	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.Make: Supreme, Finolex, Astral External work				
a	20 mm nominal outer dia .Pipes.	20	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
b	25 mm nominal outer dia .Pipes.	30	Rm		
c	32 mm nominal outer dia .Pipes.	50	Rm		
d	40 mm nominal outer dia .Pipes.	50	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
e	50 mm nominal outer dia .Pipes.	50	Rm		
15	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
a	25 mm nominal bore	10	Each		
b	32 mm nominal bore	10	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
c	40 mm nominal bore	4	Each		
d	50 mm nominal bore	4	Each		
16	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete				
	20 mm nominal bore	4	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
	25 mm nominal bore	4	Each		
17	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design : With common burnt clay F.P.S.(non modular) bricks of class designation 7.5.	2	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
18	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design : With common burnt clay F.P.S.(non modular) bricks of class designation 7.5.	1	Each		
19	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 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	20000	Litre		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
20	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.: 15 mm nominal bore: Make:Jauqar, Hindware, Parryware, crome	25	Each		
21	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.:15 mm nominal bore.: Make:Jauqar, Hindware, Parryware, crome	25	Each		
22	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 a) 15 mm nominal bore:15mm nominal bore: Make:Jauqar, Hindware, Parryware, crome	75	Each		
23	Providing and fixing PTMT grating of approved quality and colour.:Rectangular type with openable circular lid.150 mm nominal size square 100 mm diameter of the inner hinged round grating	35	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
24	Providing and fixing PTMT swivelling shower, 15mm nominal bore. Weighing not less than 40gms. Make: Jauqar, Hindware, Parryware, crome	25	Each		
25	Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.	25	Each		
26	Cutting holes up to 30x30 cm in walls including making good the same: With common burnt clay F.P.S. (non modular) bricks.	50	Each		
27	Cutting holes up to 15x15cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.	50	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
28	Providing and fixing on wall face 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.(i) Single socketed pipes. 110 mm diameter	150	Rm		
29	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.				
a	Coupler: 110 mm	30	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
b	Single tee with door: 110x110x110 mm	10	Each		
c	Bend 110 mm	30	Each		
d	110 mm Shoe	10	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
30	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm 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	150	Each		
31	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	10	Each		
32	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 300 x300 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 : 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
a	100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2	Each		
b	150 x 100 mm size P type. With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	4	Each		
c	180x150 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
33	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :All kinds of soil:Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia.	50	Rm		
34	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete : 250 mm dia. R.C.C. Pipe	50	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
35	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size), inside plastering 12mm 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 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
a	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) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	10	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
b	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	4	Each		
36	Extra for depth for manholes				
a	Size 90x80 cm With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	10	Rm		
b	Size 120x90 cm With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	10	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
37	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3	50	Each		
38	Providing & fixing of CP Health faucet. Hand operated spray unit (instand type) . Make: Jauqar, Hindware, Parryware, crome., (Lowest retail price not less than 1200/each. Materials to be selected by the Engineer in charge)	25	Set		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
39	Providing and fixing PVC soil, waste and vent pipe to IS : 13592 of SWR quality, including all fittings, like EG : Bends, Tees, Elbows, Collars, junction, inspection doors, cowls, offsets, access pipes, jointing with rubber ring / solvent cement by application of leak proof adhesive like FRP paste including cutting holes in walls and floors and making good. Make: Supreme, Finolex, Astral				
a)	50mm dia (6kg / sq.cm)	50.00	Rm		
b)	63mm dia (6kg / sq.cm)	100.00	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
c)	75mm dia (6kg / sq.cm)	50.00	Rm		
d)	90mm dia (6kg / sq.cm)	50.00	Rm		
d)	110mm dia (6 kg / sq.cm)	150.00	Rm		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
e)	160mm dia (6 kg / sq.cm)	200.00	Rm		
40	Providing and fixing PVC floor trap self cleansing design with or without vent arm complete including cutting and making good the walls and floors. Make:Supreme,Finolex,Prince etc.,110mm dia inlet 110mm dia outlet	35	Each		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL**PART II PLUMBING WORKS**

Item No	Details of items	Quantity	Unit	Rate in figures and words (Rs.)	Amount (Rs.)
41	Supplying and fixing Wash Basin with one pair mounting brackets, EWC & Cistern complete with fittings & seat cover, hinged rail, grab rails and one no of faucet for WB with Rack Bolt, Flexible Tube for pillar Tap & Waste Coupling Designed for people with special needs (Handicapped/ Physically disabled People) P trap, Angle valve, including fittings and brackets, cutting and making good the walls wherever required, including cost & conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer in charge.(Materials should be selected by Engineer in charge).(Make Hindware No. 70002-	2	Each		
	Total Amount - PART II				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART III SUMP - ABSTRACT OF ESTIMATE					
Item no.	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed: Ordinary rock	m3	98.00		
2	Do do 2nd depth 1.5m to 3.0m do do All classes of soil	m3	98.00		
3	Do do 3rd depth 3m to 4.5m do do All classes of soil	m3	66.00		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART III SUMP - ABSTRACT OF ESTIMATE					
Item no.	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
4	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	m3	6.00		
5	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	m3	0.20		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART III SUMP - ABSTRACT OF ESTIMATE					
Item no.	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
6	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of 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	m3	54.00		
7	Add for using extra cement in the items of design mix over and above the specified cement content therein.	ql	27.00		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART III SUMP - ABSTRACT OF ESTIMATE					
Item no.	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
8	Centering and shuttering including strutting, propping etc., and removal of form for,				
8a	Foundations, Footings, bases of columns,etc for mass concrete.	m2	11.00		
8b	Walls any thickness including attached pilasters butteresses,Plinth and string courses etc.	m2	295.00		
8c	Suspended floors, roofs, landings ,Balconies and access platform	m2	50.00		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART III SUMP - ABSTRACT OF ESTIMATE					
Item no.	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
9	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto Plinth level.: Termo – Mechanically Treated Bars	kg	6500.00		
10	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc., in layers not exceeding 20cm in depth: consolidating each deposited layer by ramming and watering etc complete, and form uniform level for flooring concrete .	m3	40.00		

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART III SUMP - ABSTRACT OF ESTIMATE					
Item no.	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
11	Conveying from site and disposing off the excess earth as per the direction of engineer in charge.	m3	225.00		
12	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement :12 mm cement plaster including water proofing compound	m2	340.00		
13	Providing and fixing C.I. M.H.cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :	Each	3		
	Total Amount - PART III				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART IV ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate in figures and words (Rs.)	Amount (Rs.)
A. LT Wiring					
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in 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 as required.	Each	456		
2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way 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 as required.	Each	10		
3	Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface medium class PVC conduit as required.				

3.1	2 x 1.5 sq.mm + 1 x 1.5 sq.m	Rm	940		
3.2	2 x 2.5 sq.mm + 1 x 2.5 sq m	Rm	2700		
3.3	2 x 4.0 sq.mm + 1 x 4.0 sq m	Rm	1960		
3.4	2 x 6 sq. mm + 1 x 6 sq. mm earth wire	Rm	140		

4	Supplying and drawing pair 0.5 sq mm dia FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
4.1	2 Pair	Rm	530		
4.2	4 Pair	Rm	280		
5	Supplying and drawing co-axial TV cable RG-6 grade, 0.7mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	Rm	120		

6	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
6.1	20 mm	Rm	800		
6.2	25 mm	Rm	400		
6.3	32 mm	Rm	100		

7	Supply and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.				
7.1	200 mm x 250 mm x 100 mm deep	Each	15		
7.2	250 mm x 300 mm x 100 mm deep	Each	10		
8	Supplying and fixing following modular socket outlet on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				

8.1	Telephone socket outlet	Each	40		
8.2	TV antenna socket outlet	Each	5		
9	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	35		
10	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	80		

11	Supplying and fixing following size / modules, GI box alongwith modular base & cover for modular telephone/ data sockets in recess / surface etc as required.				
11.1	1 or 2 module	Each	80		
12	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required.	Each	215		
13	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	105		

14	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	100		
15	Supplying and fixing of call bell or buzzer suitable for single phase 230 volts, complete as required	Each	10		
16	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	230		

17	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required.	Each	35		
18	Supplying and fixing extra conduit down rod of 20 cm length G.I. pipe 15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	30		
19	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
19.1	Upto 450 mm sweep	Each	30		

20	Supplying and drawing UTP 4 pair CAT 6 LAN cable in the existing surface / recessed steel / PVC conduit as required.	Rm	510		
B. MCBs, DBs and Cable Trays					
21	Providing and fixing 100A, 16kA, TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections etc as required.	Each	4		
22	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				

22.1	2+8 way Double door	Each	1		
22.2	2+12 way Double door	Each	1		
23	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
23.1	4 way, Double door	Each	5		

23.2	6 way, Double door	Each	9		
23.3	8 way, Double door	Each	4		
24	Supplying and fixing following way surface / recess mounting vertical type, 415 volt, TPN MCB distribution board of steel sheet, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, (But without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				

24.1	4 way Double door	Each	3		
24.2	8 way Double door	Each	2		
25	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
25.1	Single pole	Each	250		

25.2	Double pole	Each	2		
25.3	Triple pole	Each	20		
25.4	Triple pole and neutral	Each	17		
26	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc as required.	Each	80		

27	Supplying and fixing following rating, double pole, 240 volts,isolator in the existing MCB DB complete with connections,testing and commissioning etc. as required.				
27.1	40 amps	Each	1		
27.2	63 amps	Each	1		
26	Supplying and fixing following rating, four pole, 415 volts,isolator in the existing MCB DB complete with connections,testing and commissioning etc. as required.				

26.1					
	40 amps	Each	12		
26.2					
	63 amps	Each	6		
27	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current of 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
27.1	40 amps	Each	1		

27.2	63 amps	Each	1		
28	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current of 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
28.1	25 amps	Each	6		
28.2	40 amps	Each	12		

28.3	63 amps	Each	6		
29	Supply and fixing TP sheet steel enclosure on surface recess along with 16/25/32/amps 415V "C" curve TP MCB complete with connections, testing and commissioing etc as required.	Each	20		
30	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps, C curve SP MCB in sheet steel enclosure on surface or in recess, with chained metal cover for the socket outlet and complete with connection, testing and commissioning etc as required.	Each	10		
C. Earthing					

31	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Each	4		
32	Earthing with GI earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	6		
33	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	6		
34	Supplying and laying 6 SWG GI wire at 0.5m below ground level for conductor earth electrode, including connection / termination with GI thimble etc as required.	Rm	40		

34a	Supply and laying 25mm x 5mm copper strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	Rm	120		
35	Supply and laying 25mm x 5mm GI strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	Rm	140		
36	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Rm	130		
37	Providing and fixing 25 mm X 5 mm GI strip on surface or in recess for connections etc. as required.	Rm	320		

38	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Rm	100		
39	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring/cable as required.	Rm	180		
D. MV Cable laying and Termination					
40	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
40.1	Upto 35 sqmm	Rm	350		

40.2	Above 35 sqmm and upto 95 sqmm	Rm	20		
40.3	Above 95 sqmm and upto 185 sqmm	Rm	40		
41	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
41.1	Above 95 sqmm and upto 185 sqmm	Rm	200		

42	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing HUME/RCC/METAL pipe as required.				
42.1	Upto 35 sqmm	Rm	50		
42.2	Above 35 sqmm and upto 95sqmm	Rm	10		
42.3	Above 185sq. mm and upto 400 sq. mm	Rm	30		
43	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				

43.1	Upto 35 sq. mm	Rm	20		
43.2	Above 35 sq. mm and upto 95 sq. mm	Rm	10		
43.3	Above 95 sq. mm and upto 185 sq. mm	Rm	20		
44	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
44.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Rm	570		

44.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Rm	60		
44.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3 mm MS flat clamp)	Rm	30		
45	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
45.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Rm	450		
45.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Rm	300		

45.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3 mm MS flat clamp)	Rm	50		
46	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Each	20		
47	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
47.1	3.5 x 185 sqmm cable	Each	12		

47.2	3.5 x 150 sqmm cable	Each	2		
47.3	3.5 x 95 sqmm cable	Each	6		
47.4	3.5 x 70 sqmm cable	Each	14		
47.5	3.5 x 50 sqmm cable	Each	10		

47.6	3.5 x 35 sqmm cable	Each	6		
47.7	3.5 x 25 sqmm cable	Each	14		
47.8	4 x 16 sqmm cable	Each	26		
47.9	4 x 10 sqmm cable	Each	18		

47.10	4 x 6 sqmm cable	Each	30		
47.11	4 x 4 sqmm cable	Each	20		
48	Providing, laying and fixing of 100mm dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required				
48.1	50 mm dia	Rm	50		

48.2	100 mm dia	Rm	50		
49	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.				
49.1	150 mm dia	Rm	50		
49.2	300 mm dia	Rm	50		

E. LT Panel Board and Accessories					
50	Supply, Installation, Testing & Commissioning of LT panel , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	630A, TPN, switch disconnector unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				
	1 Set of 650 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				

	1 No 3 phase Digital Multi function meter to read V, A, F, PF, kW, kWh with Acc class 1.				
	600/5A, 10VA, class 1, resin cast CT - 1 set				
	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	250A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 1 no.				
	160A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 2 no.				
	125A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 3 no.	Each	1		

51	Supply, Installation, Testing & Commissioning of Sub Panel -1 , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	125A, TPN, switch disconnector unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				
	1 Set of 150 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F, PF class 1.				
	120/5A 10VA class 1 resin cast CT - 1 set				

	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	63A TPN MCB, C curve - 4 nos.				
	40A TPN MCB, C curve - 4 nos.	Each	1		
52	Supply, Installation, Testing & Commissioning of Bio-medical Panel , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	630A, TPN, switch disconnector unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				

	1 Set of 650 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F, PF, kW, kWh with Acc class 1.				
	600/5A 10VA class 1 resin cast CT - 1 set				
	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	250A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 2 no.				
	200A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 1 no.				
	125A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 2 no.	Each	1		

53	Supply, Installation, Testing & Commissioning of AC Main Panel , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	250A, TPN, switch disconnector unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				
	1 Set of 250 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F, class 1.				

	250/5A 10VA class 1 resin cast CT - 1 set				
	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	160A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 1 no.				
	125A, TPN, 25kA, MCCB with thermal magnetic release with adjustable OL protection - 2 no.				
	100A, TPN, 16kA, MCCB with thermal magnetic release with adjustable OL protection - 2 no.	Each	1		

54	Supply, Installation, Testing & Commissioning of AC Sub Panel -1 , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	200A, TPN, switch disconnector unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				
	1 Set of 200 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F, class 1.				

	200/5A 10VA class 1 resin cast CT - 1 set				
	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	63A TPN MCB, C curve - 5 nos.				
	40A TPN MCB, C curve - 5 nos.	Each	1		
55	Supply, Installation, Testing & Commissioning of Power panel , cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				

	Incomer				
	200A, TPN, switch disconnecter unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				
	1 Set of 200 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F, class 1.				
	200/5A 10VA class 1 resin cast CT - 1 set				
	Required Danger boards, signages, lettering etc.				
	Outgoing.				
	100A, TPN, 16kA, MCCB with thermal magnetic based adjustable OL protection - 1 no.				
	63A TPN MCB, C curve - 3 nos.				
	40A TPN MCB, C curve - 3 nos.	Each	1		

F. LT Cables					
56	Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				
56.1	3.5 x 185 sqmm cable	Rm	300		
56.2	3.5 x 150 sqmm cable	Rm	50		
56.3	3.5 x 95 sqmm cable	Rm	100		

56.4	3.5 x 70 sqmm cable	Rm	210		
56.5	3.5 x 50 sqmm cable	Rm	90		
56.5	3.5 x 35 sqmm cable	Rm	100		
56.6	3.5 x 25 sqmm cable	Rm	200		

56.7	4 x 16 sqmm cable	Rm	410		
56.8	4 x 10 sqmm cable	Rm	320		
56.9	4 x 6 sqmm cable	Rm	250		
56.10	4 x 4 sqmm cable	Rm	200		

G. Light Fixtures & External lighting					
57	Supply of 1x28 watts flurosent tube fitting powder coated CRCA steel channel complete with all electrical accessories like electronic ballast, lamp holder, 28W T5 lamp etc complete as required. (Bajaj BTCR 128 / Crompton T5GP28EBS / Havells LHFYBYF10N1W028).	Each	95		
58	Supply and installation of 4x14W recess mounted indirect / direct luminaire, with central patterned diffuser, powder coated CRCA housing complete with all electrical accessories like electronic ballast, lamp holder, 14W T5 lamp, mounting chain, hook, anchor fastner etc complete as required. (Crompton T5DIP414EB / Bajaj BNXT 414 PF / Havells LHFCDEF4IL1W014)	Each	80		
59	Supply & installation of recess mounted LED down light fixture, with die cast aluminium housing, high efficiency diffuser etc complete with all accessories like driver, day light LED lamp, optimised heat sink etc as required. (Crompton LCDD-15-CDL / Bajaj BZSLO 15W WH / Havells LHEBJNP7IN1W015)	Each	75		

60	Supply of 2x18 watts surface mounted decorative luminaire with powder coated CRCA housing, paralite louvers, complete with all accessories like electronic ballast, 18W CFL lamp etc complete as required.(Crompton TLE218EB/P5 / BSMLA 01 218 WEBS / Havells LHCC01218425)	Each	55		
61	Supply of 1x14 watts fluroscnt tube fitting, with aluminium / PVC body complete with all electrical accessories like electronic ballast, lamp holder, 14W T5 lamp, diffuser / acrylic etc complete as required. (Bajaj BTIP 114 ACR N / Havells LHDF11114031).	Each	30		
62	Supply & installation of 2x36W, indoor recess mounted front opening clean room luminaire with intergral control gear, lamps, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Bajaj BPRF 236 C LHD / Crompton CRFW12236EB(595) / Havells LHHCO2236127).	Each	8		

63	Supplying and fixing ISI marked PVC angle batten holder with 15W CFL lamp including all connection etc as required.	Each	40		
64	Supply of 1200 mm sweep min three star rated ceiling fan complete with motor, double ball bearing, blades, canopy, 30 cm down rod and without speed regulator suitable for 230 V 50 HZ, AC supply confirms to IS 374/1979 as required complete. (Usha Technix Star Rated / Crompton High Breeze Plus / Havells ES-50 Premium 5).	Each	35		
65	Supply & installation of Wall fan ,400mm sweep, powder coated guard suitable for single phase 230 volt, 50Hz AC supply complete with motor, capacitor and all accessories as required complete. (Make : Usha Max Air white or equivalent)	Each	7		

66	Supply of 250mm sweep, 1250 rpm, louvered ventilating fan suitable for single phase 230 volt, 50Hz AC supply complete with motor, capacitor, louvers/ shutters and all accessories as required complete. (Usha Crisp Air / Crompton cross air / Havells Ventil Air-DX WHT)	Each	25		
67	Supply of heavy duty exhaust fan 450 mm sweep, single phase, 950 rpm of approved colour including all accessories as required (Crompton HDEF / Usha Turbo heavy duty / Havells Turbo Force)	Each	5		

68	Supply & installation of Hot dipped Galvanised (internally and externally), seamless, octagonal pole of overall length 6 M with single arm bracket of 1.5m length 48mm dia x 3.25mm thick with standard arm cap. The pole shall have inbuilt cable loop in loop out with flush door and locking facility. The bottom dia of the pole shall be 135mm and top 70mm with 3mm sheet thickness. The pole shall be with base plate of 225x225x16mm and 4nos required size of foundation bolt. The pole shall be mounted on suitable size foundation (design to be got approved) with baseplate arrangement and provided with 4A SP C curve MCB, loop in loop out terminals block, required dia GI / PVC pipe shall be provided in the	Each	15		
69	Supply, installation, testing & commissioning of IP66,45/48W LED street light fixture, with die cast aluminium housing, toughened glass, stainless steel toggle, electronic driver etc as required. The light fitting shall be suitably installed with all required accessories to the street light pole. (Similar to Havells LHETAXU7PN6W048 / Crompton LSTO-45-CDL / Bajaj BRTFG 45W LED)	Each	15		
H. Cable Tray & MCBs					

70	Supply and installation of structural steel work with required size MS angle, MS flat etc for cable tray work including cutting, hoisting, welding, bolting, fixing in position, hanging, and applying 2 coat of steel primer and 2 coat of enamel paint of approved quality all complete. The GA drawing and fixing arrangement shall be got approved from the Engineer-in-charge.	kg	1000		
71	Supplying and fixing 40A / 63A TP MCB, 415 Volts, "C" series, miniature circuit breaker in the existing MCB DB complete with connections, testing and commissioning etc as required.	Each	20		
72	Supplying and fixing FP sheet steel enclosure (outdoor type) on surface/ recess along with 16/25/32amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	5		

73	Supplying and fixing FP sheet steel enclosure (outdoor type) on surface/ recess along with 40/63amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	10		
74	Supplying and fixing following ways surface / recess mounting vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted. Inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs with 100 amps TP 16kA MCCB as incomer interconnection between incomer MCCB and busbar (but without MCBs/MCCB) as required. (Note vertical type MCB TPDB is normally used where 3 phase outlets are required).				
74.1	4 way	Each	2		

74.2	8 way	Each	2		
I. Telephone & Network system					
75	Supply and Installation of 50 pair MDF box including back mount frame and 50 pair original krone connectors with all accessories.	Each	1		
76	Supply and Installation of 20 pair MDF box including back mount frame and 20 pair original krone connectors with all accessories.	Each	1		
77	Supply and Installation of 10 pair MDF box including back mount frame and 20 pair original krone connectors with all accessories.	Each	3		

78	Supply and laying 20 pair 0.5 sqmm FR PVC insulated annealed copper conductor, un armoured telephone cable in surface / through pipe / cable tray including all accessories as required.	Rm	50		
79	Supply and laying 10 pair 0.5 sqmm FR PVC insulated annealed copper conductor, un armoured telephone cable in surface / through pipe / cable tray including all accessories as required.	Rm	150		
80	Supply & fixing modular type computer outlet (RJ-45) with modular base and cover plate, GI box complete with all accessories, connection etc. complete as required.	Each	35		
81	Supply, installation, testing & commissioning of 24 port unmanaged Gigabit 10/100/1000 Mbps Unmanaged Switch, RoHS compliant with all required accessories.	Each	1		

82	Supply, installation, testing & commissioning of 8 port unmanaged Gigabit 10/100/1000 Mbps Unmanaged Switch, RoHS compliant with all required accessories.	Each	3		
83	Supply and installation of 6-24 port fully loaded patch panel 1U with cable manager, 4ft Cat 6 patch cord and all required accessories.	Each	4		
84	Supply and installation of 9 U wall mounted Network Rack made of steel, powder coated, front glass cover with PDU's, cable manager and cooling fans etc including all required accessories.	Each	4		
J. Miscellaneous Items					
85	Providing and fixing 10 SWG copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring/cable as required.	Rm	200		

86	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.	Rm	10		
87	Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.	Each	3		
88	Supply and providing Electrical main single line Diagram duly framed and placed in a conspicuous location for clear vision.	Each	1		
89	Preparation of electrical drawing for the building for statutory approval, submission of drawings to statutory bodies and obtain approval including all incidental expenses except the fees payable to the statutory bodies with valid receipts from the authorities.	Job	1		
	Total Amount - PART IV				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL					
PART V: Air Conditioning Works					
SI No	Item Description	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
1	Supply, installation balancing and commisioning of factory fabricated GSS sheet metal ducts rectangular/round ducting complete with neoprene rubber gaskets,elbows,splitter,dampers,vanes,hangers,supports etc as per approved drawings & specification of following sheet thickness				
a	24 g ducting	Sqm	400.00		
b	22 g ducting	Sqm	330.00		

c	20 g ducting	Sqm	130.00		
d	18 g ducting	Sqm	270.00		
2	Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core.	Sqm	6.00		
3	Supplying, fixing testing commissioning of Return air diffusers of powder coated aluminium with out aluminium volume control dampers with anti smudge ring & removable core.	Sqm	6.00		

4	Supply, intallation, testing and commissioning (SITC) of 11 TR, 5500 cfm capacity aircooled Ductable split / package air conditioner with scroll compressor, Ceiling Suspended Indoor Units (IDU) and all standard fittings, IDU SS drain pan, as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed multiple scroll compressors, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and saftey devices like thermal protector, pressure relief valve, over load relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.	Each	3.00		
5	Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 11 TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition (in case of multiple compressor machine, unit length will be 1m of multiple pipes as required) .	Rm	50.00		

6	Supply, intallation, testing and commissioning (SITC) of 8 TR, 4200 cfm capacity aircooled Ductable split / package air conditioner with scroll compressor, Ceiling Suspended Indoor Units (IDU) and all standard fittings, IDU SS drain pan, as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed multiple scroll compressors, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and saftey devices like thermal protector, pressure relief valve, over load relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.	Each	3.00		
7	Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 8 TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition (in case of multiple compressor machine, unit length will be 1m of multiple pipes as required) .	Rm	35.00		

8	Supply, installation, testing and commissioning (SITC) of 8.5 TR capacity aircooled Outdoor condensing unit with scroll compressor as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge R 22 refrigerant gas, vibration isolator pads and safety devices like thermal protector, pressure relief valve, over load relays single phase preventor, high-low pressure cut out, suitable for three phase 440V supply.	Each	2.00		
9	Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant piping for 8.5TR machine with 13 mm nitrile rubber insulation interconnecting the condensing unit to evaporating unit for packaged units as per site condition	Rm	25.00		

10	SITC of DX type double skinned air handling units, ceiling suspended/floor mounting type 8.5 TR, 1500 lps capacity complete with suitable DIDW blower (asper approved make), blower section, static pressure of 80mm of water column, built in pre filter(EU4), fine filter(EU7) 95% efficiency down to 5 microns and controls connected to condensing units, insulated SS drain pan, 6 row cooling coil, electric motor, direct driven package with TEFC motor class 'B' insulation, suitable for 3 phase, 415 V, 50Hz supply, suitable AHU panel & cabling, AHU temp & speed control panel , ARI certified, with 0.8mm double skinned 40mm thick PUF panel, belt guards, suitable supports for suspending from slab,	Each	2.00		
11	SITC of Humidity Controller electric strip heaters in supply air plenum complete with fixing arrangements, thermostats and safety thermostat including all power and control wiring	Each	2.00		
12	Supply, Laying and Fixing of control wiring of suitable size required from the Indoor to outdoor units for all units as per specification.	Rm	285.00		

13	Supply, installation, testing and commissioning PVC drain pipe of 25mm dia ISI marked, connecting the drain lines from the indoor units to floor sump, with 9mm nitrile rubber insulation as per specification	Rm	285.00		
14	Supply, installation, testing and commissioning of Air Cooled High Wall mounted Split Air Conditioner of following capacity consisting of high wall mounted type room unit (fan coil) with cordless remote control and one number outdoor condensing unit comprising of energy efficient suitable rotary compressor for operation on single phase, 230 V, 50Hz supply, fixing the outdoor unit on a raised platform as per manufacturers recommendation and fixing of room (fan coil) unit on wall, standard 4 m distance refrigerant copper piping with 13mm nitrile rubber insulation, providing and making interconnection between room & condenser as per site conditions, comprising of 1" dia drain PVC pipe with				
a	1 TR 5 star rated as per BEE	Each	6.00		

b	1.5 TR 5 star rated as per BEE	Each	2.00		
c	2.0 TR 5 star rated as per BEE	Each	3.00		
15	Supply & installation Copper Refrigerant piping suitable for Split units, duly insulated with closed cell elastomeric nitrile rubber insulation, class-o, covered with two layers of shield coating, complete with elbows, T joints, sleeves etc., and GI clamp for individual pipes.	Rm	152.00		

16	Supply, installation, testing and commissioning Ceiling Suspended Cassette type room Air-conditioner following capacity unit three phase 415V, compact cooling coil, electronic expansion valve, suction air grill, in built drain pump coated with silver ions to prevent slime, mould and bacterial growth, air filter with anti-mould and anti bacterial treatment & decorative panel. Out door unit with highly energy efficient Compressor with copper coils, first charge refrigerant gas and with MS stand. Unit to be capable of maintaining $22\pm 1^{\circ}$ C indoor condition with cordless remote with various features like 3 speed, auto manual selection etc also. Unit capable of 30 meter maximum interunit piping length and 15 maximum installation level difference.				
a	3 TR 5 star rated as per BEE	Each	1.00		
b	2 TR 5 star rated as per BEE	Each	3.00		

17	Supply & installation Copper Refrigerant piping suitable for Cassette units, duly insulated with closed cell elastomeric nitrile rubber insulation, class-o, covered with two layers of shield coating, complete with elbows, T joints, sleeves etc., with GSS slotted rail supporting arrangement from ceiling/wall and GI clamp for individual pipes.	Rm	100.00		
AIR DISTRIBUTION					
18	Supply, installation balancing and commisioning of factory fabricated Aluminium sheet metal ducts rectangular/round ducting complete with neoprene rubber gaskets,elbows,splitter,dampers,vanes,hangers,supports etc as per approved drawings & specification of following sheet thickness				
a	18 g	Sqm	69.00		

b					
	20 g	Sqm	69.00		
c					
	22g	Sqm	156.00		
19	SITC of External thermal insulation on supply air ducts using min 13mm thick nitrile rubber class "O" closed cell type with antimicrobial protection as per specifications	Sqm	1375.00		
20	Supply, installation, testing and commissioning of Acoustic duct lining using 10mm nitrile rubber insulation open cell type inside the ducts, antimicrobial protection at the outlets of all indoor units upto 4m distance from fan outlet as per spec provided.	Sqm	150.00		

21	Supply, installation and comissioning of underdeck insulation with 20 mm thick closed cell elastomeric Nitrile Rubber density of 40kg/m3 on ceiling with necessary adhesive, fixtures 600x600mm GI wire netting, supports etc.	Sqm	563.00		
22	Supply, fabrication, installation, testing of flexible connections made out of fire resistant flexible double canvas sleeve.	Set	8.00		
23	SITC of Fire Control Damper made of 16G GSS sheet blade and frame with 165mm casing, heavy duty interlocking blades and fuly enclosed bade linkage mechanism, SS lateral seal blade seals, self lubricating sintered bronze bushes, fire rating as per UL555-1995 tested as per BS-476 part 20 with 18G extended sleeve 450mm and with fusible link, spring mechanism control panel temp sensor, smoke sensor, limit swith with lever for auto shut off in case of fire/smoke as per specifications.	Sqm	5.00		

24	SITC of multi blade type volume control dampers made of extruded aluminium for ducts/ collars to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distributions system in main ducts, return ducts & other area as per specification.	Sqm	5.00		
25	SITC of Fresh air GI louvers of required size with wire mesh and birds screen for IDUs/AHUs as per specifications.	Sqm	4.50		
26	Supply and fixing of Terminal HEPA Filters having filtering efficiency of 99.7% down to 0.3 microns with aluminum frame works, suitable for fixing in the Supply air plenum boxes				
a	610 x 610 x305	Each	8.00		
27	SITC of Plenum box made of 18G Aluminum sheet with frame work for fixing HEPA filters at terminals and provision of access door for removing the HEPA Filters for cleaning and replacement .The size shall be to suit				

a	610 x 610 x305 mm	Each	8.00		
28	Supply installation testing and balancing of continous Perforated Aluminum Grilles for supply and return air grilles in accordance with the approved shop drawings size.	Sqm	7.00		
29	Supply, installation, testing and comissioning of Inline Centrifugal duct fan with dynamically balanced impeller of 500cfm capacity, min 10 mm static , complete with GI box, with single phase direct driven motor with class B, IP44 protection with an internal automatic safety thermal overload protection, dynamically balanced impeller of following capacity, with an operating sound level of less than 55dB at 3 m distance.	Each	3.00		

30	Supply, installation, testing and comissioning of Inline Centrifugal duct fan with dynamically balanced impeller of 325 cfm capacity, min 15 mm static , complete with GI box, with single phase direct driven motor with class B, IP44 protection with an internal automatic safety thermal overload protection, dynamically balanced impeller of following capacity, with an operating sound level of less than 55dB at 3 m distance. Hepa fliter of Maxmimum size 325 x 325 also to be considered in the ducting with provision for removal of Hepa filter for cleaning/replacement.	Each	1.00		
31	Supply and fixing of MERV 14 Filters having filtering efficiency of 98% down to 0.3 to 1 microns with aluminum frame works having thickness 305 mm, suitable for fixing in the Supply air ducting with provision for removal of filter for cleaning/replacement	Sqm	1.00		
32	Supply and fixing of MERV 13 Filters having filtering efficiency of 97% down to 0.3 to 1 microns with aluminum frame works,having thickness 305 mm, suitable for fixing in the Supply air ducting with provision for removal of filter for cleaning/replacement	Sqm	1.50		

33	Supply, installation, testing and commissioning of the following cabinet type centrifugal fans with backward/forward curved inclined type heavy duty class I DIDW /SISW centrifugal fans with 3/1 Phase TEFC with IP 55 protection and class F insulation complete with base frame to mount fan motor with adjusting brackets, vee drive belt and belt guard, vibration spring isolators, filters with rain protection louvers, canvas connection and epoxy painted all as per specs. Maximum outlet velocity of the fans not to exceed 9 m/s.				
a	Industrial Heavy duty Exhaust fan 380mm& 1400 RPM	Each	1.00		
	Total Amount - PART V				

CONSTRUCTION OF TERTIARY CANCER CARE CENTRE AT GOVERNMENT MEDICAL COLLEGE,					
PART VI:- SITC OF FIRE PROTECTION WORKS					
Item No	Details of items	Unit	Quantity	Rate in figures and words (Rs.)	Amount (Rs.)
1	Supply, installation, testing & commissioning of electric motor driven pump rated for 2280 LPM At head of 50 m complete in all respects	SET	1		
2	Supply, installation, testing & commissioning of Diesel Engine driven pump rated for 2280 LPM At head of 50 m complete in all respects	SET	1		
3	Jockey Pump				
	Supply, installation, testing & commissioning of Monoblock jockey pump rated for 180 LPM at 50 m head with TEFC electric motor of 5 HP, complete in all respects	SET	1		
4	Fire Pump control panel for main Electric, Standby Electric fire pump and Jockey Pump				

a	Supply, installation, testing & commissioning of Pump Panel, Starter arrangement for electrical pumps (Main and Jockey, battery charger for standby Engine driven pump, Copper control cable for connection of pressure Switches, Complete in all respects & conforming to project specification.	Each	1		
5	Supply, installation, testing & commissioning of cast iron, wafer type Butterfly valves of following sizes PN 1.0 grade, IS 13095, hand lever operated, complete in all respects & conforming to project specification.				
i)	100 mm dia	Each	4		
ii)	80 mm dia	Each	4		
6	Supply, installation, testing & commissioning of cast iron, Non Return valve of following sizes, swing check type with out by pass arrangement, Slim seal type, complete in all respects & conforming to project specification.				

i)	100 mm dia	Each	3		
ii)	80 mm dia	Each	1		
7	Cast iron Foot Valve, Flanged with Building strainer PN 1.0, of the following sizes				
i)	100 mm dia	Each	2		
ii)	80 mm dia	Each	1		

8	Supply, installation, testing & commissioning of Pressure switch, below type for the automatic operation of pumps. ,suitable for the operating pressure.	Each	3		
9	Supply, installation, testing & commissioning of Pressure Gauge bourdon type with 0-200 psi range & 10 inch dial.	Each	2		
10	Supply, installation, testing & commissioning of G.I C class pipes, IS 1239 with required attachments, and red color enamel over two coats of anti corrosive primer, Rate to be inclusive of all supports, its specials and all builders works including sleeves & associated civil works, complete in all respects & conforming to project specification (Excluding Core Cutting)				
i)	100 mm dia	Rm	120		

ii)	80 mm dia	Rm	20		
iii)	65 mm dia	Rm	18		
iv)	25 mm dia	Rm	72		
11	Supply, installation, testing & commissioning of GM,63mm.Single Headed Hydrant Valve,IS 5290,flanged type including all accessories.	Each	6		
12	Supply, installation, testing & commissioning of Hose Cabinet to accommodate 2 pieces of fire hose 63*15 Mwith one branch pipe. The cabinet shall be made out of 16 SWG MS sheet with glass front and hinged door.	Each	6		

13	Supply, installation, testing & commissioning of 63 mm dia 15M length Fire Hose CPC IS : 8423-1994 with GM couplings. Complete in all respects & conforming to project specification.	Each	12		
14	Supply, installation, testing & commissioning of GM, 19mm Air Release Valve, with screwed inlet, Ball type flat made of gun metal complete, suitable for the system operating pressure.	Each	2		
15	Supply, installation, testing & commissioning of First Aid Hose Reel (as per ISI) wall mounted, swinging type 18 SWG MS sheet, fitted with 20 mm dia x 30 M long high pressure, fabric reinforced hose, with chrome plated nozzle. Complete in all respects & conforming to project specification.	Each	4		
16	Supply, installation, testing & commissioning of GM, 63 mm, Universal Branch Pipe, conforming to IS 903	Each	6		
	Sprinkler System				
17	Supply, installation, testing & commissioning of 19 mm nominal bore Quartzoid Bulb Type Sprinkler, 68 Degree C of Tyco/HD make, UL/FM/BIS/LPCB approved				

i)	Pendant	Each	40		
18	Supply, installation, testing & commissioning of Fire Brigade Inlet consisting 3 no's 63 mm dia Inlet Valve of GM conforming to IS	Each	1		
17	Extinguisher				
i)	Supply, installation, testing & commissioning of dry chemical powder type (DCP) fire extinguishers (ABC Type) of 4 kg capacity, IS 13849	Each	10		
ii)	Supply and installation, testing and commissioning of CO2 type fire extinguisher with 4.5kg. Capacity complete with installation brackets with ISI mark IS:15638	Each	10		
	CONVENTIONAL FIRE ALARM SYSTEM				
a)	Supply, installation, testing & commissioning of microprocessor based 8 zone ,Conventional Fire alarm panel with 1 hour battery backup, UL/FM/BIS/LPCB approved	set	1		

b)	Supply, installation, testing & commissioning of Conventional Hooter with minimum of 85 db at 10 feet including all accessories , UL/ FM/BIS/LPCB approved	Each	4		
c)	Supply, installation, testing & commissioning of Conventional Manuel Call Point Break Glass Type with relay modules including all accessories , UL/ FM/BIS/LPCB approved	Each	4		
d)	Supply, installation, testing & commissioning of Conventional photoelectric Smoke Detector including all accessories , UL/ FM/BIS/LPCB approved	Each	115		
e)	Supply, installation, testing & commissioning of 2C x 1.5sq.mm FRLS twisted pair shielded, 1.1KV grade PVC insulated armored copper conductor cable.	Rm	1300		
	Total Amount - PART VI				