

**MINISTRY OF HEALTH & FAMILY WELFARE,
GOVT. OF INDIA, NEW DELHI**

TENDER

FOR

**Construction of Residential Complex (Part II) for
AIIMS like Institution at Bhubaneswar under
PMSSY**

VOLUME – V

**Bill of Quantities
(B.O.Q)**

JUNE 2011



**HSCC (INDIA) LTD.
(CONSULTANTS & ENGINEERS FOR MEGA HOSPITALS & LABORATORIES)
E-6(A), sector-1, NOIDA(U.P) 201301 (India)**

Phone : 0120-2542436-40

Fax : 0120-2542447

Tender No. HSCC/PMSSY/BHUB/HOUS/2011

**“Construction of Residential Complex (Part II) for
AIIMS like Institution at Bhubaneswar under
PMSSY”**

BILL OF QUANTITIES

BILL OF QUANTITIES

OF

CIVIL WORKS

PROJECT: CONSTRUCTION OF AIIMS HOUSING AT BHUBHNESHWAR						
NAME OF THE WORK:- BOQ OF AIIMS HOUSING PROJECT PHASE-II (TYPE 1 32 D.U., HOSTEL UG AND PG, Nursing Students Hostels, DINING HALL, GUEST HOUSE)						
Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
1.00	EARTH WORK					
1.01	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.					
a)	All kinds of soil	8528.00	CUM			
1.02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
a)	All kinds of soil	2699.00	CUM			
1.03	Extra for every additional lift of 1.5 m or part there of in.					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
a)	All kinds of soil	194.00	CUM			
1.04	Extra for disposal of excavated earth for every additional lead of 50m or part thereof upto 200m					
a)	All kinds of soil	2003.00	CUM			
1.05	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, lead up to 50 m and lift up to 1.5 m.	7332.00	CUM			
1.06	Supplying and filling in plinth with river sand under floors including, watering, ramming consolidating and dressing complete.	509.00	CUM			
1.07	Carriage of earth by mechanical transport including loading, unloading and stacking etc complete as directed.					
l)	Upto 1 km.	2544.00	CuM			
1.08	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	6454.00	SqM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
	SUB TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
2.00	CONCRETE WORK					
2.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
a)	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	509.00	CUM			
b)	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	718.00	CUM			
c)	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	55.00	CUM			
2.02	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 12.5mm nominal size).	791.00	SQM			
2.03	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	791.00	SQM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
2.04	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50kg of cement.	206.00	per bag of 50Kg. of cement used in the mix			
2.05	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :					
a)	Dumb bell with central bulb (180mm wide, 8mm thick).	50.00	Metre			
	Sub Total					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
3.00	REINFORCED CEMENT CONCRETE					
3.01	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement. including 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 the Engineer - in - charge. M-25 grade Reinforced cement concrete by using 380kg. of cement per cum of concrete.					
a)	All work upto plinth level	2398.00	CUM			
b)	All work from plinth level upto floor V level	10017.00	CUM			
3.02	Add or deduct for providing richer or leaner mixes respectively at all floor levels.					
a)	Providing M-30 grade concrete by using 400kg of cement per cum of concrete instead of M-25 grade B.M.C/R.M.C	620.00	CuM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
3.03	Centering and shuttering including strutting, propping etc. and removal of form for:					
a)	Foundations, footings, bases of columns, etc. for mass concrete.	2409.00	SQM			
b)	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	6779.00	SQM			
c)	Suspended floors, roofs, landings, balconies and access platform.	25439.00	SQM			
d)	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	33438.00	SQM			
e)	Columns, Pillars, Piers, Abutments, Posts and Struts.	22879.00	SQM			
f)	Stairs, (excluding landings) except spiral-staircases.	1258.00	SQM			
g)	Shelves (Cast in situ)	439.00	SQM			
h)	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	91.00	SQM			
i)	Edges of slabs and breaks in floors and walls.					
a)	Under 20 cm. wide	430.00	SQM			
3.04	Extra for shuttering in circular work					
(a)	In columns	106.00	SQM			
(b)	In Beams	106.00	SQM			
(c)	In Slabs	20.00	SQM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
3.05	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.					
a)	Thermo-Mechanically Treated bars.	1782.00	Tonne			
3.07	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)					
a)	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured).	50.00	Sqm			
	SUB-TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
4.00	BRICK WORK					
4.01	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:					
a)	Cement mortar 1:6 (1 cement: 6 coarse sand)	777.00	CUM			
4.02	Brick work with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level in all shapes and sizes in :					
i)	Cement mortar 1:6 (1 cement: 6 coarse sand)	6068.00	CUM			
4.03	Extra for brick work in superstructure above floor V level for each four floors or part thereof by mechanical means by lifting material using mobile crane.	1818.00	CUM			
4.04	Half brick masonry with F.P.S. brick of class designation 75 in foundations and plinth in.					
a)	cement mortar 1:4 (1 cement: 4 coarse sand)	605.00	SQM			
4.05	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level.					
a)	Cement mortar 1:4 (1 cement :4 coarse sand)	19851.00	SQM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
4.06	Extra for half brick masonry in superstructure, above floor V level for every four floors or part thereof by mechanical means by lifting material using mobile crane.	5910.00	SQM			
4.07	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks).	19851.00	SQM			
4.08	Extra for forming Cavity in cavity walls with necessary weep and vent holes including use of cores and cost of providing and fixing bitumastic coated M.S. ties 600 mm long of 25mmx3mm section at not less than 3 ties per sqm as per approved design.	200.00	SqM			
	SUB-TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.00	DOORS & WINDOWS					
5.01	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, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately) :					
a)	For fixed portion					
i)	Powder coated aluminium (minimum thickness of powder coating 50 micron)	23234.00	Kg			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
b)	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 PVC / neoprene gasket required (Fittings shall be paid for separately).					
i)	Powder coated aluminium (minimum thickness of powder coating 50 micron)	14347.00	Kg			
5.02	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.					
a)	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	122.00	SQM			
5.03	Providing and fixing ISI marked flush door shutters conforming to IS 2202 (Part I) non-decorative type, core of block board construction with frame of 1 st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
a)	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	3573.00	SQM			
5.04	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ 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) :					
a)	With float glass panes of 5.50 mm thickness	4647.00	SQM			
5.05	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	930.00	SQM			
5.06	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :					
a)	125 mm.	4015.00	Each			
b)	100mm	3152.00	Each			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.07	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:					
a)	150 x 10 mm	3589.00	Each			
b)	250 x 10 mm	2008.00	Each			
5.08	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete:					
a)	250 x 16 mm	1998.00	Each			
5.09	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	50.00	Each			
5.10	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers & a pair of lever handles with necessary screws etc. complete . (Best make of approved quality)	50.00	Each			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.11	Providing and fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	1990.00	Each			
5.12	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.					
a)	Twin rubber stopper	2006.00	Each			
5.13	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :					
a)	2nd class teak wood					
i)	50x12 mm	998.00	Metre			
5.14	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors 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 stainless steel cover plate.	5.00	Each			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.15	Providing and fixing 24 gauge and 18 mm size chicken wire mesh at junction of concrete and brickwork and other locations at all heights including cutting to required size and side laps of minimum 75 mm and fixing in position with cement and nails as directed.	2000.00	SQM			
5.16	Extra for providing etching on glass panes in doors, windows and clerestory window shutters, partitions etc in desired pattern complete as per drawing and as directed. (Area of etching shall be measured for payment)	50.00	SqM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.17	<p>Providing and installation of fully insulated wooden fire rated shutter of 120min. fire rating conforming to BS: 476 part 22 and IS:3614 Part II as per the prototype tested and certified by CBRI Roorkee, of 55mm thickness, comprising of 75mm x 49mm hardwood internal timber frame work, with infill of 96 kg/m³, ceramic fiber blankets, coated with VIPER FR or equivalent intumescent coating on both sides for insulation. The coated insulation shall be sandwiched between 12mm thick, Non combustible Boards (Calcium Silicate) on both sides (edge to edge on internal Hardwood frame) and clad with 3mm thick commercial ply of approved quality & 1mm thick laminate of approved brand and manufacture on both sides, with 55mm x 14mm 2nd class teak wood lipping all round the shutter.</p>					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
	<p>The shutter is suitable for mounted on the door frame, as per the item given below.. Both frame and shutter shall be fitted with fire & smoke intumescent seal of Viper or equivalent make of size 20 x 4mm on all the three sides except bottom. The pasting of the ply/veneer/laminate should be done using automatic machine and should be free from any nails or perforations. The board shall be Resistant to vermin, mould growth, minor impact, abrasion and short term water attack. The shutter shall be fixed with the frame with the help of SS 304 grade ball bearing hinges of size 100x76x2mm with necessary screws and making cut out for vision panel. Provisions/reinforcement for fixing all fixtures shall be built in on the door prior to the supply.</p>					
a)	Single/Double Shutter	216.00	SqM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.18	<p>Providing and fixing door frames as per BS: 476 part 22, IS:3614 Part II as per the prototype certified by CBRI Roorkee made out of 2nd class C.P. Teak Wood frame of section 140x65mm for fire resistant doors of 120 minutes fire rating, with heat activated intumescent fire seal strips of size 20 x 4 mm(for smoke sealing) provided in grooves on all three sides of the frame with one coat of approved brand of fire retardant primer including two coats of fire retardant paint FR 881or equivalent un thinned on cleared hard wood surface of door frames (@3.5 sq.m. per litre per coat) including preperation of base surface as per recommendations of manufacturer to make the surface fire retardant, including fixing the frame with 8 nos. 100 mm long, 10 mm dia metal dash fastners complete as per directions of the Engineer in charge NOTE:- cost of fire seal strips, dash fastners are included in the item. Nothing extra shall be paid if size of any component of material exceeds the limit mentioned in the item.</p>					
	The rebate shall be of 20mm x 57mm in Door frame to accommodate the shutter in frame	476.00	Metre			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.19	Providing and fixing door Co-ordinator for coordination of double leaf doors as per manufacturer specifications.	50.00	Each			
5.20	Supply and fixing of Fire Retardant board to be fixed at bottom with necessary screws etc. and filling of vermiculite based cementious type fire proof sealing system mixed with concrete of retrofit design for sealing of openings through floors shafts etc. duly tested and certified at CBRI, Roorkee as per IS : 1245 (1988) and other national and international standards. The Joints etc shall also be sealed with similar material.	10.00	Sqm			
5.21	Providing and fixing 6 mm thick piroshield fire rated clear glass of approved make, of 120 minutes fire rating having a minimum 13 mm square electrically welded chemically treated steel wire mesh of dia 0.51 mm sandwiched in the centre during the continuous rolling process to be fixed in vision panel including cost of fire rated gasket channel and moulding/beading all complete	10.00	Sqm			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
5.22	Providing and fixing of UL listed fire rated single/double leaf panic exit devices tested in accordance with BS EN 1125: 1997 & BS EN 179: 1997, EN 1670 (Corrosion Resistant), & BS 476 Part 22 (for fire rating) with one years warrantee.	100.00	Each			
5.23	Providing and fixing of fire rated door closer tested in accordance with BS:476 Part 22 for fire rating and BS EN 1154 with 1 year warranty(Briton NT-121 CE or equivalent make).	100.00	Each			
5.24	Providing and fixing 2 hrs, fire rated mortice lock with lever handle tested in accordance with BS:476 Part 22.with 1 year warranty(Briton EL 2020 of E series or equivalent make).	100.00	Each			
5.25	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.					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
a)	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	10.00	Sqm			
5.26	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with rawl plugs and stainless steel screws etc.	3366.00	Kg			
	SUB TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
6.00	STEEL WORK					
6.01	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.					
a)	Fixed to openings /wooden frames with rawl plugs screws etc.	73036.00	Kg			
6.02	Steel work welded in built up sections/ framed work including cutting ,hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					
a)	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	20470.00	kg			
b)	In stringers, treads ,landings etc of stair cases including use of chequered plate wherever required, all complete.	1044.00	kg			
6.03	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.					
a)	M.S. tube	3083.00	kg			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
6.04	Providing and fixing pressed steel door frames confirming to IS: 4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:					
a)	Profile C	10110.00	Mtr			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
6.05	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 and M.S. top cover of required thickness for rolling shutters.					
a)	80x1.25mm M.S. laths with 1.25 mm thick top cover.	50.00	Sqm			
6.06	Providing and fixing ball bearing for rolling shutters.	10.00	Nos			
6.07	Extra for providing grided rolling shutters manufactured out of 8 mm dia. M.S. bar instead of laths as per design approved by Engineer-in-charge.(area of grill to be measured).	25.00	Sqm			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
6.08	Providing & fixing in position SS Railing at staircase made out of 304 grade 16 SWG SS handrail -50 mm dia with SS end Cap and fixed into wall at end: Midrail -12mm dia X 3 Row 1st Balustrade 75mm X 2Nos. and other Balustrade -38 mm dia X 5 Steps per side with base plate of 5 mm with SS base cover and complete with all fittings as per design and diagram	50.00	Metre			
SUB-TOTAL						

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
7.00	FLOORING					
7.01	Marble stone flooring with 18mm thick marble stone (sample of marble shall be approved by Engineer-in-charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement: 4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with:					
a)	Raj Nagar plain.	603.00	SQM			
7.02	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :					
a)	25 mm thick.	22132.00	SQM			
7.03	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.					
		2564.00	SqM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
7.04	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.					
a)	Size of Tile 60x60 cm	50.00	SqM			
7.05	Cement concrete flooring 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate) finised with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.					
a)	40mm thick with 20mm nominal size stone aggregate.	63.00	SqM			
7.06	Cement plaster skirting (up to 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.					
a)	18 mm thick.	7.00	SQM			
7.07	Providing and fixing glass strips in joints of <i>terrazo</i> / cement concrete floors.					
a)	40 mm wide and 4 mm thick.	156.00	Metre			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
7.08	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.	2931.00	SQM			
7.09	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).					
a)	Medium shade using 50% white cement 50% Grey cement.	337.00	SQM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
7.10	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut stone for kitchen platforms, 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 edge to give high gloss finish etc. complete at all levels.					
a)	Area of slab over 0.50 sqm.					
i)	Granite stone of any colour and shade	373.00	SQM			
b)	25mm thick kota stone	66.00	SQM			
c)	Udaipur Green marble stone	50.00	sqm			
7.11	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut stone for dado/ cladding and similar locations of required size of approved shade, colour and texture laid over 12 mm 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 edge to give high gloss finish etc. complete at all levels.					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
ii)	Granite stone of any colour and shade					
a)	Area of slab over 0.50 sqm.	694.00	SQM			
7.12	Extra for providing edge moulding to 18mm thick Granite stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.					
	Granite work.	731.00	Metre			
7.13	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive including cleaning etc. complete.	731.00	Mtr			
7.14	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 rubbing and polishing of cut edges etc. complete.	100.00	Each			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
7.15	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacture) 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 @ 3.3kgper sqm including pointing in white cement mixed with pigment of matching shade complete.	9162.00	SqM			
7.16	Precast terrazo tiles 22mm thick with graded marble chips of size upto 12mm laid in floors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete with precast tiles on 20mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :					
a)	Medium shade using 50%white cement and 50% ordinary cement.	692.00	Sqm			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
7.17	Precast terrazo tiles 22 mm thick with graded marble chips of sizes upto 12 mm in skirting and risers of steps not exceeding 30 cm in height on 12 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete with tiles of :					
a)	Medium shades using 50% white cement and 50% ordinary cement.	70.00	Sqm			
	SUB- TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
8.00	CEILING & ROOFING					
8.01	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edges and making and finishing the outlet complete.	97.00	Each			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
8.02	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.	3062.00	SQM			
8.03	Providing and laying in position cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 broken brick bats 40 mm nominal size) including consolidation etc all complete.	601.00	CuM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
8.04	<p>Providing and fixing 8mm thick clear multi wall polycarbonate sheets of approved quality and shade in desired shape in roofing including the cost of EPDM gaskets , sealing tape , aluminium profile and all necessary accessories complete as per architectural drawings and as directed by Engineer incharge. The item includes designing the complete system and supplying & getting approval from client and / or reputed engineering institue like IIT etc. The detailed shop drawings including supplying structural design calculations based on relevent codal provisions and carrying out water penetration test as per standards followed in India.</p>					
	<p>The whole work is to be done through reputed and approved vendor having experience in polycarbonate work in Commercial/Govt/Corporate buildings as per architectural elevation drawings including filling of joints with silicon sealent and also with masonry/RCC work, at all heights including double heights, straight or curved etc. complete in all respect. (Plan Area shall be measured for the payment) (M.S. Framing if required to be paid for seprately)</p>	594.00	Sqm			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
8.05	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
	<p>c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :</p>					
a)	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	5059.00	SqM			
	SUB-TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
9.00	FINISHING					
9.01	12 mm cement plaster of mix;					
a)	1:6 (1 cement: 6 fine sand)	32508.00	SQM			
9.02	15 mm cement plaster on the rough side of single or half brick wall of mix:					
a)	1:6 (1 cement: 6 fine sand)	32520.00	SQM			
b)	1:4 (1 cement: 4 fine sand)	34975.00	SQM			
9.03	6 mm cement plaster of mix:					
	1:3 (1 cement: 3 fine sand)	25439.00	SQM			
9.04	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof	14899.00	SQM			
9.05	Neat cement punning.	835.00	SQM			
9.06	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade					
a)	New work (two or more coats) over and including a primer coat with cement primer.	74492.00	SQM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
9.07	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	74492.00	SQM			
9.08	Finshing walls with textured exterior paint of required shade: New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	34975.00	SQM			
9.09	Painting with synthetic enamel paint of approved brand and manufacture of required color to give an even shade: a) Two or more coats on new work over an under coat of suitable shade with ordinary paint including priming coat of ready mixed red oxide zinc chromate primer of approved brand and manufacture.	14299.00	SQM			
9.10	White washing with lime to give an even shade:- a) New work (three or more coats)	15975.00	SQM			
9.11	Finishing Walls with Premium Acrylic Smooth Exterior paint with Silicone additives "Snowcryl-XT" or equivalent of required shade.					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
a)	New Work (Two or more coats applied @1.43ltr/10 sqm over and including base coat of water proofing cement paint Snowcem Plus or equivalent applied @2.20 kg/10sqm)	2000.00	Sqm			
	SUB-TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
10.00	MISCELLANEOUS					
10.01	Making plinth protection with 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand: 6graded stone aggregate 20mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth	1280.00	SQM			
	SUB-TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
11.00	ROAD WORK					
11.01	Preparation of sub grade by excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and disposal of surplus earth lead upto 50 Metres.	400.00	SQM			
11.02	Supplying & stacking of graded stone aggregate at site of size range.					
a)	90 mm to 45 mm	90.00	CuM			
b)	63 mm to 45 mm	54.00	CuM			
c)	Stone screening 13.2 mm nominal size (Type A).	17.00	CuM			
d)	Stone screening 11.2 mm nominal size (Type B).	9.00	CuM			
e)	moorum	9.00	CuM			
11.03	Laying spreading and compacting stone aggregate of specified sizes to WBM specifications including spreading in uniform thickness, hand picking , rolling with 3 wheeled road / vibratory roller 8-10 tonne in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate watering and compacting to the required density .	100.00	CuM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
11.04	Providing and applying tack coat using hot straight run bitumen of grade 80/ 100 including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :					
a)	On W.B.M. @ 0.75 Kg / sqm.	400.00	SQM			
11.05	2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2mm and 11.2mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete. (tack coat to be paid for separately) :					
a)	With paving Asphalt 80/100 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt.	400.00	Sqm			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
11.06	Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade 80 / 100 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface including rolling and finishing with road roller all complete.	400.00	SQM			
11.07	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including 50mm thick compacted bed of course sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge.	100.00	SqM			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
11.08	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement 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).	23.00	CuM.			
	SUB-TOTAL					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
12.00	LAND DEVELOPMENT & HORTICULTURE					
12.01	Supplying and stacking of good earth at site including royalty and artage (Earth measured in stacks will be reduced by 20% for payment)	75.00	Cum			
12.02	Supplying & stacking sludge or manure at site including royalty & carriage (sludge measured in stacks will be reduced by 8% for payment)	25.00	Cum			
12.03	Spreading of sludge, dump manure or/and good earth in required thickness (Cost of sludge, dump manure or/ and good earth to be paid separately).	100.00	Cum			
12.04	Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing of by spreading and neatly levelling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	300.00	Cum			
12.05	Rough dressing the trenched ground including breaking colds & uprooting weeds from the trenched are after 10 to 15 days of its flooding with water (including disposal of uprooted vegetation)	1000.00	Sqm			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
12.06	Supply & sprinkling of Neem cake (at the rate of 6 kg per 100 sq. metres) and fine dressing the ground.	1000.00	Sqm.			
12.07	Supply & grassing with "Calcutta Doob" grass in rows 7.5cms, apart in either direction including fine dressing the ground to be levelled, supply and filling with good earth if needs, watering & maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds & fit for mowing. Anti-termite shall be applied with CHLOROPYRIPHOS (DURSBAN make or equivalent) at the rate of 2ml per litter in the first watering.	1000.00	Sqm.			
	Subtotal					

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
13.00	SIGNAGES					
13.01	Providing fabricating and fixing of signages of varying sizes and shapes using three mm thick PVC sheet at base with self adhesive coloured vinyl with graphicson top of glow tape complete including fixing on wall with screws and washers or hanging on ceiling with GI chain/GI Bar complete as per technical specifications and directions of Engineer.	1000.00	sq inch			
13.02	Providing and fixing of sinages of varying sizes and shapes using stainless steel sheet of minimum 16G thickness brush finish including engraving/etching of letters of required size filled with colour as desired by engineer,fixing with ss screws on walls	200.00	sqinch			
13.03	Providing and fixing of external sinages of varying sizes and shapes using GI sheet of atleast 22 G / aluminium sheet of suitable gauge complete as per technical specifications and directions of Engineer.	20.00	sqft			
13.04	Providing and fixing MS support frame for external signages made of structural steel including welding, primering, painting foundation with 1:1.5:3 cement concrete complete as per drawing, technical specifications and directions of engineer.	40.00	Kg			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
13.05	Providing,fabricating and fixing neon glow signages of approved make with 100% handcraft glass tubes in letter shape of required colour of dia 9-12 mm including making the electrical wiring for illumination,transformer,connection complete as per technical specifications and directions of engineer.	10.00	sqft			
13.06	Providing,fabricating installation and fixing of glass finish SS letters made of 20 gauge SS 304 sheet of required size and shape with neatly fabricated joints properly welded and grinded with all corners rubbed and polished with arrangement of screws in the letter itself for mounting on the walls including cost of screws and fixing complete as per directions of Engineer.	20.00	sqinch of each letter			
13.07	Providing fabricating and fixing of retroreflective vinyle sinages of varying sizes and shapes pasted on aluminium/GI sheet of 18 gauge with provision of fixing on MS structure complete as per technical specifications and directions of Engineer.	200.00	sqinch			

Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
13.08	Providing. Fabricating and fixing of acp, alu minium composite plastic signs with 3 mm acp sheet, using 1" ms pipe frame, with anti rust coating, back with g.i. and 5 sides with acp sheet, lettering to be done with 5mm acrylic sheet and vinyls if needed backlit with philips slim lite tubelight fittings, acrylic letters to protrude out and be lit, together with a timer for switching on and off at required timings, including transportation and fixing at site as per the direction of the site engineer	20.00	sq.ft.			
13.09	Providing, fabricating and fixing of frontlit signages With solvent printing on 13 oz hanwa/lg make flex printing on vutek/ sytec/ edgeprint etc with uv cure inks with minimum life of 1 year for non fading, stretched on 25mm sq m.s. pipe, with 28 guage tin sheet on the back for withstanding wind pressure with adequate lights in the front. The front lighting to be metalite (white light) of 150 watts and philips make to be fixed with metal arms atleast 4ft protruding outside.	10.00	sq.ft.			
13.10	Providing fabricating and fixing of name plate pockets outside rooms made of 5mm opaque, milky white acrylic sheet in various sizes and with provision of fixing acrylic plates as per boq-1 on the same, the pockets should be well crafted using high quality adhesives and should be fixed on the wall with the help of screws etc.and as per the direction of the engineer.	200.00	sq.inch			


Item No	Description Of Item	Total Qty	Unit	Rate in Rs (In figures)	Rate in Rs (In Words)	Amount in Rs
1	2	3	4	5	6	7
13.11	Providing and fixing self glowing exit sign board single side painted made of luminescent safety, rigid sheet in standard colour, photo luminescent sheet made of crystals consisting mainly sulphide in protective glass like sheet green and yellow crystal luminescent(glass in dark) by action of light.	15.00	Each			
SUB TOTAL						

PROJECT: CONSTRUCTION OF AIIMS HOUSING AT BHUBHNESHWAR		
NAME OF THE WORK:- BOQ OF AIIMS HOUSING PROJECT PHASE-II (TYPE 1 32 D.U., HOSTEL UG AND PG, Nursing Students Hostels, DINING HALL, GUEST HOUSE)		
ABSTRACT OF COST		
S.No.	Description	Amount
1	EARTH WORK	
2	CONCRETE WORK	
3	REINFORCED CEMENT CONCRETE	
4	BRICK WORK	
5	DOORS & WINDOWS	
6	STEEL WORK	
7	FLOORING	
8	CEILING & ROOFING	
9	FINISHING	
10	MISCELLANEOUS	
11	ROAD WORK	
12	LAND DEVELOPMENT & HORTICULTURE	
13	SIGNAGES	
	TOTAL	

BILL OF QUANTITIES

OF

PUBLIC HEALTH
ENGINEERING

		 H.S.C.C. HSCC					
		Design & Engineering Departemen					
		Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student\$)					
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
		Note: Based on the tender drawing the agency has to prepare the internal & external plumbing shop drawing and obtain the approval of the same before execution					
1.00		SANITARY FIXTURES					
1.01	17.1	Providing&fixing water closet squatting pan(Indian W.C.Pan)with 100 mm sand cast iron P or S strap,10 Litre low level white P.V.C flushing cistern with manually controled device(handle lever) conforming to IS:7231 with all fittings&fixture complete including cutting and making good the walls & floors wherever required.					
a)	17.1.1	White vitreous china orissa pattern W.C. pan of size 580 x 440 mm with integral type foot rests.	Each	179.0			
1.02	17.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous flushing cistern and 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:					
a)	17.3.2	W.C. pan with ISI black solid plastic seat & lid.	Each	262.0			
1.03	17.7	Providing and fixing wash basin with C.I. brackets, 15mm C.P. brass pillar taps, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required:					
a)	17.7.3	White vitreous china wash basin size 550x 400 mm with a pair of 15mm C.P. brass pillar tap.	Each	486.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
1.04	17. 10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:					
	17.10.2	Kitchen sink withou drain board					
a)	17.10.2.1	610x510 mm bowl depth 200 mm	Each	114.0			
1.05	17. 14	Extra for using coloured W.C. pan instead of white W.C pan					
a)	17.14.1	Orissa pattern W.C. pan 580x440 mm	Each	178.0			
1.06	17. 16	Extra for using coloured pedestal type W.C. pan (European type) with low level cistern of same colour instead of white vitreous china W.C. pan and cistern	Each	262.0			
1.07	17. 32	Providing and fixing superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shape with 6 mm thick hard board backing.					
a)	17.32.2	Rectangular shape 453x357 mn	Each	486.0			
1.08	17. 33	Providing and fixing 600x120x5 mm glass shelf with edges round of supported and anodised alominium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	Each	486.0			
1.09	17. 34	Providing and fixing toilet paper holder .					
a)	17.34.2	Vitreous china	Each	262.0			
1.10	17. 71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour weighing not less than 105 gms.	Each	4.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing students							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
1.11	NS	Providing and fixing water Jet Nozzle with hose pipe and haif turn CP brass angle valve to be fitted with seat cover of european water closet complete in all respect of approved quality	Each	262.0			
1.12	NS	Providing and fixing soap tray with CP brass lid and brackets fixed to wooden cleats with CP brass screws.	Each	632.0			
1.13	NS	Providing and fixing CP brass towel rail size of 600x20 mm of approved make complete with CP brackets fixed to wooden cleats with CP brass screws	Each	496.0			
1.14	NS	Providing and fixing brass coat hook of approved quality and make complete with material of fixing	Each	546.0			
1.15	NS	Extra for providing and fixing white vitreous china oval shape wash basin in place of normal wash basin with CI/MS brackets painted white, 15 mm CP brass pillar taps, 32 mm CP brass waste of standard pattern, including painting of fittings and brackets cutting and making good the walls wherever require					
a)		Counter top oval shape wash basin size 550x470 mm with centre tap hole, single 15 mm CP brass swan neck type pillar tap	Each	486.0			
SUB TOTAL(SANITARY FIXTURES)							

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student

Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
2.00		SOIL, WASTE AND VENT PIPES					
2.01	17. 35	Providing and fixing soil, waste and vent pipes.					
a)	17.35.1	100 mm dia.					
a i)	17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS:3989	Metre	6570.0			
2.02	17. 37	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.					
a)	17.37.1	for 100 mm dia. pipe	Each	1247.0			
2.03	17. 38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.					
a)	17.38.1	100 mm					
a ii)	17.38.1.2	Sand cast iron S&S as per IS-3989	Each	549.0			
2.04	17. 39	Providing and fixing plain bend of required degree.					
a)	17.39.1	100 mm					
a ii)	17.39.1.2	Sand cast iron S&S as per IS:3989	Each	650.0			
2.05	17. 40	Providing and fixing heel rest sanitary bend.					
a)	17.40.1	100 mm dia					
a.ii)	17.40.1.2	sand cast iron S&S as per IS-3989	Each	137.0			
2.06	17. 43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.					
a)	17.43.1	100x100x100mm					
a.ii)	17.43.1.2	sand cast iron S&S as per IS-3989	Each	944.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
2.07	17. 56	Providing and fixing terminal guard.					
a)	17.56.1	100 mm	Each	137.0			
a.ii)	17.56.1.2	sand cast iron S&S as per IS-3989					
2.08	17. 57	Providing and fixing collar					
a)	17.57.1	100 mm					
a.ii)	17.57.1.2	Sand cast iron S&S as per IS-3989	Each	880.0			
2.09	17. 58	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:					
a)	17.58.1	100 mm	Each	6348.0			
2.10	NS	Providing Drip seal joint of approved make for the sand cast iron/centrifugally cast iron pipes where the workability of lead joint can be effected due to space constraints					
a)		100 mm	Each	2078.0			
2.11	17. 59	Providing and fixing M.S. stays and clamps for sand cast iron / centrifugally cast (spun) iron pipes of diameter					
a)	17.59.1	100 mm	Each	137.0			
2.12	17. 60	Providing and fixing trap of self cleansing with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:					
a)	17.60.1	100 mm inlet and 100 mm outlet					
a i)	17.60.1.1	Sand cast iron S&S as per IS-3989	Each	706.0			
2.13	17. 61	Cutting chases in brick masonry walls for following diameter sand cast iron/centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement:3 coarse sand:6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement: 4 coarse sand):					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
a)	17.61.1	100 mm diameter pipe	Metre	399.0			
2.14	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:					
a)	17.65.1	100 mm diameter pipe	Metre	3439.0			
2.15	NS	Providing and fixing floor drain points formed out of 65 mm dia GI elbow, including with 75mm dia Stainless Steel grating with frame, embedded in floor, all complete as directed.	Each	317.0			
2.16	NS	Providing and fixing C.P. brass bottle trap for wash basin including CP waste fittings complete 32 mm dia complete in all respect of approved quality.	Each	518.0			
2.17	NS	Providing and fixing C.P. brass bottle trap for sinks & urinal basin including CP waste fittings complete 40 mm dia complete in all respect of approved quality.	Each	129.0			
2.18	NS	Providing and laying cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) 80 mm thick all-round the SCI/centrifugally S&S pipe diameter					
a)		100 mm dia	Metre	3005.0			
2.19	NS	Providing and fixing G.I EXTENSION PIECE for 100 mm dia floor trap formed out of main pipe(Type A) with multiple side inlets, suitable for various dia pipes, side connections, including all fixtures and fittings as per site conditions and as per standard details and water tight sealing of joints and area surrounding the grating and as directed.	Each	706.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing students)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
2.20	NS	Providing and fixing cPVC. pipes complete with cPVC fittings including painting,jointing,testing the cost of cutting the chases and making good the same for waste water disposal complete as per direction of engineer incharge					
a)		32 mm dia nominal bore (Wash basin to floor trap/floor drain)	Metre	553.0			
c)		50 mm dia nominal bore (Floor Drain to Floor Trap)	Metre	569.0			
SUB TOTAL(SOIL, WASTE AND VENT PIPES)							

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
3.00		WATER SUPPLY					
3.01	18.7	Providing and fixing Chlorinated Polyvenyl 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 1.0 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.					
		Internal work – Exposed on wall					
a)	18.7.1	15 mm nominal outer dia pipes (SDR-11)	Metre	250.0			
b)	18.7.2	20 mm nominal outer dia pipes (SDR-11)	Metre	575.0			
c)	18.7.3	25 mm nominal outer dia pipes (SDR-11)	Metre	790.0			
d)	18.7.4	32 mm nominal outer dia pipes (SDR-11)	Metre	700.0			
e)	18.7.5	40 mm nominal outer dia pipes (SDR-11)	Metre	1045.0			
f)	18.7.5	50 mm nominal outer dia pipes (SDR-11)	Metre	1045.0			
g)	NS	62.5 mm nominal outer dia pipes (SDR-11)	Metre	85.0			
3.02	18.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.					
		Concealed work including cutting chases and making good the walls etc.					
a)	18.8.1	15 mm nominal outer dia pipes (SDR-11)	Metre	4363.0			
b)	18.8.2	20 mm nominal outer dia pipes (SDR-11)	Metre	2046.0			
c)	18.8.3	25 mm nominal outer dia pipes (SDR-11)	Metre	419.0			
d)	18.8.4	32 mm nominal outer dia pipes (SDR-11)	Metre	23.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
3.03	18. 9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.					
		External Work					
a)	18.9.3	25 mm nominal outer dia pipes (SDR-11	Metre	30.0			
b)	18.9.5	40 mm nominal outer dia pipes (SDR-11	Metre	100.0			
c)	18.9.6	50 mm nominal outer dia pipes (SDR-11	Metre	90.0			
3.04	18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc					
		Internal Work- Exposed on walls					
a)	NS	65 mm dia nominal bore	Metre	320.0			
b)	NS	80 mm dia nominal bore	Metre	500.0			
3.05	18. 13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including, cutting and threading the pipe etc. complete including obtaining approval for connection from DJB/Municipal corporation :					
a)	18.13.2	50 to 80 mm nominal bore (SDR-11)	Each	24.0			
3.06	18. 17	providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)					
a)	18.17.1	25 mm nominal bore	Each	106.0			
b)	18.17.2	32 mm nominal bore	Each	44.0			
c)	18.17.3	40 mm nominal bore	Each	51.0			
d)	18.17.4	50 mm nominal bore	Each	51.0			
e)	18.17.5	65 mm nominal bore	Each	30.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
g)	18.17.6	80 mm nominal bore	Each	9.0			
3.07	18. 18	Providing and fixing ball valve (brass) of approved quality, High or low pressure with plastic floats complete					
a)	18.18.2	20mm	Each	66.0			
3.08	18.20	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main					
a)	18.20.3	25 mm nominal bore	Each	21.0			
b)	NS	32 mm nominal bore	Each	1.0			
3.09	18. 21	Providing and fixing unplasticised PVC connection pipe with brass unions:					
a)	18.21.2	45 cm length					
a i)	18.21.2.1	15 mm nominal bore	Each	2104.0			
3.10	18. 22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet					
a)	18.22.2	150 mm diameter	Each	380.0			
3.11	18. 32	Constructing masonry chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for stop cock, with C.I. surface box 100x100x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) 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					
a)	18.32.1	With F.P.s bricks	Each	30.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing students)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
3.12	18. 33	Constructing masonry chamber 60x60x75 cm, inside with 75 class designation 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 li and RCC top slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) 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					
a)	18.33.1	With F.P.s bricks	each	24.0			
3.13	18. 38	Painting CPVC/G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work					
a)	18.38.1	15 mm nominal outer dia pipe:	Metre	250.0			
b)	18.38.2	20 mm nominal outer dia pipe:	Metre	575.0			
c)	18.38.3	25 mm nominal outer dia pipe:	Metre	790.0			
d)	18.38.4	32 mm nominal outer dia pipe:	Metre	700.0			
e)	18.38.5	40 mm nominal outer dia pipe:	Metre	1045.0			
f)	18.38.6	50 mm nominal outer dia pipe:	Metre	1045.0			
g)	NS	65 mm nominal outer dia pipe:	Metre	85.0			
3.14	18. 40	Painting G.I. /CPVC pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality.					
a)	18.40.3	25 mm diameter pipe	Metre	30.0			
b)	18.40.5	40 mm diameter pipe	Metre	100.0			
c)	18.40.6	50 mm diameter pipe	Metre	90.0			
3.15	18. 41	Providing and filling sand of grading zone V or coarser grade all-around the G.I./CPVC pipes in external wor					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
a)	18.41.3	25 mm diameter pipe	Metre	30.0			
b)	18.41.5	40 mm diameter pipe	Metre	100.0			
c)	18.41.6	50 mm diameter pipe	Metre	90.0			
3.16	18. 48	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					
a)		Treated water Tank and Untreated water tank	per litre	112900.0			
3.17	18. 49	Providing and fixing C.P brass bib cock of approved quality.					
a)	18.49.1	15 mm nominal bore	Each	440.0			
3.18	18. 50	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms. (Marck, Jaquar, Jainco, Rybo)					
a)	18.50.1	15 mm nominal bore	Each	876.0			
3.19	18. 53	Providing and fixing C.P. brass angle valve for basin mixer and geyser/cisterns points of approved quality conforming to IS:8931.					
a)	18.53.1	15 mm nominal bore	Each	2104.0			
3.20	18.52	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to 18:8931.					
a)	18.52.1	15mm nominal bore.	Each	752.0			
3.21	18. 60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by municipal board complete with bolts,nuts rubber, insersions etc. (the tail plases if required will be paid seperatly)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
a)	18. 60. 1	80mm dia nominal bore	Each	12.0			
3.22	18. 62	Providing and fixing PTMT ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.C plastic ball.					
a)	18.62.4	40 mm nominal bore, 206 mm long weighin not less than 690 gms	Each	13.0			
b)	18.62.5	50 mm nominal bore, 242 mm long weighin not less than 1240 gms	Each	9.0			
3.23	18.76	Cutting holes upto 30x30 cm in walls including making good the same					
a)	18.76.1	with F.P.S bricks	Each	355.0			
3.24	18. 77	Cutting holes up to 15x15 cm 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	Each	350.0			
3.25	NS	Extra for providing wash basin mixer pillar tap in place of normal pillar tap	Each	486.0			
3.26	NS	Providing & fixing full way lever operated forged brass ball valve with brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 10 Kg / sqcm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.					
a)		15 mm diameter	Each	65.0			
b)		20 mm diameter	Each	57.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing students)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
3.27	NS	Providing and fixing mosquito proof coupling of approved Municipal design for scour and vent pipes for RCC overhead tanks complete in all respects					
a)		20 mm diameter	Each	61.0			
b)		25 mm diameter	Each	20.0			
c)		32 mm diameter	Each	20.0			
d)		40 mm diameter	Each	7.0			
e)		50 mm diameter	Each	9.0			
f)		65 mm diameter	Each	9.0			
3.28	NS	Providing & fixing 9 mm thick thermal insulation tubing of elastomeric flexible material on hot water supply/return pipes having hermetic blistered closed cell structure of expanded synthetic rubber over pipes/ fitting as per manufacturer's specifications etc.complete.					
a		15 mm to 25 mm diameter	Meter	1380.0			
b)		32 mm to 50 mm diameter	Meter	50.0			
3.29	NS	Supplying, fixing, testing and commissioning of storage type water heater (Geyser) etc. with Stainless steel body , copper container , automatic thermostatic control electric element, pressure release valve, M.S. nuts and bolts etc. conforming to IS: 2082					
a	a)	35 Litre Capacity	Each	149.0			
b)	b)	25 Litre Capacity	Each	188.0			
3.30	NS	Providing & fixing water storage cooler of approved make and brand with SS body having minimum flow rate of 20 ltrs. Per hour and storage capacity 40 ltrs. Complete in respects.(VOLTAS/ BLUE-STAR/ USHA SHRIRAM)	Each	52.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student]							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
3.31	NS	Providing and fixing approved make & suitable model of R.O. plant 60 ltrs. Per hour flow rate having capacity to treat the raw water having TDS 1200 ppm and not less than 40%. The treated water should have TDS less than 100 ppm and hardness less than 50 ppm. The operating voltage to 230 volt AC +/- 10% alongwith required capacity pump and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, hydro pneumatic tank, over voltage and over current protection with switch mode power supply system antiscaling dosing system complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS/Pantair)					
a)		10 micron polypropylene sediment pre filter					
b)		10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating					
c)		3 Nos. of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type					
d)		UV lamp of minimum capacity 25 LPM and minimum lamp wattage 9W	Each	52.0			
		SUB TOTAL(Water Supply)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
4.00		SEWARAGE & DRAINAGE					
4.01	19. 1	Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the pro-portion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.					
a)	19.1.1	100 mm diameter	Metre	245.0			
4.02	19. 2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:					
a)	19.2.1	100 mm diameter S.W. pipe/RCC NP2	Metre	175.0			
b)	19.2.2	150 mm diameter S.W. pipe/RCC NP2	Metre	640.0			
4.03	19. 3	Providing and laying cement concrete 1:5:10 (1 cement:5 coarse sand:10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design:					
a)	19.3.1	150 mm diameter S.W.pipe	Metre	290.0			
b)	19.3.2	250 mm diameter s.W. pipe	Metre	400.0			
4.04	19. 4	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating, brick masonry chamber with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:					
a)	19.4.2	150x100mm size P type					
a.i)	19.4.2.1	F.P.S. Bricks class designation 75	Each	136.0			
4.05	19. 6	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					
a)	19.6.2	150 mm dia R.C.c. pipe	Metre	930.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
b)	19.6.3	250 mm dia R.C.C. pipe	Metre	400.0			
4.06	19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand), R.C.C. top slab with 1:2:4 mix (1cement 2 coarse sand : 4graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 (1cement : 4 coarse sand : 8graded stone aggregate 40 mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, and making necessary 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 all complete as per standard design.					
a)	19.7.1	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)					
a i)	19.7.1.1	With F.P.S. bricks with class designation 75	Each	127.0			
4.07	19.8	Extra depth for manhole:					
a)	19.8.1	Size 90 x 80 cm					
a i)	19.8.1.1	With F.P.S. bricks class designation 75	Metre	13.0			
4.08	19.9	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement: 3 coarse sand: 6 graded stone aggregate 40mm nominal size), and making necessary channel 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 all complete as per standard design:					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
a)	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :					
a i)	19.9.1.1	With F.P.S. bricks class designation 75	Each	26.0			
4.09	19. 10	Extra depth for circular type manhole 0.91m dia (at bottom) with beyond 0.91m to 1.67 m					
a)	19.10.1	With F.P.S. bricks class designation 75	Metre	6.5			
4.10	19. 11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement: 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 mix (1 cement :3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominalsize) finished with a floating coat of neat cement complete as per standard design.					
a)	19.11.1	1.68 m deep with SFRC cover and frame(heavy duty HD-20 grade designation) 560 mm internal diameter conforming to IS: 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominalsize) including centering shuttering all complete. (Excavation, foot rests and 12 mm tick cement plaster at the external surface shall be paid for separately)					
a.i)	19.11.1.1	With F.P.S. bricks with class designation 75	Each	17.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
4.11	19. 12	Extra depth for circular type manhole 1.22 m internal dia (at bottom) with beyond 1.68 m to 2.29 m					
a)	19.12.1	With F.P.S. bricks with class designation 75	Metre	4.0			
4.12	19. 16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS: 10910 on 12 mm dia steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 specification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	454.0			
4.13	19. 21	Making connection of drain or sewer line with existing manhole including breking into and making good the walls, floors with cemer concrete 1:2:4 mix (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cemnet mortar 1:3 (1 cement:3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete (including obtaining approval from DJB/Municipal corporation					
a)	19.21.1	For pipes 100 to 230 mm dia	Each	12.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
4.14	19.22	Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid sand cast Iron drop pipe and bend encased all-round with cement concrete 1 :5:1 0 (1 cement:5 fine sand: 10 graded stone aggregate 40 mm nominal size) with all centering and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement: 4 coarse sand) plastered with cement mortar 1:3 (1 cement: 3 coarse sand) on, inside of the manhole wall lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement: 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications:					
a)	19.22.2	150 mm dia. sand cast iron drop connection	Each	16.0			
4.15	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement:4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design:					
a)	19.27.1	With F.P.S. bricks	Each	174.0			
4.16	NS	Constructing brick masonry open surface drain including factory made perforated RCC cover with edge protected with MS plate of 3 mm thick with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 fine sand) including earth excavation, 10cm thick bed concrete 1:5:10 (1 cement: 5 fine sand :10 graded stone aggregate 40mm nominal size) and 25mm thick cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 12.5 mm nominal size) for filling hunches including 12mm cement plaster 1:4 (1 cement:4 coarse sand) with a floating coat of neat cement inside the drain, its top and exposed side including disposal of surplus earth complete as per standard design.					
a)		25cm drain 30cm average depth With F.P.S bricks	Metre	850.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student]							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
		45cm drain 75cm average depth					
b)		With F.P.S bricks	Metre	385.0			
4.17		Constructing grease trap 1.5x1.0x1.2m (inside) with one brick thick brick masonry wall with inlet and outlet drain with bricks of class designation 75 in cement mortar 1:4 (1 cement:4 fine sand) plastered 12mm thick with 1:4 (1 cement : 4 coarse sand) finished with a floating coat of neat cement on inside and exposed surfaces having baffled walls with 40mm flooring in cement concrete 1:2:4 (cement:2 coarse sand 4: graded stone aggregate 12.5 mm nominal size) with a floating coat of neat cement including all earth excavation, refilling and disposal of surplus earth complete as per standard design.					
	a)	With F.P.S bricks	Each	3.0			
		SUB TOTAL(SEWERAGE AND DRAINAGE)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
5.00		EARTH WORK					
5.01	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth,1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m , disposed earth to be levelled and neatly dressed.					
a)	2.6.1	All kinds of soil	cum	350.0			
5.02	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 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					
a)	2.10.1	All kinds of soil					
a.ii)	2.10.1.2	Pipes, cables etc, not exceeding 80 mm dia but not exceeding 300 mm dia	metre	1595.0			
5.03	2.25	Filling available excavated earth (excluding rock) in trenches, plinth sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m	cum	112.0			
		SUB TOTAL(EARTH WORK)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
6.00		EXTERNAL WATER SUPPLY(for use of recycling of STP treated water for flushing and horticulture)					
6.01	18. 31	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):					
a)	18.31.1	100 mm diameter					
a.i)	18.31.1.1	Class I	each	10.0			
b)	18.31.3	150 mm diameter					
b.i)	18.31.3.1	Class I	each	6.0			
c)	18.31.4	200 mm diameter					
c.i)	18.31.4.1	Class I	each	4.0			
d)	18.31.5	250 mm diameter					
d.i)	18.31.5.1	Class I	each	2.0			
6.02	18. 34	Constructing masonry chamber 90x90x100 cm, inside with 75 class designation 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 20 mm nominal size) 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					
a)	18.34.1	With F.P.S.bricks	each	10.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
6.03	18.35	Constructing masonry chamber 90x90x100 cm, inside with 75 class designation 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 20 mm nominal size) 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					
a)	18.35.1	With F.P.S.bricks	each	12.0			
6.04	18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately					
a)	18.59.3	100 mm dia	each	4.0			
6.05	18.61	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS:2373					
a)	18.61.3	150 mm dia	each	2.0			
b)	18.61.4	200 mm dia	each	2.0			
6.06	18.68	Providing and laying D.I. specials of class k-12 suitable for push-on jointing as per IS:952					
a)	18.68.1	Upto 600 mm dia	quintal	200.0			
6.07	18.70	Providing push-on-joints to Centrifugally (Spun) Cast Iron pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket					
a)	18.70.1	100 mm dia pipes	joint	1000.0			
b)	18.70.2	150 mm dia pipes	joint	500.0			
c)	18.70.3	200 mm dia pipes	joint	250.0			
d)	18.70.4	250mm dia pipes	joint	30.0			
6.08	18.72	Providing and laying S&S Centrifugally Cast (Spun)/Ductile Iron pipes confirming to is:8329					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
a)	18.72.1	100 mm dia Ductile Iron Class k-7 pipe	metre	2000.0			
b)	18.72.2	150 mm dia Ductile Iron Class k-7 pipe	metre	1500.0			
c)	18.72.3	200 mm dia Ductile Iron Class k-7 pipe	metre	500.0			
d)	18.72.4	250 mm dia Ductile Iron Class k-7 pipe	metre	50.0			
6.09	18.80	Disinfecting C.I./D.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laborator					
a)	18.80.2	100 mm diameter C.I./D.I. pipe	100 metre	20.0			
b)	18.80.4	150 mm diameter C.I./D.I. pipe	100 metre	15.0			
c)	18.80.5	200 mm diameter C.I./D.I. pipe	100 metre	5.0			
d)	18.80.6	250 mm diameter C.I./D.I. pipe	100 metre	0.5			
6.10	NS	Providing and fixing puddle flanged including 60 cm long GI pipe piece welded/threaded with MS plates 450x450x6 mm thick with both end screwed/flanged					
a)		For 100 mm dia pipe	Each	2.0			
b)		For 150 mm dia pipe	Each	2.0			
c)		For 200 mm dia pipe	Each	2.0			
6.11	NS	Providing and fixing double seal type D.I. Manhole cover of 560 mm clear internal diameter of over all heavy duty with locking arrangement complete in all respects.	Each	6.0			
6.12	NS	Providing and fixing garden hydrant with 20 mm outlet complete with bolts,nuts and rubber insertion etc	each	30.0			
SUBTOTAL (EXTERNAL WATER SUPPLY)							

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
7		RAIN WATER PIPING					
7.01	12. 44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	Each	82.0			
7.02	17.35	Providing and fixing rain water ,soil, waste and vent pipe:					
a)		100 mm dia.					
a i)	17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS:398	Metre	781.0			
c)	NS	150 mm dia pipe as per IS:398	Metre	1153.0			
7.03	17. 37	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.					
a)	17.37.1	for 100 mm dia. pipe	Each	416.0			
c)	NS	for 150 mm dia pipe	Each	518.0			
7.04	17.39	Providing and fixing plain bend of required degree.					
a)		100 mm					
a ii)	17.39.1.2	Sand cast iron S&S as per IS:3989	Each	36.0			
c)	NS	150 mm	Each	45.0			
7.05	17.40	Providing and fixing heel rest sanitary benc					
a)	17.40.1	100 mm dia					
a.ii)	17.40.1.2	sand cast iron S&S as per IS-3989	Each	36.0			
c)	NS	150 mm dia	Each	45.0			
7.06	17.57	Providing and fixing colla					
a)	17.57.1	100 mm					
a.ii)	17.57.1.2	Sand cast iron S&S as per IS-398	Each	225.0			
c)	NS	150 mm	Each	262.0			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
7.07	17.58	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter					
a)	17.58.1	100 mm	Each	298.0			
c)	NS	150 mm	Each	398.0			
7.08	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:					
a)	17.65.1	100 mm diameter pipe	Metre	841.0			
c)	NS	150 mm diameter pipe	Metre	1093.0			
		SUB TOTAL(Rain Water pipe & fitting)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
8		SOLAR WATER HEATING SYSTEM					
8.01	NS	Supply, installation, testing and commissioning of solar water heating system, Thermosyphon type, all complete based on Flat plate collector system (Cu-Cu Type only) comprising of but not limited to the following:					
a)		Requisite number of Flat plate collectors of 2 sq. mtr. collector area. Collector absorber plate to be made of copper tubes & copper fins only					
b)		Hot water storage tank made of stainless steel 304- food grade quality with 100 mm Glass wool insulation and cladding with 24 SWG Aluminum sheet. One temperature measuring device and suitable inlet, outlet and drain connections on the storage tank to be provided. Suitable Electrical Heater backup to be provided inside the tank along with thermostat					
c)		Heat Exchanger - Cage type Internal Heat Exchanger made of SS pipes shall be provided inside the Solar Tank. Heat exchangers shall have min. heat transfer area of 0.24 sq. mtrs. for every 100 LPD capacity. Suitable make up tank for the Heat Exchanger circuit shall also be provided					
d)		Interconnecting system piping shall consist of B Class insulated GI pipes covered with 50mm thick glasswool & clad with 26 SWG Aluminium Sheet. All Gate/Ball valves shall be of ISI make.					
e)		Electrical control panel, cabling from panel to pumps and electrical heaters shall also be provided					
f)		The solar collector shall be arranged on roof of building in such a way that shadow can be avoided and requisite number of MS support for collector/tanks of minimum 35x35x5 MS angle adequate for 150 Km/Hr wind speed.					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
g)		Solar water heating system based on Flat plat collector system technology with output capacity of as mentioned below with hot water at 60 degree centigrade having required Nos. solar collectors and required nos. of electric heating element of 3 KW each controlled by thermostat. as per complete item as per technical specification of make BHEL/TATA/EMMVEE. The system has to be installed by Manufacturers authorised distributors/approved specialised firms of Solar water heating of approved makeThe shop drawing of the systems shall be provided by the agency as per site condition obtain the proper efficiency The system shall be procured after obtaining the approval of shop drawings from HSCC / Engineer in-charge.					
i)		Solar System of Capacity 1500 Litre/day (With minimum 12 nos of Collect) of 2.0 Sqm area	each	5.0			
		SUBTOTAL(SOLAR WATER HEATING SYSTEM					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
9.00		WATER TREATMENT PLANT					
9.01		WATER TREATMENT PLANT (/Domestic use)					
		Planning, Designing, Detailing, Manufacturing, Supplying, Erection, Testing and Commissioning of Water treatment plant for supply of treated water for use of domestic purpose comprising of filter and pumps. The plant is to be installed in pump room and Raw water supply is available in UGT including design and execution of all Civil, Structural, Electrical, Mechanical, Plumbing and processing, ancillary equipments & works etc required to complete the package, getting approval from HSCC/client etc.					
		The shop drawings & design of WTP shall also be prepared in such a way that it comprise of the following units of required size as per detail design requirements. The work has to be carried through authorised vendor, dealer/representative of approved make (lon exchange, Pollucon technologies, AKAR Impex,Thermax, Aquaprocess, Fontus).					
i)		Providing and fixing vertical/ multi-stage inline centrifugal raw water filter feed pumps mounting on a foundation with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts,1500 RPM, 3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts etc. (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)					
		Raw water (filter) feed pumps					
		Capacity : 500 lpm (Each)					
		Head 35 m					
		Power :3.0 HP or as requirec					
		1 working					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
ii)		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks. (Make: Leader / Zoloto / Kartar or equivalent)					
		65/80 mm dia (4 nos.) (min.) or required size and required number					
iii)		Providing and fixing gun metal or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete . (Make: Leader/ Zoloto or equivalent)					
		50/65 mm NB (min.) or required size and numbe					
iv)		Filtration Plant : Vertical Downflow Multigrade Pressure Sand Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :					
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.					
		b) Initial charge of Filter Media.					
		c) Complete underdrain system and raw water distributor as per manufacturer's design.					
		d) M.S. heavy class fabricated - epoxy coated / post galvanised face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.					
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.					
		f) All internal parts of the filtration plant shall be coated with 6 mm thick natural rubber lining after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of epoxy paint and primer .					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.					
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor, dealer/representative of approved make (Ion exchange, Pollucon technologies, AKAR Impex, Thermax, Aquaprocess, Fontus). The filter water will be supplied to treated water tank through U.V. water steriliser Capacity - 500lpm Filtration rate - 20,000 lph/sqm (min. Filter dia approx.1.4 m (min. Filter HOS Min. : 1.8 m(min.) Working pressure : 3.0 Kg/sq cm. Test pressure : 4.5 Kg/sq cm No. of Filters : 1 working					
v)		UV WATER STERILISERS High performance on line UV water sterilisers of capacity 30000 lph designed on at least 250 J/Sq. M. UV dosage, comprising of glass UV chamber in SS 316 housing, UV lamp and electrical circuit, wall mounted model / line mounted model, capacity 500lpm, minimum lamp rating :120 watts - 1Nos.					
vi)		Providing and fixing G.I.pipes/CPVC pipes to I.S. 3589/1239 (Heavy class) with G.I./CPVC Fittings e.g., Tee, elbow reducers, unions, end cap etc., flanges & clamps, including supporting the pipes with G.I. supports, cutting and making good the walls etc. complete. For Suction & Delivery headers.					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
		50/65 mm dia (min.) (Interconnection between units)/ Drain lines etc. as per plant room requirement. (All piping and fitting of required size inside the plant room included in the item)					
vii)		Painting G.I./CPVC pipes with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved priming coat as directed by the Project-in-charge (shade as per pip colour code). 50 mm dia (min.) (as per required length					
		Complete W.T.P as mentioned above including testing, training and trial run till comissioning of W.T.P. set	Job	1.00			
9.02		STRUCTURAL STEEL WORK					
i)		Supply, fabrication, erection, painting of pipe supports of structural steel, for piping work in the production areas and anchoring them. 2 coats of zinc chromate primer and one coat of finishing paint.	Kgs.	150.00			
9.03		Supplying, assembly, erection, testing and commissioning of level controllers based on level switches and necessary auxillary circuits included in the electric panel ,including all accessories required for the performance of the system to the satisfaction of the engineer in charge complete including providing and fixing wiring from control panel to the level switches of required size,all interconnections as required . Note : The required transformers / associated equipment shall be designed keeping in view the acrual distance of various tanks from the control panel, particularly the distance of OH soft water tank from panel. The most suitable route of sensor cable travel between the panel and the tank shall have to be worked out by the contractor according to site conditions and in consultation with engineer in charge. All cabling / switch installation should be done in an easy to maintain manner.					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
i)		One way one tank level controller as under.					
		To switch on the tube well pump when the level of water in the UG raw water tank is low and to cut off the pump when the level in the underground raw water tank is high. (Approx. control cable requirement - 200 meters.)	Set	1.00			
9.04	NS	Providing and fixing gun metal foot valve with stainer of approved quality/model complete in all respect.					
	a)	100 mm dia	each	2.0			
	b)	150 mm dia	each	2.0			
9.05	NS	Supplying, installing, testing and commissioning vertical online/horizontal centrifugal pumping set with mechanical seal, C.I. volute and SS impeller & SS shaft connected to a TEFC induction motor of suitable HP for 415 volts, 3 phase, 50 cycles A.C. supply with 150 mm dia pressure gauge with gunmetal isolation cock, vibration eliminating pads, base plate wiring upto panel and equipment for water level controller to start and stop the pump automatically at predecided levels of the water in the tank with provision of protection for dry run etc. complete in all respect also including panel/starter of required size and MCCB,digital voltmeter, Amps digital ammeter,busbars, circuit breaker etc. complete in all respect as per the approved drawing. (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).					
		Domestic water pumps (Treated water transfer&Raw water Transfer pump to terrace tank)					
	a)	Treated water transfer pump to terrace tank					
		Capacity 500 lpm					
		Head 70M	Each	2.00			

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student]							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
9.06	NS	Supply, installing, testing and commissioning vertical fully floodable type submersible drainage pump in close coupled design single stage, suitable for handling minimum 12 mm dia solids for transferring waste water from sump to outside the building with float switch for automatic start and stop arrangement with panel and wiring, chain and pulley, mechanical seal complete in all respect as per instruction of the Engineer in charge . (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).					
		Material of Construction (M.O.C): Corrosion Resistant in general					
		: Casing — Cast Iron					
		: Impeller — Stainless Steel					
		: Shaft — Stainless Steel					
		: Bearings — Anti friction, prelubricated ball bearings, packed with grease for life.					
		Motor: — Dry Motor with built in over load protection Protection - IP68. Insulation Class - F					
		Duty of each pump					
	a)	150 LPM against 10 M head	each	2.0			
		SUB TOTAL(Water treatment Plant)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
10.00	NS	SEWAGE TREATMENT PLANT					
		Planning,Designing,Detailing,Supplying, Erection,Testing and Commissioning of Package Sewage treatment plant based on MBBR (Moving bed Bio Reactor) technology of average flow rate of 410 cu.m/day for sewer and provision in planning only for additional load expected in phase-II (i.e. 375 KLD).But the present scope of work will be limited to 410 KLD only including provision of recirculation of treated sewage/effluent for the use of horticulture purposes including design and execution of all civil,structural,electrical,mechanical,plumbing and processing,ancillary equipments and works etc required to complete the package, getting approval from state pollution control board and other statutory bodies as well as from consultant (HSCC) including the cost of STP building for electrical room, treated sewage under ground storage tank of 150 cu.m capacity etc.					
		All the water retaining structure shall be designed as water retaining structure as per provision of IS code and water proofing with fixed or any other approved chemical shall be carried out by approved agency with 10 year (minimum) garanty. All the unit shall be painted by epoxy or any other approved paints.					
	i)	The shop drawings & design of STP shall be prepared by the agency .The STP shall comprising of the following units of required size as per detail process and hydraulic design.The structure design shall be carried as per provision of IS code.The agency has to get their structure drawing checked and approved by IIT Delhi/Kharagpur/NITE or any other govt. Engineering college approved by HSCC.(set-1)					
	ii)	RCC Suitable size Bar Screen chamber with minimum free board 300 mm and minimum size 0.6mx1mx0.3m SWD and suitable size SS Bar screen is installed at suitable angle at the inlet of raw sewage sump before pumping. The unit shall be designed for peak flow -2 nos.(min.) .					
	a)	Electrical & mechanical(2 Nos)					
	b)	Civil (2Nos)-will be paid seperately in civil work					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student]							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
iii)		Providing and fixing submersible sewage pumping set with CI body, SS impeller and shaft coupled with totally enclosed fan cooled induction motor complete with HDPE double flanged/CPVC pipings, sluice valves, non return valves, fittings etc as required. Motor suitable for 415 volts, 3 phase 50Hz,1500 rpm A/c supply with control auto start float switch, cable and all fitting complete in all respect.					
		RAW SEWAGE PUMP-(4 nos min.)					
		Capacity - 175LPM (min.)					
		Head - 15 m					
		Solid handing - 50-80mm					
iv)		RCC Equalisation tank with hydraulic retention time Min.6 Hrs HRT of suitable Size free Board 500 mm,the effluent of equalisation tank is agitated with diffused air that is fed by an air blower, including pipe non-corrosive material and its complete system. (1 unit)					
a)		Civil-will be paid seperately in civil work					
b)		Mechanical & Electrical					
v)		RCC MBBR-(4 nos. minimum) with minimum 4hr. retention time of each reactor of suitable size with Air grid CPVC pipe material of construction or corrosion resistant material,Air diffusers (fine bubble), HDPE approved make Bio media for each aeration tank,with minimum water depth of 3.6 m.					
a)		Electrical & mechanical(4 Nos)					
b)		Civil(4 Nos)-will be paid seperately in civil work					
vi)		ROTARY AIR BLOWERS					
		Providing and Installation of Rotary air blowers for air scouring, driver through v-belt or directly coupled through flaxble coupling. Motor shall be of suitable HP for 400-440 volts, ,1500RPM, 3 phase, alongwith air filter, non-return valve, safetyvalve, base plate and necessary air piping fittings valves, flowmeters etc.					
		(Blower capacity and pressure head shall be suitable to meet the requirement of equalisation tank and Bio reactor suitable for average flow rate of effluent of 410cu.m per day)- 6 nos.(4working +2 stand by)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
vii)		RCC secondary tube settler -2 nos. maximum Hydraulic loading 2.0 cu.m/sq.m/hr and with approved quality media.(2 units)					
a)		Electrical & mechanical(2 Nos)					
b)		Civil(2 Nos)-will be paid seperately in civil work					
viii)		Providing and fixing of OxiLyte (Mixed Oxidant) Generation System , based on ECA Technology, producing non toxic mixed Oxidant Slution at 1000 ppm of Oxidant Concentration or any other approved disinfection method excepted by HSCC. The solution should be at a pH 3+-0.5 suitable for 24x7 operations should produce 720L per day. The system should be supplied complete with appropriate dosing pumps , valves, piping, fittings, chemical dosing tank etc. complete in all respect.(2 unit)					
ix)		RCC supernatant tank/Filter feed tank minimum 30 cu.m capacity (1 unit) with filter feed pumps - will be paid seperately in civil work					
		FILTER FEED PUMPSETS					
		Providing and installation horizontal single/multistage centrifugal monoblock pumping set with CI body, SS impeller, coupled with totally enclosed fan cooled inlduction motor mounted on common structural base plate with all pump accessories complete as per specifications inclusive rubber vibration eleminators motor suitable for 415 volts, 1500RPM, 3 phase 50 HZ. A/c supply.					
		Type of pump - Horizontal					
		Capacity -350 LPM					
		Head - 30 M					
		Nos.- 2 (min.)					
x)		MULTI GRADE FILTER					
		Providing and installation of mild steel pressure vessel (as per IS:2825) 6 mm thick natural rubber lining fabrication standard multi grade filter complete in all respects, of total capacity 350LPM, complete with dished ends, supporting legs, manhole cover, frontal pipe work fitting with valves. Plant shall be provided with inlet, outlet pressure gauge, sample cocks, charge of filter media graded sand and internals consisting of strainers fitted on plate for collection. (No. of unit-2)					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
		Dia of vessel -1.2 m (minimum)					
		Shell thickness -6mm (minimum.)					
		Dish end thickness-8mm (minimum.)					
		Nozzie plate -10mm thick (minimum.)					
		Manhole -450mm					
xi)		ACTIVATED CARBON FILTER					
		Providing and installation of mild steel pressure vessel (as per IS:2825) 6 mm thick natural rubber lining fabrication standard multi grade filter complete in all respects, of total capacity 350LPM, complete with dished ends, supporting legs, manhole cover, frontal pipe work fitting with valves. Plant shall be provided with inlet, outlet pressure gauge, sample cocks, charge of approved quality activated carbon media. (No. of unit-1)					
		Dia of vessel -1.2 m (minimum)					
		Shell thickness -6mm (minimum.)					
		Dish end thickness-8mm (minimum.)					
		Nozzie plate -10mm thick (minimum.)					
		Manhole -450mm					
xii)		RCC sludge sump (20cu.m minimum) and submersible sludge pump set with CI body, SS impeller and shaft coupled with to a totally enclosed fan cooled iniduction motor complete with HDPED/F pipings, sluice valves, non return valves, fittings etc as required. Motor suitable for 415 volts, 3 phase 50Hz. A/c supply with control auto start float switch with return sludge line upto Bioreactor.					
	a)	SLUDGE PUMP- (2 set minimum)					
		Capacity -100 LPM					
		Head - 8 m					
		Solid handing - 50mm (minimum)					
	b)	Civil - RCC sludge sump and piping(1 Nos)-will be paid seperately in civil work					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student]							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
xiii)		Providing and fixing 24 plates 600 x 600mm size filter press - 2no. with suitable sludge pump and sludge tank of 4,000 ltrs. (min.) capacity alongwith piping, fittings valve etc. complete in all respects.					
xiv)		Providing and fixing dust and vermine proof cubical type motor control panel centre for the various pumps, blower etc. required. It is fabricated from 2mm thick CRCA sheet with stove enamelled finish and comprising of:Panel should have at least 20% spare feeders.					
a.		One incomming main MCCB of required capacity suitable rating					
b.		MCCB/MPCB, one for each motor					
c.		Fully automatic DOL/star delta starters suitable for different motors/pumps used in the ETP.Upto 7.5 HP DOL may be used and above star/delta starter used with push buttons one for each motor and on/off indicating neon lamps.					
d.		Single phasing preventors of appropriate rating for each motor.					
e		rotary type selector switch					
f		Panel type ampere meters, one for each motor shall be with rotary selector switch to monitor line currents.					
g		Panel type volt meters, on incoming main with rotary selecting switch to monitor voltage between phase to neutral and phase to phase.					
h		Neon phase indicating lamps and indicating lamp for each motor on incoming mains.					
l		Rotary switch for manual or auto operation for each pump					
j		Fully taped separate aluminium bus bar of required capacity for normal and emergency supply.					
k		The panel shall be pre-wired with coded wiring. All intercnnting wiring from incoming main to switchgear, meters and accessories within the switchboard panel shall have suitable copper ferrules					
xv)		Electrical works (including supply, installation and termination of cables of suitable size as per HP of all pumps with all structural supports, clamps and cable trays as per approved design/specifications,installation will be as per relevant Indian standard and CPWD specification alongwith control cable of suitable size).(1 lot). Any other electrical and mechanical item required to complete the work.					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student]							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
xvi)		Providing and fixing digital type flow meter etc. complete in all respects. (1 no.)					
xvii)		Providing and fixing lab. Equipments including digital type pH meter, COD kit, TDS kit, bicker, conical flask etc. complete in all respects.(1 set)					
xviii)		Sludge drying beds (5.0X15.0X1.8) (minimum size) (complete civil & mechanical work)-will be paid seperately in civil work					
xix)		Rooms for Pumps & control panel (50 sq.m.) (minimum size)					
a)		Civil-will be paid seperately in civil work					
b)		Electrical & mechanical					
xx)		RCC Treated water tank (150m3) (minimum)-will be paid seperately in civil work					
		Note: The rate also be included the cost of trial run for period of two month from the date of handing over and operation and maintenance of the plant for a period of one year from the expiry of trial run period including the cost of consumables complete as specification as directed .Obtain required no. of test report of treated/raw sewer during trial run. Tentative raw sewage generation & characteristics for designing of the plant are mentioned below. The bidder has to take this own judgment for designing the system					
		Average daily flow (cum/day) : 410 CuM per day					
		pH : 5.5 - 8.5					
		BOD (5 days at 20 degree C) (mg/l) : 150-400					
		COD (mg/l) : 250-600					
		Suspended solids (mg/l): 200-400					
		Oil & grease (mg/l) :20-50					
		The treated effluent characteristics shall be as per local pollution control board standards. The treated effluent (indicative) shall have following standard:-					
		BOD : Less than 10 Mg/l					
		COD : Less than 100 mg/l					
		Suspended solids: Less than 10 mg/l					
		Oil & grease : Less than 10 mg/l					
		pH : 6.5 - 8.0					

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar (Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing student)							
Sl. No.	DSR-2007 No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in Figures(in Rs.)
1	2	3	4	5			
		Bio-assay test : Survival of fish after 96 hrs 100 % Odor-Odorless					
		On the basis of the above and as per site condition the detailed drawing along with design calculation (Hydraulics, process, Structure etc.) shall be submitted to HSCC for the approval of the same before the start of the work The STPhas to be designed and installed by the approved vendor (Geo Miller, Ion Exchange, Fontus,Thermax, Pollucon Technologies, AKAR Implex (P) Ltd., KWAN Environmental solution). To have flexibility in O&M and to minimize the operation cost during lean flow or when the occupancy of the campus is low, the plant shall be designed in such a way that half portion of plant can be closed for O & M without disturbing the operation of another half portion of STP including the cost of operation & maintenance.					
		Complete functional STP 410 KLD capacity as mentioned above					
		The work to be executed as per approved shop drawings/design which meet the functional requirement quoted by the agency.The price quoted by the bidder shall include all the items stated above and also any other item/work required for completion of the work and efficient functioning of STP nothing extra shall be paid beyond above rates (BOQ item no. 1.00 subhead i to xx).	Set	1.0			
		SUB TOTAL(Sewage Treatment Plant)					

ABSTRACT

Name of Work:BOQ of Plumbing work of AIIMS,Bhubneshwar[Type-I (32 DU),UG Hostel-Girls,UG Hostel-Boys-I,UG Hostel-Boys-II,PG Hostel Design-II,Guest House, Dining Hall,Nursing students hostel-Block-D,Nursing students hostel-Block-E,Dining Hall for Nursing students)]

S.No.	DESCRIPTION	Amount (Rs)
A	INTERNAL PLUMBING ,	
1. 00	SANITARY FIXTURES	
2. 00	SOIL, WASTE AND VENT PIPES	
3. 00	WATER SUPPLY	
4. 00	SEWERAGE AND DRAINAGE	
5. 00	EARTH WORK	
B	EXTERNAL PLUMBING ,	
6.00	EXTERNAL WATER SUPPLY	
7.00	RAIN WATER PIPING	
8.00	SOLAR WATER HEATING SYSTEM	
9.00	WATER TREATMENT PLANT ,PUMP & EQUIPMENT	
10.00	STP	
	TOTAL	

BILL OF QUANTITIES

OF

FIRE FIGHTING

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.00	FIRE FIGHTING SYSTEM					
1.01	Excavating trenches of required width for pipes, cables etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil, and then returning the soil as required, inlayers 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					
1.01.1	Pipes, cables etc exceeding 80 mm dia but not exceeding 300 mm dia	Metre	80.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.02	Providing, fixing jointing and testing of Heavy (class -C) G.I. pipes as per relevant IS :1239/4736 with special accessories like tees, elbow, gasket, flanges, flanged joints, rubber insertion nuts and bolts including earth work excavation and trenching, wrapping pipecot 4mm thick 500mm width tar based polymeric corrosion protection tape or equivalent suitable to GI/ MS pipe line including applying uniform coat of cold pipecot primer complete 1 m below the ground level, refilling in layers not exceeding 20 cm in depth consolidated each deposited layer by ramming & watering complete in all respect as per IS : 1022 (Under ground)					
a)	150 mm dia G.I. Pipe with flange joints (5.4 mm wall thickness)	Metre	80.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.03	Heavy class G.I. pipes conforming to IS with accessories like tees, elbows, flanged joints, rubber insertion, nuts, bolts or welded joints including fixing the pipe with suitable flat iron strip clamps/brackets, structural members, dash fastener , cutting hole and chases in walls, floor, R.C.C. slab etc. and making good the same, including painting pipes and fittings with a primer coat of steel primer and two coats of postal red enamel paint etc. complete as required. (All the fitting i.e. tee /elbow, Valve shall be joint the pumps will flanged joints)					
a)	150 mm dia (with Flanged joints)	Metre	330.0			
b)	100 mm dia (with Flanged joints)	Metre	25.0			
1.04	Providing and fixing Single headed hydrants flanged inlet with 63 mm female instantaneous outlet of gunmetal complete with male blank caps, chains conforming to IS:5290 type A with stainless steel orifice plate (if required) to keep the pressure not more than 3.5 kg/sq.cm at any point.	Each	63.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.05	Providing 63mm dia 15 m long reinforced rubber lined hose pipe conforming to IS: 636-1992 Part-II with gunmetal male & female coupling wire wound with pipe as required.	Each	126.0			
1.06	Providing and fixing 63mm dia 15 m long canvas hose pipe complete with gunmetal male & female coupling wire wound with the pipe The pipe shall confirm to IS: 4927.	Each	15.0			
1.07	Providing and fixing Gunmetal branch pipe with 20mm dia nozzle conforming to IS:903. suitable for installation connections to hose coupling etc. as required.	Each	71.0			
1.08	Providing and fixing Four way fire brigade connection housed in steel cabinet of size 900mm x 750mm x 400mm fabricated from 1.5mm thick M.S. sheet having lockable arrangement, openable glazed door with 4mm thick glass, including painting a coat of steel primer and two coats of postal red enamel paint, with necessary supports for the cabinet etc. with 150 mm dia. non return and butterfly valves complete in all respects.					

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
a)	4 Way - 150mm dia	Each	8.0			
1.09	Providing and fixing Set of "Siamese" quadraplet instantaneous fire brigade connections comprising of two gunmetal instantaneous male inlet coupling 63mm dia with plug and cap, chain bends, tees etc for inlet to the static tank.	Each	1.0			
1.10	Providing & Fixing 150 mm dia, 4 way suction coupling for firebrigade withdrawal of water from the fire tank	Each	1.0			
1.11	Providing and fixing glazed door shutter and frame for Fire hose cabinet with hold fasts (frame fabricated from 40 x 40 x 5mm and shutter from angle) 2100 mm high x 1200 mm wide x 600mm deep with locking arrangement, 4mm thick glass with M.S. flats including all accessories, painting with one coat of steel primer and two coats of postal red enamel paint complete as per drawing and as directed. The words " hose cabinet" to be painted on the box complete in all respects.	Each	63.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.12	Providing and fixing Weather proof standard stand post type hose cabinet (900mm x 750 mm x 400 mm) out door type made of 1.5mm thick M.S. sheet having central opening glazed door with 4mm thick glass suitable for accommodating hydrants, 2 Nos. canvas hose pipe and branch pipe including necessary locking arrangements, painting one coat of primer and two coats of postal red enamel paint.. The shutters are to be lockable type. The words " hose cabinet" to be painted on the box.	Each	8.0			
1.13	Providing and fixing cast iron body IS: 210 FG 220 and double flange gear simple operation type butterfly valve conforming to IS: 13095 with SS304 disc and shaft NITNLE rubber replaceable seat of the following size complete with bolts, nuts, washers and rubber insertions as per specification.					
a)	150 mm dia	Each	14.0			
b)	100 mm dia	Each	2.0			
1.14	Supplying, testing, installation & commissioning of pressure switches for pumps including necessary wiring upto the control panel.	Each	8.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.15	Constructing masonry chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 fine sand) for sluice valve, with C.I. surface box 100mm top diameter, 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 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 F.P.S. bricks	Each	2.0			
1.16	Supplying and Fixing First Aid Hose Reel , wall mounting swinging type complete with drum & bracket of MS construction, spray painted in Post office Red, confirming to IS 884/1995 with upto date amendments, complete with the following as required.					

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
	36 Meter long 20 mm dia water hose Thermoplastic (Textile reinforced) Type - 2 as per IS : 12585					
	20 mm dia gun metal ball valve & nozzle.					
	Drum and brackets for fixing the equipments on wall.					
	Connection from riser with stop valve (gun metal) & M.S. Pipe	Each	63.0			
1.17	Providing and fixing C.I. sluice valves (With cap) of approved quality complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) Class II					
a)	150 mm dia	Each	2.0			
1.18	Supply, Installation, Testing and Commissioning of 100 mm dia Bourden type, Stainless Steel dial type Pressure Gauge including brass isolation valve and siphon pipe having calibration of 0 - 16 Kg / cm ² .	Each	63.0			
1.19	Supplying and Fixing of Fire Man's axe with heavy insulated rubber as per standard conforming to IS 926	Each	63.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.20	Supplying and Fixing vane type waterflow switch with contacts suitable for installation on 50 mm to 150 mm dia pipeline for a service pressure upto 20 Kg/sq.cm.	Each	8.0			
1.21	Fabricating, Supplying, Installation, Testing and Commissioning Air Vessel of continuous welded construction with flanged discharge header on the top of each riser fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, Air Release Valve complete with suitable drain arrangement with 25 mm dia gun metal wheel valve complete with all accessories etc. as required of the following sizes					
a)	1.2 Metre high and 250 mm dia	Each	8.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.22	Supply, Installation, Testing and Commissioning External Yard Hydrant Stand Post comprising of GI pipe 80 mm dia (heavy duty C class) from existing ringmain to about 1 meter above ground level and Single Headed Yard Hydrant Valve with 80 mm dia flanged inlet, instantaneous gunmetal coupling of 63 mm dia with cast iron wheel ISI marked, conforming to IS : 5290 (Type A), with ABS cap and chain etc.complete with all accessories as required.	Each	8.0			
1.23	Supply, erection, testing & commissioning of exit glow sign board of size 200mm x 350 mm wall mounting signage consisting of photo luminescent coating on acrylic cover	Each	63.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.24	Providing and fixing fire extinguisher of carbon dioxide type consisting of brand new high pressure steel cylinder bearing IS: 7285 mark and having the approval of controller of explosives Nagpur, wheel type valve bearing IS:3224 mark internal discharge tube, 1 meter long high pressure discharge hose, non conducting horn, suspension bracket, fully charged bearing IS: making fixed to wall as directed.					
a)	4.5kg capacity cylinder	Each	65.0			
1.25	Providing and fixing 9 liters capacity fire extinguisher water type gas pressure conforming to IS marking, fixed to wall.	Each	65.0			
1.26	Providing and fixing ABC type fire extinguishers complete in all respects.					
a)	Capacity 5.0 Kg.	Each	65.0			
1.27	Providing and fixing C.I. non-return valve complete with gunmetal seat, bolts, nuts washer & rubber insertions as required conforming to IS:5312.					
a)	150 mm dia	Each	7.0			
b)	100 mm dia	Each	1.0			

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
1.28	Supplying, installing, testing and commissioning of electric motor driven type automatic pressurisation, pump set suitable for automatic operation of terrace down comer and consisting of the following (as per CPWD specifications Part V-1985) for fire fighting and its amendmendts).					

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
a	Fire pump with stainless steel impeller CI casing, SS shaft shall be horizontal end suction centrifugally type having a capacity of 900 LPM against a total head of 35m so as to ensure a minimum pressure of 3.0 kg/sqm at the highest and farthest out at the specified flow complete with necessary strainer with foot valve in suction side and pressure gauge on the delivery side including bypass arrangement for periodic testing of the working of the pumping set as required. The pump shall be provided with mechanical seals.(Including taking necessary approval of complete fire fighting scheme from local fire authority before and after start of work) {Agency also has to submit characteristic curve of the pumps, model & other technical data for approval before placing the order} Including starter and electrical panel etc.					
b	Squirrel cage AC induction motor suitable for operation of 415 V ,+/-10%, 3 phase 50 HZ, AC supply and of minimum 7.5 HP,1500 RPM for the above pump with flexible coupling as per specification and conforming to IS 325-1978 and shall be TEFC type only					

Project: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR

Name of Works: Detailed BOQ of Fire Fighting Works for AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)

Item No	Description Of Item	Unit	Qty.	Rate(Rs) in figures	Rate(Rs) in words	Amount in figures (Rs.)
c	Common base plate fabricated from mild steel channel ot castiron type					
d	Suitable cement concrete pump foundation with vibration damping arrangememnt with cushy foot mounting as required	set	14.0			
	Sub Total					

PROJECT NAME: CONSTRUCTION OF AIIMS HOUSING AT BHUBANESWAR						
NAME OF WORK: BOQ OF FIRE FIGHTING FOR AIIMS HOUSING PROJECT PHASE II (TYPE 132 D.U., HOSTEL UG & PG,NURSING STUDENTS HOSTELS, DINING HALL, GUEST HOUSE)						
S.No	DESCRIPTION OF WORK		Amount in figures (Rs)	Amount in words (Rs)		
1	FIRE FIGHTING					

BILL OF QUANTITIES

OF

ELECTRICAL WORKS

BILL OF QUANTITIES FOR THE ELECTRICAL WORKS OF A.I.I.M.S. HOUSING AT BHUBHNEHWAR.

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
1.00	SUB HEAD 1 : MV PANELS					
1.01	MV PANELS					
	Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, wall/ floor mounted type, dust, damp and vermin proof, Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, powder coat painted and having following incoming and outgoing switchgears complete as required. Panel shall have IP-42 protection.					
i	EDB-Guests House					
a)	INCOMER:					
	1 No. 250 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 250 Amp ammeter with selector switch with 250/5A C.T.'s.					
	1 Set of phase indicating lamp with HRC fuses					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
b)	BUSBARS:					
	300 Amp TPN Aluminium busbars					
c)	OUTGOING:					
	2 No. 40 Amp 415 volts, Four Pole, Miniature Circuit Breaker, with phase indicating lamps.					
	3 No. 63 Amp 415 volts, Four Pole, Miniature Circuit Breaker, with phase indicating lamps.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	EDB-Guests House as mentioned above	1	Set			
	ii EDB-UG HOSTEL BLOCK 'A, B& C'					
	a) INCOMER:					
	1 No. 63 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 63 Amp ammeter with selector switch with 63/5A C.T.'s.					
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
	b) BUSBARS:					
	100 Amp TPN Aluminium busbars					
	c) OUTGOING:					
	10 No. 32 Amp, Double Pole, Miniature circuit Breaker, with phase indicating lamps.					
	EDB-UG HOSTEL BLOCK 'A, B & C' as mentioned above	3	Set			
	iii EDB- NURSING HOSTEL BLOCK 'D & E'					
	a) INCOMER:					
	1 No. 63 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 63 Amp ammeter with selector switch with 63/5A C.T.'s.					
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	b) BUSBARS: 100 Amp TPN Aluminium busbars					
	c) OUTGOING: 10 No. 32 Amp, Double Pole, Miniature circuit Breaker, with phase indicating lamps.					
	EDB- NURSING HOSTEL BLOCK 'D & E' as mentioned above	2	Set			
	iv EDB- PG HOSTEL					
	a) INCOMER: 1 No. 63 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism. 1 No. 0 to 500 V voltmeter with selector switch. 1 No. 0 to 63 Amp ammeter with selector switch with 63/5A C.T.'s. 1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
	b) BUSBARS: 100 Amp TPN Aluminium busbars					
	c) OUTGOING: 10 No. 32 Amp, Double pole, Miniature circuit Breaker, with phase indicating lamps.					
	EDB- PG HOSTEL as mentioned above	1	Set			
	v EDB- DINNING HALL					
	a) INCOMER: 1 No. 63 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism. 1 No. 0 to 500 V voltmeter with selector switch. 1 No. 0 to 63 Amp ammeter with selector switch with 63/5A C.T.'s.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
	b) BUSBARS:					
	100 Amp TPN Aluminium busbars					
	c) OUTGOING:					
	04 No. 32 Amp, Double pole, Miniature circuit Breaker, with phase indicating lamps.					
	EDB- DINNING HALL as mentioned above	2	Set			
	vi NDB- UG HOSTEL BLOCK A					
	a) INCOMER:					
	1 No. 250 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 250 Amp ammeter with selector switch with 250/5A C.T.'s.					
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
	b) BUSBARS:					
	300 Amp TPN Aluminium busbars					
	c) OUTGOING:					
	5 Nos 63 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	8 Nos. 40 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	3 Nos. 32 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	NDB- UG HOSTEL BLOCK A as mentioned above	1	Set			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
vii	NDB- UG HOSTEL BLOCK B & C					
a)	INCOMER:					
	1 No. 250 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 250 Amp ammeter with selector switch with 250/5A C.T.'s.					
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
b)	BUSBARS:					
	250 Amp TPN Aluminium busbars					
c)	OUTGOING:					
	8 Nos 63 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	8 Nos. 40 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	NDB -UG HOSTEL BLOCK B &C as mentioned above	2	Set			
viii	NDB- NURSING HOSTEL BLOCK 'D & E'					
a)	INCOMER:					
	1 No. 250 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 250 Amp ammeter with selector switch with 250/5A C.T.'s.					
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
b)	BUSBARS:					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	300 Amp TPN Aluminium busbars					
	c) OUTGOING:					
	8 Nos 63 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	8 Nos. 40 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	NDB- NURSING HOSTEL BLOCK 'D & E' as mentioned above	2	Set			
	ix NDB- DINNING HALL					
	a) INCOMER:					
	1 No. 63 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					
	1 No. 0 to 500 V voltmeter with selector switch.					
	1 No. 0 to 63 Amp ammeter with selector switch with 63/5A C.T.'s.					
	1 Set of phase indicating lamp with 2A SP control MCBs					
	1 no.three phase digital KWH meter of suitable rating in lockable box.					
	b) BUSBARS:					
	100 Amp TPN Aluminium busbars					
	c) OUTGOING:					
	6 Nos 40 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	1 Nos. 32 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.					
	NDB- DINNING HALL as mentioned above	2	Set			
	x NDB- PG HOSTEL					
	a) INCOMER:					
	1 No. 630 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker with extended rotary mechanism.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).							
S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)	
1	2	3	4	5		6	
	1 No. 0 to 500 V voltmeter with selector switch.						
	1 No. 0 to 630 Amp ammeter with selector switch with 630/5A C.T.'s.						
	1 Set of phase indicating lamp with 2A SP control MCBs						
	1 no.three phase digital KWH meter of suitable rating in lockable box.						
	b) BUSBARS:						
	700 Amp TPN Aluminium busbars						
	c) OUTGOING:						
	16 Nos 63 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.						
	8 Nos. 40 Amp 415 volts, Four Pole, Miniature circuit Breaker, with phase indicating lamps.						
	NDB - PG HOSTEL as mentioned above	1	Set				
1.02	METER BOARDS NORMAL AND EMERGENCY						
1.02.01	METER BOARDS NORMAL						
	Supply and installation, testing and commissioning of M.V., indoor cubical type totally enclosed floor/ wall mounting type, dust, dump and vermin proof meter panel complete with bus bars, M.V. danger notice plate, inter connection with suitable capacity copper leads/ solid copper strip/ rods, connection of incoming and outgoing cables with thimbles, stove enameled painted with lockable arrangement of each individual meters having following switchgear as required. Testing of these meters from local electricity board shall be in the contractor's scope.						

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	i) TYPE-I FLATS					
	a) INCOMER 63 A, 4 pole MCCB 415/ 500 volts, 1 Set of phase indicating lamp with 2A SP control MCBs					
	b) BUSBAR 100 A TPN busbar of alluminium alloy.					
	c) OUTGOING 12 nos 2.5 -10 A single phase digital KWH meter with 1 no DP 32 A MCB on out going of every energy meter. Energy meter duly tested and sealed by state electricity board, in individual lockable cubical.					
	Meter board, Type-I Flats as mentioned above	3	Set			
1.02.02	METER BOARDS EMERGENCY					
	i) TYPE - I FLATS					
	a) INCOMER 63 A, 4 pole MCCB 415/ 500 volts, 1 Set of phase indicating lamp with 2A SP control MCBs					
	b) BUSBAR 100 A TPN busbar of alluminium alloy.					
	c) OUTGOING 1 nos 10-40 A single phase digital KWH meter with 4 no, 16 A DP MCB on out going of energy meter. Energy meter duly tested and sealed by state electricity board, in individual lockable cubical					
	Meter board Type-I Flats as mentioned above	3	Set			
1.03	LIFTS PANEL (From emergency supply)					
	a) INCOMER:					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	1 No. 100 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker					
	1 No. 0 to 500 V voltmeter with selector switch.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	1 No. 0 to 630 Amp ammeter with selector switch with 630/5A C.T.'s.					
	1 Set of phase indicating lamp with HRC fuses					
	b) BUSBARS:					
	150 Amp TPN Aluminium busbars					
	c) OUTGOING:					
	03 No. 63 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker, with phase indicating lamps.					
	01 No. 32 Amp 415 volts, Four Pole, Moulded Case Circuit Breaker, with phase indicating lamps.					
	Lifts panel as mentioned above	6	Set			
	TOTAL SUB HEAD 1 : MV PANELS					
	SUB HEAD-2: MCB DISTRIBUTION BOARDS.					
2.00	MCB DISTRIBUTION BOARD					
2.01	Supplying, installation, testing and comissioning of following way, three phase and neutral , pre wired, factory assmbed single door MCB distribution board with incomers(RCCB+ MCB) and out goings (MCB) as per drawings, Before procurement of DB the contractor has to take approval of DB schedule/ drawing of each DB from the Engineer-in-charge as per technical specifications and as required.					
	i 4 way	23	Each			
	ii 6 Way	38	Each			
	iii 8 Way	18	Each			
	iv 12 Way	32	Each			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
2.02	Supplying, installation, testing and commissioning of following way, single phase and neutral , pre wired, factory assembled single door MCB distribution board with incomers (RCCB + MCB) and out goings (MCB) as per drawings, Before procurement of DB the contractor has to take approval of DB schedule/ drawing of each DB from the Engineer-in-charge as per technical specifications and as required.					
	i 4 way	60	Each			
	ii 8 Way	48	Each			
	TOTAL SUBHEAD: 2- MCB DISTRIBUTION BOARD.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
3.00	SUB HEAD: 3 - WIRING					
3.01	WIRING					
	Wiring for light point/ fanpoint/ exhaust fan point/ call bell point with 1.5 sq.mm. FR PVC insulated copper conductor cable, single core/ multi strand, insurface/ recessed ISI marked PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq. mm FR PVC insulated copper conductor single core/ multi strand cable etc as required					
	Point wiring as mentioned above	5793	Point			
3.02	i					
	Wiring for twin control light point with 1.5 sq.mm. FR PVC insulated copper conductor single core/ multi strand cable in surface/ recessed ISI marked PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FR PVC insulated copper conductor single core/ multi strand cable etc as required.					
	Wiring for twin control light points as mentioned above	380	Point			
3.03						
	Wiring for 5 A light plug point with 1.5 sq.mm. FR PVC insulated copper conductor cable, single core/ multi strand, insurface/ recessed ISI marked PVC conduit earthing the point with 1.5 sq. mm FR PVC insulated copper conductor single core/ multi strand cable etc as required	488	Point			
3.04						
	5 A light plug wiring same as above but plug point is in the existing switch board itself.	215	Points			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
3.05	Wiring for 16 Amp power plug, with 2X4 sqmm FR PVC insulated copper conductor single core cable in surface/recessed ISI marked PVC conduit along with 1 no 4 Sq mm FR PVC insulated copper conductor single core cable for loop earthing as required					
	Directly from MCB-Distribution Board to the Socket Outlets	1417	Point			
3.06	Wiring for 20 amp power plug with 2X6 sq.mm.FR PVC insulated copper conductor single core cable in surface/recessed ISI marked PVC conduit) along with 1 no 6 sqmm FR PVC insulated copper conductor single core cable for loop earthing as required.					
		26	Point			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
3.07	Wiring for circuit/ submain wiring along with earth wire with the following sizes of PVC insulated copper conductor single core/ multi strand cable in surface/recessed ISI marked PVC conduit as required.					
	i 2X2.5 Sqmm + 1X 2.5 sqmm earth wire	9260	Metre			
	ii 2X4 Sqmm + 1X 4 sqmm earth wire	250	Metre			
	iii 2X10 Sqmm + 1 x 10 sq mm earth wire	1610	Metre			
	iv 2X16 Sqmm + 1X16 sq mm earth wire	0	Metre			
	v 4X6 Sqmm + 2X 6 sqmm earth wire	360	Metre			
	vi 4X10 Sqmm + 2X10 sq mm earth wire	700	Metre			
	vii 4X16 Sqmm + 2 X 16 sq mm earth wire.	250	Metre			
3.08	Supplying and fixing 5 pin 5/6 amp modular socket outlet with shutters in suitable Module modular metal box on surface or in recess including modular cover plate, base plate, connections etc. complete as required.	488	Each			
3.09	Supplying and fixing of 5 pin 5/6 amp modular socket outlet & switch on the existing modular switch board complete as required.	215	Each			
3.10	Supplying and fixing 6 pin 15/ 16 A modular socket outlet with shutters in suitable modular metal box on surface or in recess including , modular cover plate, base plate, connections, etc. complete as required.	1417	Each			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
3.11	Supply and fixing following 20 Amps, 240 volts, 2P+E, Industrial Socket Outlet (with plugs) in a metal box with 20 SP MCB in a sheet steel cover on surface or recess complete with all accessories including connections, testing and commissioning etc. as required.	26	Each			
3.12	Supplying, providing & fixing cordless musical bell, batteries etc of approved make complete as required.	100	Each			
3.13	Aviation light point wiring with 2.5 sq. mm FR PVC insulated, copper conductor in ISI marked PVC conduit including providing and fixing MS switch box (similar to that street light pole) near plinth level of the building, earthing the point with 1 no 2.5 sq mm FR PVC insulated copper conductor complete as required.	10	point			
	TOTAL SUBHEAD: 3- WIRING					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).							
S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)	
1	2	3	4	5		6	
	SUB HEAD: 4 - LIGHT FIXTURE AND FANS						
4.00	LIGHT FIXTURES AND FANS						
4.01	Supply of following light fixture with high efficiency electronic ballast, starter, capacitor, tubes/lamps, reflector, diffuser, MS body/housing holder etc. complete with all fixing accessories as required of approved makes Twinkle/ Kselec/ Ankur/ Decon.						
	i 1X TL5 28 watt box type flourescent light fixture similar to Philips TMS 122M 1XTL5 28W EBT of approved makes.	1105	Each				
	ii 1X TL5 28 watt box type flourescent light fixture similar to Philips TMS 122M 1XTL5 28W EBT with reflector GMS 122 M128 R of approved makes.	228	Each				
	iii 1 X 36watt surface mounted flourescent light fixture with opal acrylic cover similar to Philips TCS 19 1XTLD36 W IO of approved makes	280	Each				
	iv 2X TLD 36watt surface mounted flourescent light fixture with acrylic cover similar to Philips TCS019 2XTLD36W IC O of approved makes.	24	Each				
	v 1X36 watt surface mounted mirror optics type 1 similar to Philips TCS605 1XTLD36W IC MI of approved makes.	5	Each				

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	vi 2X36 watt surface mounted mirror optics similar to Philips TCS 306 2XTLD36 W IC of approved makes	3	Each			
4.02	Supply of following compact flourescent light fixture with electronic ballast, starter, capacitor, lamps, reflector, diffuser, MS body/housing holder etc. complete with all fixing accessories as required of approved makes Decon/ Ankur/ Twinkle/ Kaselec					
	i 2X10 watt surface mounted mirror light fixture suitable for 2 x 10 watt CFL similar to Decon 05CZ or approved equivalent)	286	Each			
	ii Surface mounted Batten holder (Plastic) with 13 watt CFL	50	Each			
	iii 1x9 watt Bulk Head light fixture similar to Philips FXC 101 1XPL-S/2P11W ACO of approved makes	59	Each			
	iv 1x15 watt GLS lamp in wall recessed fixture similar to Decon 54VW, in die cast aluminium or approved equivalent) used as a night lamp	14	Each			
	v 1 x 10 watt CFL surface mounted Down Light fixture Type-1 similar to Decon 03XC or approved equivalent)	1473	Each			
	vi 1 x 13 watt CFL surface mounted Down Light fixture Type-2 similar to Decon 03WS or approved equivalent)	220	Each			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
vii	2 x 26 watt CFL pendant mounted Down Light fixture; Type-3 similar to GE CFLC2x26DNPR) reflector with glass.(Aria) of approved make.	15	Each			
viii	2 x 18 watt CFL surface mounted fixture type 1 & type 3; similar to GE: GE CFL 2x18 DN AOS (Mint) of approved make.	51	Each			
ix	2 x 13 watt CFL surface mounted fixture type 2 similar to GE: GE CFL C 2X18 DN FG S(Lento) of approved make	93	Each			
x	1 x 13 watt CFL Wall Bracket type-1 similar to Decon: 05PZ (rnd) or approved equivalent.	706	Each			
xi	2 x 13 watt CFL Wall Bracket type-2 similar to Decon: 05QW or approved equivalent)	191	Each			
4.03	Supply of following ceiling fans complete with double ball bearing, motor, blades, downrod, canopies, capacitor, modular type electronic fan regulator, MS Fan Box with MS Hook etc. suitable for operation on 230 volts, 50 Hz., 1 phase, AC supply complete as required					
i	1200 mm sweep	1144	Each			
ii	900 mm sweep	10	Each			
4.04	Supply of 1400 RPM, 230 mm Crompton Greaves; transair exhaust fan suitable for single phase 230 volts, 50 Hz., AC supply complete with motor, louvers/shutters etc. complete as required.	435	Each			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
4.05	Supply of 450 mm sweep, crompton greaves model high flow 18" wall mounted fan complete with double ball bearing, motor, blades, capacitor etc suitable for single phase 230 volts, 50 Hz., AC supply, complete as required.	15	Each			
4.06	Supply of aviation light (twin light) with neon spiral lamp suitable for single phase 230 volts, 50 Hz, AC supply.	10	Each			
4.07	Installation, testing and commissioning of prewired, flourescent fittings of all types, complete with all accessories and tube etc. directly on ceiling/wall, including connections with 1.5 sq.mm. PVC insulated, FRLS copper conductor, single core/ multi strand cable etc. as required.	1645	Each			
4.08	Installation, testing and commissioning of prewired, compact flourescent lamp fixture (CFL fxtures)of all types, complete with all accessories and lamp etc. directly on ceiling/wall, including connections with 1.5 sq.mm. PVC insulated, FRLS copper conductor, single core/ multi strand cable etc. as required.	3158	Each			
4.09	Installation, testing and commissioning of ceiling fan and modular type electronic fan regulator(Electronic regulator to be fixed in switch board) including wiring, the down rod and connection with 1.5 sqmm PVC insulated, copper conductor single core cable as required.	1154	Each			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
4.10	Installation, testing and commissioning of exhaust fan up to 300 mm sweep in the opening, including making the hole to suit the size of the above fan including , fixing of louvers/ shutters with frame making good the damages etc. as required.	435	Each			
4.11	Installation, testing and commissioning of wall mounted fan up to 450 mm sweep including supply and fixing wall bracket arrangement complete as required.	15	Each			
4.12	Installation, testing and commissioning of aviation light including supply and fixing of MS pipe, fixing of pipe etc complete as required. including connections with 2.5 sq.mm. PVC insulated, FRLS copper conductor, single core/ multi strand cable etc. as required	10	Each			
	TOTAL SUBHEAD 4: LIGHT FIXTURE & FANS					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	SUB HEAD 5: TELEPHONE SYSTEM					
5.00	TELEPHONE SYSTEM					
5.01	Supply & laying two pair 0.5 Sq. mm FR PVC insulated copper conductor unarmoured telephone cable in ISI marked PVC conduit including providing & fixing of two module modular metal box on surface or on recess with following pair cord outlet, connections etc. complete as required. This also includes conduiting, wiring from floor Tag blocks to individual telephone outlets.					
	i 1 pair cord outlet (Jack Type)	850	Each			
	ii 2 pair cord outlet (Jack Type)	70	Each			
5.02	Supplying, Installation, testing and commissioning of following sizes of telephone distribution board in M.S. hinged type locable box duly painted complete with Krone type tag block etc. including terminations of cable as required.					
	i 10 Pair	12	Each			
	ii 30 Pair	49	Each			
	iii 40 Pair	3	Each			
	iv 100 Pair	5	Each			
5.03	Providing & laying multi pair, jelly filled ,unarmoured 0.5 Sq. mm FR PVC insulated copper conductor telephone cable on surface/ recessed including clamping & fixing , also including connection in Tag blocks at both ends.					
	i 10 Pair Telephone Cable	250	Metre			
	ii 20 Pair Telephone Cable	500	Metre			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	TOTAL SUBHEAD 5: TELEPHONE SYSTEM					
	SUB HEAD 6 : FIRE DETECTION AND ALARM					
6.00	FIRE DETECTION AND ALARM SYSTEM					
6.01	Supply, installation, testing and commissioning of the manual fire alarm system including Manual Break Glass unit & Hooter as required.	106	Each			
	TOTAL SUB HEAD 6 : FIRE DETECTION AND ALARM					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	SUB HEAD 7: CONDUITING FOR TV OUTLETS					
7.00	CONDUITING FOR TV OUTLETS					
7.01	Supply and fixing of following sizes of ISI marked PVC conduit alongwith the accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required					
	i 20 mm dia	2550	Metre			
	ii 25 mm dia	1500	Metre			
7.02	Supplying and fixing 2 module modular metal box in recess with modular cover plate including fixing 1 no. coaxial TV outlet connection and all accessories complete as required	60	Each			
7.03	Supply and drawing Coaxial TV Cable RG - 6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and potected with PVC sheath in the existing surface/ recessed steel/ PVC coduit as required.	1500	Metre			
	TOTAL SUB HEAD 7: CONDUITING FOR TV OUTLETS					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	SUB HEAD 8: LIGHTENING PROTECTION					
8.00	LIGHTENING PROTECTION					
8.01	Earthing with 600 mm X 600 mm X 6 mm thick GI plate including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as required.	52	Set			
8.02	Extra for using charcoal and salt for GI or copper plate earth electrode as required.	52	Set			
8.03	Providing and fixing of lightening conductor finial, made of 25mm. dia. 300mm., long GI tube, having single prong at top, with 85 mm. dia. 6 mm. thick GI base plate including holes etc. complete as required.	68	Each			
8.04	Providing and and fixing GI tape 25mm X 6 mm thick on parapet or surface of wall for lightning conductor as required. (For horizontal and vertical runs).	2250	Metre			
8.05	Providing and fixing testing joint, made of 25mmX6mm thick GI strip, 125 mm. long, with 4 no.'s of GI bolts, nuts, check nuts, bar shaddles, and spring washers etc. complete as required.	52	Each			
8.06	Providing and laying GI tape, 32 mm X 6 mm thick, from test joint upto earth electrode directly in ground as required.	670	Metre			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	TOTAL SUB HEAD 8: LIGHTENING PROTECTION					
	SUB HEAD 9 : LIFTS					
9.00	LIFT					
9.01	Design, manufacture, supply, installation, testing and commissioning of 8 passenger (544 kg) lift , with travel speed 1.0 MPS serving different floors in the lift shaft including lift well pressurization as per detailed specification/ drawing enclosed and as under: Speed 1.0 MPS Floors G+7 (Total eight floors) Travel: As per architectural drawing. Stops & opening: 8 stops & 8 opening Controller: A.C. variable voltage & variable frequency Automatic rescue device complete with dry maintenance free batteries as required. Operation:Microprocessor based single automatic push button/ simplex selective collective/ duplex collective selective with attendant. 415 V, 3 phase, 50 Hz, 4 wire system Lift car: M.S. powder coated sheet steel. The flooring shall be with 3 mm thick PVC tiles. Type of doors: a) Car : A collapsible MS door with a single panel, single slide which slides horizontally. (b) Landing doors: A swinging type MS powder coated single panel door which is opened manually and closed by means of a spring closer when released with proper locking arrangement.					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	A hand rail not less than 600 mm long at 900 mm above floor level to be fixed adjacent to control panel in the lift car.					
	Mirror of suitable size to be fixed inside the lift car.					
	Voice announcement system in the car to announce the position of the elevator in the hoistway as the car passes or stops at a floor served by the elevator.					
	Intercom (Telephone system) in the lift car to be connected to the entrance of the block at ground floor.					
	Passenger Lift as mentioned above.	12	Each			
	TOTAL SUB HEAD 9: LIFTS					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	SUB HEAD 10: OUT DOOR LIGHTING					
10.00	OUTDOOR LIGHTING					
10.01	Supply, erection, testing and commissioning of external lighting pole with following specifications & items as mentioned below :					
	i 7-meter high, single arm, pedestal mounted type, steel posts, Drop Down Hanging with L-Bracket. The posts and fixtures are primer coated and painted with polyurethane paints. The fixtures are integral wired with copper wound ballast, ignitor and capacitor. SV lamp will be provided. A service window is provided at the bottom of the post with suitable connector block and MCB for termination of incoming UG cable. The post will be erected on 1:2:4 CC foundation, nominal depth 1/6th of pole height, and 40 cm x 40 cm, with 4 nos grouting bolts (to be supplied along with the post). The pedestal will be 30 cm above ground level. Suitable PVC pipe of medium gauge shall be kept in the foundation for UG cable entry and exit. The item includes provision of CC foundation, erection of post, termination of UG cabling, wiring upto fixture with 1.5 sq mm FRLS copper conductor cable, earthing, erection of fixture and commissioning the lighting. Pole/fixture: 1x150 watt HPSV, Twinkle make Cat. No.TMUL-8021 or similar make of Philips/ Bajaj/ Keslec.	25	Set			
	ii Same as above for double arm with 2x150 watt HPSV fitting. Twinkle cat No. TMUL-8022.	7	Nos			
	iii same as above for 3.6 meter post top fittings:					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).							
S.No.		Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1		2	3	4	5		6
	A	Twinkle cat no. TMUL:5010, 70 Watt metal halide	5	Nos			
	B	Twinkle cat no. TMUL:8010, 70 Watt metal halide	15	Nos			
10.02		Supply, installation, testing and commissioning of bollard lamps 1X18 watts CFL (Philips HCS360 1XPL-C 18W Sonara bollard in green color or equivalent) control box - 1 set.	7	Each			
10.03		Supply, installation, testing and commissioning of Post top lantern with 70W SON lamp (Philips HPS370 1XSON 70(E) or equivalent) and its wiring with 2 x 2.5 sq.mm PVC insulated copper wire and 1.5 sqmm PVC insulated copper earth wire from control box - 1 set	3	Each			
10.04		Road Lighting Panel (From Emergency Supply)					
		Supply, installation, testing and commissioning of following outdoor type with canopy, IP-54 protected M.V. cubicle type totally enclosed, free standing type, dust, damp and vermin proof, MV Panel, busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, stove enamelled painted and having following incoming and outgoing switchgears complete as required.					
		INCOMER:					
		1 No. 100 Amp 415 volts, TPN Switch Disconnecter Fuse Unit with HRC Fuses					
		1 Set of phase indicating lamp with HRC fuses					
		1Set of timer and 100A TP contactor with neutral link (for street lights control)					
		BUSBARS:					
		125 Amp TPN Aluminium busbars					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).							
S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)	
1	2	3	4	5		6	
	OUTGOING:						
	30 Nos. 16 Amp 415 volts, DP MCB	4	Set				
	TOTAL SUB HEAD -10.00 OUTDOOR LIGHTING						
	SUB HEAD 11: LT CABLES						
11.00	LT CABLES						
11.01	Supply of following sizes of 1.1 kV grade multicore aluminium conductor PVC sheathed armoured AYFY cable as per IS 1554.						
	i 2 Core 6 Sq mm	800	Metre				
	ii 3.5 Core 25 Sqmm.	1652	Metre				
	iii 3.5 Core 50 Sqmm.	120	Metre				
	iv 3.5 Core 95 Sqmm.	768	Metre				
	v 3.5 Core 120 Sqmm.	96	Metre				
11.02	Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required						
	i Size not exceeding 25 sq.mm	2452	Metre				
	ii Size exceeding 25 sq.mm but not exceeding 120 sq.mm	864	Metre				
11.03	Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in the existing RCC/ Hume/Stoneware/Metal pipe as required						
	i Size not exceeding 25 sq.mm	50	Metre				

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
ii	Size exceeding 25 sq.mm but not exceeding 120 sq.mm	50	Metre			
iii	Size exceeding 120 sq.mm but not exceeding 300 sq.mm	50	Metre			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
11.04	Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade on surface or on existing cable tray complete as required.					
	i Size not exceeding 25 sq.mm	100	Metre			
	ii Size exceeding 25 sq.mm but not exceeding 120 sq.mm	100	Metre			
	iii Size exceeding 120 sq.mm but not exceeding 240 sq.mm	100	Metre			
11.05	Supplying and making end termination with brass double compression glands of following sizes of 1.1. kv grade multicore aluminium conductor PVC insulated and PVC sheathed					
	i 2 Core 6 Sq mm	70	Each			
	ii 3.5 Core 25 Sqmm.	24	Each			
	iii 3.5 Core 50 Sqmm.	12	Each			
	iv 3.5 Core 95 Sqmm.	76	Each			
	v 3.5 Core 120 Sqmm.	10	Each			
11.06	Fabricating and installing following size of perforated M.S. cable trays including horizontal and vertical bends, reducers, tees, cross members and other accessories as required and duly suspended from the ceiling with M.S. suspenders and including painting etc. as required :-					
	i 150 mm. width x 50 mm. depth x 1.6 mm. thickness	50	Metre			
	ii 300 mm. width x 62.5 mm. depth x 2.0 mm. thickness	50	Metre			
	iii 450 mm. width x 62.6 mm. depth x 2.0 mm. thickness	50	Metre			
	iv 600 mm. width x 62.6 mm. depth x 2.0 mm. thickness	50	Metre			
	TOTAL SUB HEAD 11: LT CABLES					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
	SUB HEAD 12: EARTHING SAFETY EQUIPMENT AND MISC. ITEMS					
12.00	EARTHING, SAFETY EQUIPMENTS AND MISC. ITEMS					
12.01	Earthing with Copper plate 600mmX600mmX3mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as per CPWD general specifications for electrical works Part-1, Internal - 2005 and IS:3043-1987.	2	Set			
12.02	Earthing with GI plate 600mmX600mmX6mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as per CPWD general specifications for electrical works Part-1, Internal - 2005 and IS:3043-1987	34	Set			
12.03	Extra for using charcoal and salt for GI or copper plate earth electrode as required.	36	Set			
12.04	Supplying and laying 25mmX5mm copper strip at 0.5mm below ground level as strip earth electrode, including soldering etc. as required.	15	Metre			
12.05	Supplying and laying 25mmX5mm GI strip at 0.5mm below ground level as strip earth electrode, including soldering etc. as required.	500	Metre			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
12.06	Providing and fixing 40mmX6mm GI strip on surface/ on existing cable trench/RCC pipe or in recess for earth electrode as required.	220	Metre			
12.07	Providing and fixing 25mmX5mm GI strip on surface/ on existing cable trench/RCC pipe or in recess for earth electrode as required.	1200	Metre			
12.08	Providing and laying of following sizes non pressure NP2 class (light duty) RCC pipe with colar joint with stiff mixture of cement (1 cement : 2 fine sand) including testing the joints etc. as required.					
	i 100 mm dia	100	Metre			
	ii 150mm dia	110	Metre			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.		Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1		2	3	4	5		6
	iii	200mm dia	200	Metre			
	iv	300mm dia	50	Metre			
12.09		Providing and fixing M.V. danger notice plate of 200mmX150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription in signal red colour on front side as required.	9	Each			
12.10		Supplying and laying of 1.1kV grade 1 metre wide anti skid chequered type rubber mat.	20	Metre			
12.11		Design, manufacture, supply and installation of Fire Buckets 13 litre capacity 4 Nos. duly filled with sand and GI pipe support stand for these buckets including painting etc. complete as required.	4	Set			
12.12		Supply and fixing shock treatment chart in English, Hindi and local language mounted on 5mm thick Plywood and 3mm thick plain glass front complete as required.	4	Set			
12.13		Supplying and fixing Foam type 9 ltrs capacity fire extinguishers as approved by ISI complete as required.	2	Set			
12.14		Supplying and fixing CO2 type 4.5 ltrs capacity fire extinguishers as approved by ISI complete as required.	15	Set			
12.15		Supplying, storing, handling and fixing in position First Aid Medical Box complete as per tech. specifications as required.	2	Each			

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)
1	2	3	4	5		6
12.16	Providing & laying of 100 mm dia class B G.I. pipe; underground/ surface as per site requirement including; all accessories & excavation & back filling etc. complete; as required	100	Metre			
	TOTAL SUB HEAD 12: EARTHING, SAFETY EQUIPMENT AND MISC. ITEMS					

SCOPE OF WORK : TYPE - I (3 BLOCKS), UG HOSTEL (3 BLOCKS), DINING HALL (2 BLOCKS), GUESTS HOUSE, PG HOSTEL - DII, NURSING HOSTEL (BLOCK D & E).							
S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in Words (in Rs.)	Amount (in Rs.)	
1	2	3	4	5		6	
	SUB HEAD 13: COMPREHENSIVE MAINTENANCE:						
13.00	COMPREHENSIVE MAINTENANCE:						
	Comprehensive Maintenance of the following items for one Year including supply of spare parts, man power on 24 Hrs basis:						
1	SubStation Equipments including Sound Proof D.G. Sets; complete including panels, exhaust Day tanks, Piping; Etc.	1	Job				
2	Lifts	1	Job				
3	External Lighting including cables.	1	Job				
	TOTAL SUB HEAD 13: COMPREHENSIVE MAINTENANCE:						
	GRAND TOTAL FOR ALL ELECTRICAL WORKS						

SUMMARY OF COST ESTIMATE - ELECTRICAL WORKS

S.No.	Description	Amount In Figure (In Rs.)	Amount in Words (Rs.)
1	Sub Head 1: MV Panels		
2	Sub Head 2: MCB Distribution Board		
3	Sub Head 3: Wiring		
4	Sub Head 4: Light Fixtures & Fans		
5	Sub Head 5: Telephone Systems		
6	Sub Head 6: Fire Detection & Alarm		
7	Sub Head 7: Conduiting For TV Outlet		
8	Sub Head 8: Lightening Protection		
9	Sub Head 9: Lifts		
10	Sub Head 10: Outdoor Lighting		
11	Sub Head 11: LT Cables		
12	Sub Head 12: Earthing, Safety Equipments & Miscellaneous Items.		
13	Sub Head 13: Comprehensive Maintenance.		
14	GRAND TOTAL FOR ALL ELECTRICAL WORKS		
15	Discount If Any:		
16	Net Total After Discount:		

* Discount indicated at Sr. No. 15 shall only be considered

SUMMARY SHEET FOR “Construction of Residential Complex (Part II) for AIIMS like Institution at Bhubaneswar under PMSSY”.

S.No	Name of Head	Total Quoted Amount (In Indian Rupees)
-------------	---------------------	--------------------------------------------------

- | | | |
|---|---------------------------|--|
| 1 | Civil Works | |
| 2 | Public Health Engineering | |
| 3 | Fire Fighting | |
| 4 | Electrical works | |

Total in Figures:-

Total in Words:-