PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(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 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.	50.00	cum			
1.02	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.	50.00	cum			
	Total					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(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)	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	20.00	cum			
b)	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	11.00	cum			
2.02	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. up to floor five level, excluding the cost of centering, shuttering and finishing:					
a)	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	8.00	cum			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
2.03	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.	38.00	Cum			
	Total					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(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. All works above plinth level up to floor V level.	1025.00	cum			
3.02	Add or deduct for providing richer or leaner mixes respectively at all floor levels.					
i)	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..	200.00	cum			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
3.03	Centering and shuttering including strutting, propping etc. and removal of form(Note: The contractor shall make adequate arrangement of shuttering materials for simultaneous working at two or more floors, to achieve the targets set for completion of the structure. Nothing extra is payable on this account.) for:					
a)	Suspended floors, roofs, landings, balconies and access platform.	2330.00	sqm			
b)	Shelves (Cast in situ)	83.00	sqm			
c)	lintels, beams, plinth beams. girders. bressumers and cantilevers.	3449.00	sqm			
d)	Columns, Pillars, Piers, Abutments, Posts and Struts.	1023.00	sqm			
e)	Stairs, (excluding landings) except spiral-staircases	334.00	sqm			
f)	Extra for shuttering in circular work for					
i)	columns	172.00	Sqm			
ii)	Beams	337.00	sqm			
g)	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.	385.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
h)	Edges of slabs and breaks in floors and walls. Under					
i)	20 cm wide	20.00	metre			
ii)	Above 20 cm wide	10.00	sqm			
i)	Weather shade, Chajjas, corbels etc., including edges.	49.00	sqm			
3.04	Extra for additional height in centering, shuttering whereever required with adequate bracing, propping etc. includIng cost of decshuttering 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,* landings, beams and balconies (Plan area to be measured).	2381.00	sqm			
3.05	Reinforcement for R.C.C. work including straightening. cutting, bending, placing in position and binding all complete.					
a)	Thermo-Mechanically Treated bars Fe500	155974.00	Kg			
	Total					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(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)	5.00	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 :					
a)	Cement mortar 1:6 (1 cement: 6 coarse sand)	606.00	cum			
4.03	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 300mm long of 25x3mm section at not less than 3 ties per sqm as per approved design.	20.00	sqm			
4.04	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)	3690.00	sqm			
	Total					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.00	**DOORS, WINDOWS AND PARTITIONS**					
5.01	Providing and fixing aluminium work for doors, windows, ventilators, partitions and louvers with extruded built up standard tubular *sections* / appropriate Z sections/ sheet strips and other modular 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) :					
5.01.1	For fixed portion					
a)	Powder coated aluminium (minimum thickness of powder coating 50 micron)	3719.00	kg			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.01.2	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).					
a)	Powder coated aluminium (minimum thickness of powder coating 50 micron)	1288.00	kg			
5.02	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 a 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.	1116.00	kg			
5.03	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) :					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
a)	With float glass panes of 5.50 mm thickness	356.00	sqm			
5.04	Providing and fixing powder coated aluminium grills made out with special extruded sections fixed with suitable means approved and as directed by Engineer in Charge including all complete.	1185.00	kg			
5.05	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 1st class hard wood and well matched commercial 3 ply on both faces of shutters :					
a)	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	188.00	sqm			
5.06	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured) Over item no. 9.20 and 9.21.	188.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.07	Extra of providing vision panal not exceding 0.1sqm in all type of flush doors. (Cost of glass excluded). Over all area of doors shutters to be measured.					
a)	Rectalgular of square	94.00	sqm			
5.08	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).	89.00	sqm			
5.09	Providing glass panes, with wooden fillets wherever necessary.					
a)	Float Glass Panes of thickness 4mm	3.00	Sqm			
5.10	Extra for Providing etching on glass panes in doors, windows shutters, partition etc in desired pattern complete as per drawing and as directed.(Area of etching shall be measered for payment)	10.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.11	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality					
	1.0 mm thick.	375.00	sqm			
5.12	Providing and fixing Wooden Wall panelling with the following specification:					
a)	Frame work of chemically treated (for termites) seasoned sal wood 50 X 50 mm in horizonntal & Vertical frame 600 X 600 mm c/c and along doors, windows etc, fixed rigidly with suitable desh fastners etc all complete as required at site.					
b)	Providing and fitting 50 mm thick glass wool of 24 kg/cum density wrapped in 200G virgin polythene bags					
c)	Providing and fixing 20 mm thick teak wood slats/panels of required width for skirting and panelling fixed over wooden base giving 3 mm gap between the panels, as per drawing including required hardware, beading etc all complete.					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
d)	Malamine polishing over wooden panelling (Area of paneling shall be measured for complete item)	82.00	sqm			
5.13	Providing and fixing wall panelling with the following specification:					
a)	Frame work of chemically treated (for termites) seasoned sal wood 50 X 50 mm in horizonntal & Vertical frame 600 X 600 mm c/c and along doors, windows etc, fixed rigidly with suitable desh fastners etc all complete as required at site.					
b)	Providing and fitting 50 mm thick glass wool of 24 kg/cum density wrapped in 200G virgin polythene bags					
c)	Providing and fixing fabric cladding (Base rate of fabric Rs 300 per sqm) fixed with suitable adhesive over 19 mm thick accousitc board of approved quality fixed over wooden base including all hardware, beading etc complete,	82.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.14	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 intumuscent 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 cladded 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.					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
	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.					
a)	Single/Double Shutter	16.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.15	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.		Metre			
	The rebate shall be of 20mm x 57mm in Door Frame to accommodate the shutter in frame	27.00	Metre			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.16	Providing and fixing door Co-ordinator for coordination of double leaf doors as manufactures specifications.	4.00	Each			
5.17	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.	0.50	sqm			
5.18	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	0.50	sqm			

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1	2	3	4	5	6	7
5.19	Providing and fixing M.S. Tubular frames for doors , windows, ventilators and cupboard with L-Type section made of 1.60mm thick M.S. Sheet, joints mitred and welded and grinded finish profiles required size with 15x3mm lugs 10cm long embedd in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement: 3 coarse sand :6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or nuts as required including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primers.	50.00	Kg			
	ALUMINIUM FITTINGS					
5.20	Providing and fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	91.00	each			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.21	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)	300x16 mm	2.00	each			
b)	250x16 mm	2.00	each			
5.22	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)	250x10 mm	124.00	each			
b)	150x10 mm	410.00	each			
5.23	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 wilh necessary screws etc. complete :					
a)	125 mm	248.00	each			
b)	100 mm	319.00	each			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
5.24	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	124.00	each			
5.25	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).	91.00	each			
5.26	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.					
a)	255 X 19 mm	304.00	Each			

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1	2	3	4	5	6	7
5.27	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 5 years warrantee.					
a)	Double Leaf	4.00	Each			
5.28	Providing and fixing of fire rated door closer tested in accordance with BS:476 Part 22 for fire rating) and BS EN 1154 with 10 year warranty.	4.00	Each			
5.29	Providing and fixing 2 hrs, fire rated mortice lock with lever handle tested in accordance with BS:476 Part 22.with 7 year warranty.	4.00	Each			
5.30	Providing and fixing stainless steel grade 304 D type pull handle with screws complete.	8.00	Each			
	Total					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
6.00	**Steel Works**					
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 steel windows by welding.	50.00	kg			
6.02	Providing and fixing circular Hexagonal cast iron or M.S sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding , top lid shall be screwed into the cast iron / M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	168.00	Each			
6.03	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.	6396.00	Kg			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
6.04	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railng and staircase railing including applying a priming coat of approved steel primer.					
a)	M.S. tube.	775.00	Kg			
6.05	Providing & fixing in position SS Railing for staircase, balconies and parapets made out of 304 grade 16 SWG SS pipe/other modular sections with SS end Cap, base plate connector, cover plate of required thickness and fixing arrangement etc all complete as per drawing and diagram complete with buffing and polishing etc complete.	85.00	Mtr			
	Total					

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
7.00	**Flooring**					
7.01	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.	27.00	sqm			
7.02	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.	5.00	sqm			
7.03	Providing and fixing glass strips in joints of *terrazo/* cement concrete floors.					
a)	40 mm wide and 4 mm thick.	67.00	Metre			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
7.04	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 White	261.00	sqm			
b)	Udaipur green marble	339.00	sqm			
c)	Jaisalmer Stone	55.00	sqm			
7.05	Granite stone flooring with 18 mm thick granite (Base Rate Rs. 110/- Sqft) stone, rectangular shape, (minimum size of stone should be 0.45 sqm and one dimension not less than 700 mm), 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.	592.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
7.06	18mm thick Prepolished Granite (Base Rate 110/- Sqft) in Risers, skirting and dado (upto 90 cm height) over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement including pointing with white cement mixed with pigment matching the shade of granite stone all complete and as directed.	235.00	sqm			
7.07	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.	228.00	sqm			
7.08	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.	35.00	sqm			

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
7.09	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	130.00	sqm			
7.10	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.	105.00	sqm			

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
7.11	Providing and laying polished 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	1082.00	sqm			
7.12	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut 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, induding rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels					
a)	Granite of any colour and shade					
i	Area of slab upto 0.50 sqm	5.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
ii	Area of slab over 0.50 sqm.	76.00	sqm			
7.13	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.					
a)	Granite work.	104.00	metre			
7.14	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.	88.00	Meter			
7.15	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.	30.00	Each			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
7.16	P/L 8mm thick (EN13329) laminated Flooring including skirting (class use of 23/31 AC 3 with 0.2mm thick direct pressure laminated on top) plank size 1290 X 194 mm & groove construction with edge impregnate with seal to secure long lasting joints ,secured together with the help of suitable glue, conforming to EN 13329.	171.00	sqm			
	Total					

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
8.00	**CEILING & ROOFING**					
8.01	Providing and fixing 15mm thick Mineral Fibre False Ceiling Tiles or equivalent of size 600x600 mm in true horizontal levelsuspendied on inter locking metalgrid of hot dipped galvanied steel sectios (Galvanized @ 170 gsm/sqm) consisting of main "T" runner suitably spaced at joints to get required length and of size 24x38mm made from 0.30 mm thick (minimum)sheet spaced at 1200 mm center to center and cross "T" of size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x 600mm and laying 15 mm thick mineral fibre false ceiling tiles of approved texture in the grid including, whereever, requried, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke deterctors etc. Main "T" runners to besuspended from ceiling using GI slotted cleats fixed to ceiling with 6 mm dia and 50 mm long dah fasteners, 4 mm GI adjustable rods with galvanised leve lclips spaced at 1200 m center to center along main T, bottom exposed width of 24 mm of all T-SEcitons shall be pre-painted with polyes paint, all complete at all heights as per specificaitons drawings and as directed by Engineer-in-Charge.					

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
	Only Mineral Fibre false ceiling area will be measured for the purpose of payment.					
	The Mineral Fibre Ceiling shall either be precast (moulded) or wetted product and shall have NRC value of 0.5 (minimum) CAC 35-39, light reflection 84% (minimum), fire rating class A as per ASTM E-84, suitable for 95% relative humidity and also having Thermal Resistance "(R)" =0.33 sqm deg. C/W					
	The job to be carried out by reputed company Lloyeds insulations (india) ltd., or equivalent having sufficient work experience.	228.00	sqm			
8.02	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8193 density 24kg/m^3, 50mm thick, wrapped in 200 G Virgin Polythene bags fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5mm x 24g wire and mesh, for top most ceiling of building.	228.00	Sq Mtr.			

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
8.03	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and					

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
	30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with :					
a)	12.5 mm thick tapered edge gypsum board conforming to IS: 2095- Part I.	105.00	sqm			
8.04	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed pprtions of W.C., kitchen and the like consisting of :					

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
i)	1st course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to 18 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.					
ii)	IInd course of 20mm cement plaster 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.					
iii)	IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area.					
iv)	IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet Should be 100 mm wide and pasted to each other with bitumen @ 1:7 Kg/sqm.)	142.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(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 to IS : 2645 and approved by Engineer - in - charge to required slope and treating similarly the					

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
	adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using *2.75kgl* 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 :					
a)	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	1375.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
8.06	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.					
	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 masonary/RCC work, at all heights including double heights, straight or curved etc. complete in all respect. (Plan Area shall be measured for the payment) (Framing to be paid seprately)	308.00	sqm			
	Total					

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(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)	2269.00	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)	3403.00	sqm			
9.03	20 mm cement plaster of mix :					
a)	1:4 (1 cement: 4 coarse sand)	3534.00	sqm			
9.04	6 mm cement plaster of mix:					
a)	1:3 (1 cement: 3 fine sand)	2565.00	sqm			
9.05	Neat cement punning	50.00	sqm			
9.06	Providing and applying readymade putty(Birla or equivalent) of required thickness over plastered surface to prepare the surface even and smooth complete to the satisfaction of engineer in charge	6528.00	Sqm			
9.07	White washing with lime to give an even shade:					
a)	New work (three or more coats)	100.00	sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
9.08	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 priming coat with cement primer.	1714.00	sqm			
9.09	Applying one coat of cement primer of approved brand and manufacture on wall surface:					
a)	Cement primer.	5998.00	sqm			
9.10	Finishing walls with textured exterior paint of required shade:					
a)	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.	3534.00	sqm			
9.11	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
a)	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	450.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
9.12	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:					
a)	Two or more coats on new work	5998.00	sqm			
9.13	Providing and applying Antifungal & Washable paint over plaster/POP surface including primer and putty complete as per manufacturers specification to give an even shade:					
a)	Two or more coats on new work	816.00	sqm			
9.14	Providing and fixing 24 gauge and 18mm mesh size chicken wiremesh at junction of concrete and brick work and other locations at all heights including cutting to required size and side laps of minimum 75mm and fixing in positions with nails/screws etc. as directed and as required at site.	100.00	sqm			
	Total					

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.00	**Miscellaneous**					
10.01	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.	800.00	Sqm			
10.02	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).	5.00	Cum			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.03	Designing, supplying, fabrication and installation of semi unitised Structural glazing system in the form of fixed panels, using specially designed aluminium extruded sections, mullions and transoms having 25 micron Anodising of approved colour and shade and make with mullions fixed on the RCC beams/columns through adequately designed brackets including providing masking tape on the profiles for safety against external scratches on site complete with approved silicon sealant EPDM gasket etc. to make the structural glazing air tight and water tight as per standards and as per Architect's drawings and specifications. The design to be as per BIS code for required wind pressure IS: 875 part III and use of aluminium section alloy as per IS:8147.					

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
	System design to strictly consider for thermal movements, air infiltration, water penetration, seismic movement and structural movement. Contractor to furnish shop drawings along with sequence of work for approval of Engineer-in-charge.The minimum section shall be 131x66x2mm and per sqmt weight shall be 10kg approx., the item shall be measured and paid for actual surface area of structural glazing/aluminium composite panel supported on the frame. The work shall be carried out by the specialised agency approved by Engineer in Charge.	100.00	Sqm			

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Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.04	Extra for providing & fixing 24mm made up thickness insulated glass over above corresponding item hermetically sealed with 6mm heat strengthend toughened solar control off line coated high performance temperable glass of approved colour having reflactive soft coating and 6mm clear toughned float glass inside with 12mm dry air cavity between two glass panes separated by a hollow aluminium spacer bar with twin lines of micro holes as approved filled with molecular desiccant of approved make and using primary hot meld duly and secondary polysulphide or silicon sealant of approved make all complete over above item. (U value less than 2.85w/sqm k, shadding cofficent less than 0.55, solar factor less than 0.25, light transmission minimum 25%)	100.00	Sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.05	Providing following Brand new vehicle at any time for exclusive use of Engineer during currency of contract. The number of vehicles and period shall be informed by the Engineer as per requirement. The rates are inclusive of services of drivers, fuel, oil, lubricants, consumable stores and maintenance etc. complete.					
	Indica or Equivalent.	36000.00	Km			
10.06	Providing and fixing Aluminium Composite sheet cladding using 4 mm thick of approved make consisting of a core of 3 mm natural polyethylene core sandwitched between two skins of 0.5 mm each of aluminium alloy with outer surface in all colour coating of PVDF paint in fully automatic coil coating process . The PVDF coated finish surface to be factory protected with self adhesive peel off foil tested to withstand at least 6 months exposure to local weather conditions The composite sheet cut and bend to shape profile as required, including perimeter extrusion base frame frame extruded stiffners expansion fastners & silicon sealent (Dow Corning 789) required for installation as per approved elevation drawing work included accessories complete	48.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.07	Providing water proofing treatment by chemical injection grout process on horizontal surfaces like rafts & other similar locations using 25mm dia . G.I nozzles , minimum 1/4th thickness of raft 40mm(long) whichever is more inside the raft fixed @ 1.5m c/c in both the directions. The injuction grout which consist of injection cement slurries of different viscosities & expansive plasticizing agent (a non shrinkage compensating grout) is to be pumped in to the nozzles under pressure with a pump . The nozzles to be sealed off after the injection operation with suitable admixture. Providing & applying two coats of acrylic latex cementitious coatings in the ratio 3:1 (3 parts of cement :1 part acrylic polymer latex) keeping water cement ratio as per manufacture's specifications , 20mm cement plaster of mix 1:4 (1 cement :4 coarse sand) mixed with liquid waterproofing admixture & finally embedding with 12mm size stone aggregate @ 8cudm per sqm complete as per manufacturer's specifications & as directed.					
	(Work to be got executed through a specialized agency and covered by a 10 years guarantee by the main contractor.)	115.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.08	Providing water proofing treatment by chemical injection grout process on vertical surfaces like walls & other similar locations using 25mm dia . M.S nozzles , minimum 1/4th thickness of wall or 40mm(long) whichever is more inside the walls fixed @ 1.5m c/c in both the directions and @ 0.75 m c/c along construction joints. The injuction grout which consist of injection cement slurries of different viscosities & expansive plasticizing agent (a non shrinkage compensating grout) is to be pumped in to the nozzles under pressure with a pump . The nozzles to be sealed off after the injection operation with suitable admixture. Providing & applying two coats of acrylic polymer latex cementitious coatings in the ratio 3:1 (3 parts of cement :1 part acrylic polymer latex) keeping water cement ratio as per manufacture's specifications , 20mm cement plaster of mix 1:4 (1 cement :4 coarse sand) mixed with liquid waterproofing admixture complete as per manufacturer's specifications & as directed.					
	(Work to be got executed through a specialized agency and covered by a 10 years guarantee by the main contractor.)	174.00	sqm			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.09	Providing fabricating and fixing of signages of varying sizes and shapes using three mm thick PVC sheet at base with self addhesive 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.	1176.00	Sq inch			
10.10	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	2646.00	Sq inch			
10.11	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.	500.00	Sqft			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.12	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.	2000.00	Kg			
10.13	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.	250.00	Sqft.			
10.14	Providing fabricating installation and fixing of backlit flex signages on Hanwa/star 18 ounce flex signages printed on high resolution printermounted on MS sheet on framed MS structure further fixed on 24 gauge MS /GI box with phylips/surya fittings inside including tranformers etc, electri wiring etc complete.	500.00	Sqft			

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Bill of Quantity

Item No	Description Of Item	Qty.	Unit	Rate in Figures(Rs)	Rate in Words(in Rs)	Amount in Figures(in Rs)
1	2	3	4	5	6	7
10.15	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.	1323.00	Sq inch			
10.16	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.	2000.00	Sq inch			
10.17	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			
	Total					

PROJECT NAME: CONSTRUCTION OF VETERINARY AYURVEDIC RESEARCH INSTITUTE AT LUCKNOW (Phase II)

ABSTRACT OF COST

S.No	DESCRIPTION OF WORK		Amount
1	EARTHWORK		
2	CONCRTE WORK		
3	RCC WORK		
4	BRICK WORK		
5	DOORS & WINDOWS		
6	STEEL WORK		
7	FLOORING		
8	CEILING & ROOFING		
9	FINISHING		
10	Miscellaneous		
	TOTAL		

Name of Work:BOQ of Plumbing work of VARI, AYUSH-LUCKNOW (for addition of Ist and 2nd floor)						
Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.11	Constructing masonary 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 cenment: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)	With F.P.s bricks	Each	2.00			

Name of Work:BOQ of Plumbing work of VARI, AYUSH-LUCKNOW (for addition of Ist and 2nd floor)						
Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.12	Constructing masonary 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 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 cenment: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)	With F.P.s bricks	each	1.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.13	Constructing masonary chamber 60x45x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cenment: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)	With F.P.s bricks	each	1.00			
3.14	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)	15 mm nominal outer dia pipes	Metre	10.00			
a)	20 mm nominal outer dia pipes	Metre	65.00			
b)	25 mm nominal outer dia pipes	Metre	115.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
c)	32 mm nominal outer dia pipes	Metre	190.00			
d)	40 mm nominal outer dia pipes	Metre	125.00			
e)	50 mm nominal outer dia pipes	Metre	30.00			
e)	65 mm nominal outer dia pipes	Metre	5.00			
3.15	Painting G.I. /CPVC pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality.					
a)	40 mm diameter pipe	Metre	10.00			
b)	50 mm diameter pipe	Metre	10.00			
c)	65 mm diameter pipe	Metre	10.00			
3.16	Providing and filling sand of grading zone V or coarser grade all-round the G.I./CPVC pipes in external work					
a)	40 mm diameter pipe	Metre	10.00			
b)	50 mm diameter pipe	Metre	10.00			
c)	65 mm diameter pipe	Metre	10.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.17	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					
	Treated water Tank and Untreated water tank	per litre	10000.00			
3.18	Providing and fixing C.P brass bib cock of approved quality.(Jaguar,Marc.Jainco,Rybo)					
a)	15 mm nominal bore	Each	25.00			
3.19	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.(Jaguar,Marc.Jainco,Rybo)					
a)	15 mm nominal bore	Each	20.00			
3.20	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make confirming to IS:8931					
a)	15 mm nominal bore	Each	6.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.21	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931.(Jaguar,Marc.Jainco,Rybo)					
a)	15 mm nominal bore	Each	30.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.22	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by muncipal board complete with bolts,nuts rubber, insersions etc. (the tail plases if required will be paid seperatly)					
a)	80mm dia nominal bore	Each	1.00			
3.23	Providing and fixing PTMT ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.D. plastic ball.					
a)	40 mm nominal bore, 206 mm long weighin not less than 690 gms	Each	5.00			
a)	50 mm nominal bore, 242 mm long weighin not less than 1240 gms	Each	1.00			
3.24	Cutting holes up to 30x30 cm in walls including making good the same					

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
a)	With F.P.S. bricks	Each	10.00			
3.25	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	10.00			
3.26	Providing and fixing C.P. brass Overhead (Rain Fall) shower (100mm) with arm and wall flange complete including cutting and making good the walls wherever required including CP wall mixture with provision for overhead shower with long bend pipe & wall flange of approved quality.	Each	3.00			
3.27	Extra for providing wash basin mixer pillar tap in place of normal pillar tap	Each	20.00			

Name of Work:BOQ of Plumbing work of VARI, AYUSH-LUCKNOW (for addition of Ist and 2nd floor)

Sl. No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in figures(in Rs.)
1	3	4	5	6	7	8
3.28	Providing & fixing full way lever operated forged brass ball valve of brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 10 Kg / sqcm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.					
	15 mm diameter	Each	4.00			
	20 mm diameter	Each	7.00			
3.29	Providing and fixing mosquito proof coupling of approved Municipal design for scour and vent pipes for RCC overhead tanks complete in all respects					
	15 mm diameter	Each	3.00			
	20 mm diameter	Each	5.00			
	40 mm diameter	Each	5.00			
	50 mm diameter	Each	2.00			
3.30	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.					

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Sl. No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in figures(in Rs.)
1	3	4	5	6	7	8
a	15 mm to 25 mm diameter	Each	65.00			
3.31	Extra for providing and installing INFRA-RED controlled electrically operated (220V, AC mains) automatic flushing system of approved make instead of urinals with flushing cistern. The automatic flushing system shall comprising of :					
	Light sensing device fixed in recessed metallic box with tamper resistant stainless steel outercase Solenoid valve housed in a recessed metallic box with openable cover mounted at high level (at desired height from finished floor level) complete with interconnecting control wiring in recessed PVC conduit between solenoid valve and sensing unit, including cutting and making good the walls & floor complete and all necessary fittings to make it	Each	10.00			
3.32	Extra for in place of pillar trap in wash basin/scrub sink providing and installing INFRA-RED controlled electrically operated (220V, AC mains) automatic tap of approved make instead of pillar tap, comprising of :					

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
	Light sensing device fixed in tap, Solenoid valve housed in a recessed metallic box with openable cover mounted at high level (at desired height from finished floor level) complete with interconnecting control wiring in recessed PVC conduit between solenoid valve and sensing unit, including cutting and making good the walls & floor complete and all necessary fittings to make it operational as directed	Each	25.00			
3.33	Providing and fixing C.P. brass lab sink pillar tap with long elbow operating lever handle of approved model and make complete in all respect (EORO brass, Jaguar,Marck)	Each	15.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
3.34	Providing & fixing solid state fully hygienic no touch hand drier of approved make rated for continuous repeat usage with solid state time delay LSF protection, with independent ambient light level & seasonal control temperatures including providing necessary C.I./M.S. brackets painted with two or three coats of enamel paint of approved shade over a coat of primer, wiring cables from drier to plug, plug tops etc. complete including cutting and making good the walls wherever required.	Each	6.00			
3.35	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	25 Litre Capacity	Each	4.00			

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Sl. No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in figures(in Rs.)
1	3	4	5	6	7	8
3.36	Providing & fixing water storage cooler of approved make and brand with SS body having minimum flow rate of 40 ltrs. Per hour and storage capacity 80 ltrs. Complete in respects.(VOLTAS/ BLUE-STAR/ USHA SHRIRAM)	Each	2.00			
3.37	Providing and fixing approved make & suitable model of R.O. plant 100 ltrs. Per hour flow rate having capacity to treat the raw water having TDS 1200 ppm and hardness upto 800 ppm with recovery 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 complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS,Pantair)					

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
a)	10 micron polypropylene sediment pre filter -2 Nos.					
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 100 LPM and minimum lamp wattage 9W					
e)	Antiscalant dosing tank and dosing pump and accessories					
f)	pH controlling system					
g)	Digital pH meter, TDS meter,pressure switches					
h)	3mm thick SS 304 water storage tank 1500 lts. Capacity.	Each	2.00			
SUB TOTAL(Water Supply)						

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
4.00	**SEWARAGE & DRAINAGE**					
4.01	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)	100 mm diameter	Metre	10.00			
4.02	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)	100 mm diameter S.W. pipe/RCC NP2	Metre	10.00			
b)	150 mm diameter S.W. pipe/RCC NP2	Metre	10.00			
c)	250 mm diameter S.W. pipe/RCC NP2	Metre	10.00			
4.03	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:					

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Sl. No.	Description of Item	Unit	Total Qty.	Rate in figures(in Rs.)	Rate in words(in Rupees)	Amount in figures(in Rs.)
1	3	4	5	6	7	8
a)	150 mm diameter S.W.pipe	Metre	10.00			
b)	250 mm diameter s.W. pipe	Metre	10.00			
4.04	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)	150x100mm size P type					
a.i)	F.P.S. Bricks class designation 75	Each	2.00			
4.05	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)	150 mm dia R.C.c. pipe	Metre	20.00			
b)	250 mm dia R.C.C. pipe	Metre	20.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
4.06	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)	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)	With F.P.S. bricks with class designation 75	Each	2.00			
14.07	Extra depth for manholes					
a)	Size 90 x 80 cm					

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1	**3**	**4**	**5**	**6**	**7**	**8**
a i)	With F.P.S. bricks class designation 75	Metre	1.00			
4.07	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					

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
a)	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)	With F.P.S. bricks class designation 75	Each	2.00			
4.08	Extra depth for circular type manhole 0.91m dia (at bottom) with beyond 0.91m to 1.67 m					
a)	With F.P.S. bricks class designation 75	Metre	1.00			

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Sl. No.	**Description of Item**	**Unit**	**Total Qty.**	**Rate in figures(in Rs.)**	**Rate in words(in Rupees)**	**Amount in figures(in Rs.)**
1	**3**	**4**	**5**	**6**	**7**	**8**
4.09	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	10.00			
SUB TOTAL(SEWERAGE AND DRAINAGE)						