

CIVIL BOQ

NAME OF THE WORK:- Animal Housing Facility & other Miscellaneous work at VMMC, Safdarjung Hospital, New Delhi

Item No	Description Of Item	Total Qty	Unit	Rate in fig.	Rate in words	Amount
1	2		4	5	6	7
1.00	EARTH WORK					
1.01	Earth work in excavation over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 Sq.m. 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	5.00	CUM			
1.02	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 upto 50 m and lift upto 1.5m.	3.00	CUM			
2.00	CONCRETE WORK					
2.01	Providing and laying cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.					

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1	2		4	5	6	7
b)	1:4:8 (1 cement : 4 coarse sand :8 graded stone aggregate 40 mm nominal size).	3.00	CUM			
c)	1:2:4 (1 cement : 4 coarse sand :8 graded stone aggregate 40 mm nominal size).	1.00	CUM			
3.00	REINFORCED CEMENT CONCRETE					
3.01	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shutteri					
b)	All work from plinth level upto floor V level					
ii)	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	2.00	CUM			
3.02	Centering and shuttering including strutting, propping etc.with steel tubes and extension piers or built up section of roll steel and steel shuttering up to 3.9 m height and removal of form for :					
c)	Suspended floors, roofs, landing and balconies.	25.00	SQM			

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1	2		4	5	6	7
3.03	Reinforcement for RCC work including straightening, cutting, bending, binding and placing in position complete.					
a)	Cold twisted bars/ Thermo mechanically treated bars as mentioned in the drawing.	0.10	Tonne			
4.00	BRICK WORK					
4.01	Brick work with bricks of class designation 35 in Cement mortar 1:6 (1cement : 6 coarse sand)					
a)	In foundation and plinth	1.00	CUM			
b)	In Superstructure					
i)	From plinth level to floor V level.	3.00	CUM			
4.02	Extra for brick work in superstructure above floor V level for each four floors or part thereof.	3.00	CUM			
4.03	Half brick masonry with bricks of class designation 35 in Cement mortar 1:3 (1 cement : 3 coarse sand)					
b)	In Superstructure					
i)	From plinth level to floor V level.	100.00	SQM			
4.04	Extra for Half brick work in superstructure above floor V level for each four floors or part thereof.	100.00	SQM			

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1	2		4	5	6	7
4.05	Extra for providing and placing in position 2 Nos. 6 mm dia M.S. bars at every third course of half brick masonry.	100.00	SQM			
5.00	DOORS & WINDOWS					
5.01	Providing and fixing powder coated aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular and other sections of approved make confirming to IS:733 and IS: 1285, powder coated to required shade . (Minimum powd					
	(i) For fixed portions	200.00	Kg			
	(ii) For shutters of doors, & windows including providing and fixing Stainless Steel friction hinges/ pivots and making provisions for fixing of fittings wherever required including the cost of PVC/ neoprene gasket required as per drawing and as directe	35.00	Kg			
5.02	Providing and fixing flush door shutters 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)	35mm thick including anodised aluminium butt hinges with necessary screws.	15.00	SQM			

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1	2		4	5	6	7
5.03	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions, curtain walls etc. with neoprene gasket etc. complete as per the architectural drawings and as directed. (Cost of aluminium snap beading shall be paid in basic it					
a)	With glass panes of 5.50mm thickness (weight not less than 13.75 kg./sqm.)	25.00	SQM			
5.04	Extra for providing frostings on glass panes of 10.00 kg/sqm. (4mm thick) instead of ordinary glass panes 10.0 kg/sqm. (4mm thick) respectively in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside reb	5.00	SQM			
5.05	Providing and fixing aluminium handles colour anodised (anodic coating not less than grade AC10 as per IS: 1868) to required colour or shade with necessary screws etc. complete.					
a)	125 mm.	15.00	Each			
5.06	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :	15.00	SQM			

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1	2		4	5	6	7
5.06	Providing and fixing aluminium tower bolt powder coated (powder coating not less than 50 Micron) to required colour or shade with necessary screws etc.					
a)	150 x 10 mm	10.00	Each			
b)	250 x 10 mm	10.00	Each			
5.07	Providing and fixing aluminium sliding door bolts powder coated (powder coating not less than 50 Micron) to required colour or shade with necessary nuts, screws etc. complete :					
a)	250 x 16 mm	10.00	Each			
5.08	Providing and fixing chrome plated brass 100 mm mortice latch and lock with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS :1868) aluminum lever handles with necessary accessories and screws etc. complete .					
	(Best make of approved quality)	2.00	Each			
5.09	Providing and fixing IS 3564 marked Aluminium die cast body tubular type universal hydraulic door closer , Hardwyn make or equivalent with necessary accessories and screws etc. complete.	10.00	Each			

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1	2		4	5	6	7
5.10	Providing and fixing aluminium hanging floor door stopper colour anodised to required colour & shade with necessary screws etc. complete					
a)	Twin rubber stopper	10.00	Each			
5.11	Providing and fixing 35mmx12mm wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete					
a)	Approved quality 1st class sal wood	75.00	Metre			
6.00	STEEL WORK					
6.01	Steel work welded in built up sections/frame work including cutting, hoisting, fixing in position, making holes, repairing and applying a priming coat of approved steel primer using structural steel, locking arrangements if any etc. as required.					
a)	In gratings, frames, guard bar, ladders, railings, brackets, gates in similar works.	100.00	kg			
7.00	FLOORING					

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Item No	Description Of Item	Total Qty	Unit	Rate in fig.	Rate in words	Amount
1	2		4	5	6	7
7.01	Marble stone tile skirting, risers of steps with 6-8 mm thick mm thick marble stone laid over 12mm (average) thick base of cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with white cement slurry mixed with pigment to match the shade of slab					
a)	Udaipur green Tile (6-8mm nominal thickness)	5.00	SQM			
7.02	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					
a)	Size of the Tile 60x60CM	70.00	SQM			
7.03	Providing and fixing 1st 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	100.00	SQM			

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1	2		4	5	6	7
7.04	Providing and fixing mirror polished, machine cut for kitchen platforms, vanity counters facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1cement: 4coarse sand) with joints tr					
i)	Over 1 SqM and upto 2.0 SqM					
a)	18mm thick Granite stone	10.00	SQM			
7.05	Extra for providing edge moulding to 18 mm thick Granite stone counters, vanities etc. over item no. 7.10 a & b including machine polishing to edge to give high gloss finish etc. complete as per design and as approved by the Engineer.	175.00	Metre			
8.00	CEILING & ROOFING					
8.01	Providing and fixing at all height false ceiling of 12.5 mm thick tapered edge gypsum board/ Hylex board conforming to IS:2095 including providing and fixing of frame work made of special sections power pressed from M.S sheet and galvanised in accordanc	75.00	SQM			

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1	2		4	5	6	7
8.02	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of grade 175, consisting of floor and					
	67mm overall thickness partition with 8.5mm thick double skin glass reinforced Gypsum (GRG) board conforming to IS: 2095: part III.	15.00	SQM			
8.03	Providing and laying water proofing treatment in sunken portion of WCs bathroom etc. by applying cement slurry mixed with Armourcrete, Tapecrete or approved equivalent make consisting of applying :					
i)	a) First layer of slurry of cement @ 0.488 kg/sqm mixed with Armourcrete, Tapecrete or approved equivalent make @ 0.253 kg/sqm. This layer will be allowed to air cure for 4hours followed with water curing for 48hours.					
ii)	b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with armourcrete or tapecrete or approved equivalent @ 0.126 kg/sqm. This layer will be allowed to air cure for 4hours followed with water curing for 48 hours.					

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1	2		4	5	6	7
iii)	The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.					
	Note : Rendering/plastering as protective layer, if required will be paid sepatately	25.00	SQM			
9.00	FINISHING					
9.01	12 mm cement plaster of mix; 1:6 (1 cement: 6 medium sand)	100.00	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 medium sand)	100.00	SQM			
b)	1:4 (1 cement: 4 medium sand)	50.00	SQM			
9.03	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof	5.00	SQM			
9.04	Neat cement punning.	15.00	SQM			
9.05	Supplying and applying oil bound washable distemper of approved brand and manufacture to give an even shade.					

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1	2		4	5	6	7
a)	old work (two or more coats) over and including a primer coat with cement primer.	25.00	SQM			
9.06	Supplying and applying plastic emulsion paint of approved brand and manufacture to give an even shade in Walls					
a)	Two or more coats on new work	25.00	SQM			
9.07	Providing and applying plaster of paris putty of 2mm thickness (average) over plastered surface to prepare the surface even and smooth complete	350.00	SQM			
9.08	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.	15.00	SQM			

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1	2		4	5	6	7
9.09	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. - On concrete / plastering work	350.00	SQM			
10.00	SIGNAGES					
10.01	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 ce	400.00	sq inch			
11.00	Cages					

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1	2		4	5	6	7
11.01	Providing fabricating and placing of stainless steel cages of approved quality as per specification and drawing complete including nut bolts screws etc	250.00	KG			
	Miscellaneous					
11.02	Providing following 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.					
	a) Car Ambassador or equivalent as required.	5000.00	KM			
12.00	INTERNAL PLUMBING , WATER SUPPLY & SANITARY FIXTURES					
	SANITARY FIXTURES & INTERNAL PLUMBING					
12.01	Providing and fixing white vitreous china wash basin with C.I./M.S. 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) Flat back wash basin size 550 x 400 mm with a single 15mm C.P. brass pillar tap.	1.00	Each			
12.02	Providing and fixing bottle trap for wash basins and sinks.					
	a) 40mm dia	1.00	Each			

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1	2		4	5	6	7
b)	32mm dia	1.00	Each			

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Item No	Description Of Item	Total Qty	Unit	Rate in fig.	Rate in words	Amount
1	2		4	5	6	7
12.03	Providing and fixing 600x450mm bevelled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	2.00	Each			
12.04	Providing and fixing towel rail complete with brackets fixed to wooden cleats with C.P. brass screws.					
a)	C.P. brass towel rail with two C.P. brass brackets 600 x 20 mm size.	2.00	Each			
12.05	Providing and fixing unplasticised PVC connection pipe with brass unions, 45 cm length.					
a)	15 mm dia nominal bore	4.00	Each			
12.06	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	5.00	Each			
12.07	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour. weighing not less than 105 gms.	2.00	Each			
12.08	Providing and fixing CP brass twin coat hooks fixed on toilet door/wall with CP brass screws.	5.00	Each			

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Item No	Description Of Item	Total Qty	Unit	Rate in fig.	Rate in words	Amount
1	2		4	5	6	7
12.09	Providing and fixing stainless steel kitchen sink as per I.S.13983 with C.I brackets and stainless steel plug 40mm including painting of fittings and brackets, cutting and making good the walls wherever required.					
a)	Kitchen sink with drain board 510x1040 bowl depth 178mm	1.00	Each			
B) SOIL, WASTE, RAIN WATER AND VENT PIPES						
12.10	Providing and fixing soil, waste and vent pipes.					
a)	100 mm dia. Centrifugally cast (spun) iron S&S Pipe. (IS : 3989)	5.00	Metre			
b)	75 mm dia. centrifugally cast (spun) iron S & S pipe (IS : 3989)	5.00	Metre			
12.11	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) inc					
a)	for 100 mm dia. pipe	2.00	Each			
b)	for 75 mm dia. pipe	2.00	Each			
12.12	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.					
a)	100 mm Centrifugally cast (spun) iron S&S.	2.00	Each			
b)	75 mm Centrifugally cast (spun) iron S&S.	2.00	Each			

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Item No	Description Of Item	Total Qty	Unit	Rate in fig.	Rate in words	Amount
1	2		4	5	6	7
12.13	Providing and fixing plain bend of required degree.					
a)	100 mm Centrifugally cast (spun) iron S&S	2.00	Each			
b)	75 mm Centrifugally cast (spun) iron S&S	2.00	Each			
12.14	Providing and fixing single equal plain junction of required degree.					
a)	100x100x100 mm Centrifugally cast (spun) iron S & S pipe	1.00	Each			
b)	75x75x75 mm Centrifugally cast (spun) iron S & S pipe	1.00	Each			
12.15	Providing and fixing terminal guard.					
a)	100 mm Centrifugally cast (spun) iron S&S	5.00	Each			
b)	75 mm Centrifugally cast (spun) iron S&S	5.00	Each			
12.16	Providing and fixing Double equal junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.					
a)	100x100x100 x100mm Centrifugally cast (spun) iron S & S pipe	1.00	Each			
12.17	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:					
a)	100 mm	15.00	Each			
b)	75 mm	15.00	Each			

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1	2		4	5	6	7
12.18	Providing and fixing sand cast iron/centrifugally cast(spun) iron trap of self cleansing design with sand cast iron screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:					
a)	100 mm inlet and 100 mm outlet	8.00	Each			
12.19	Extra for providing and fixing stainless steel jali (grating) in place of C.I. grating with or without hole for waste pipe for floor/ Nahani trap.					
a)	100 mm dia weight not less than 100 gms.	8.00	Each			
12.20	Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes/laboratory pipes by means of 50x50x50 mm hard wood plugs,screwed with M.S screws of required length including cutting brick work and fixing in cement					
i)	250mm	12.00	Each			
12.21	Providing and fixing on wall face unplasticised-PVC (working pressure 4kg per sqm cm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion.					
	(I) Single socketed pipes					
a)	250 mm diameter	30.00	Metre			

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1	2		4	5	6	7
12.22	Providing and fixing on wall face unplasticised-PVC moulded fittings/ accessories for unplasticised-PVC rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion.					
a)	Bend 87.5o					
i)	250mm	1.00	Each			
b)	Shoe (plain)					
i)	250mm	1.00	Each			
12.23	Providing & fixing to the inlet mouth of rain water pipe PVC grating					
a)	For 250 mm OD pipe	1.00	Each			
12.24	Providing and fixing cast brass clean out /Floor clean out plug with suitable insert keys for opening male threaded joint fixed to G.I.socket complete (cleanout to be flushed with floor finish)					
a)	100 mm dia	5.00	Each			
C	WATER SUPPLY					
12.25	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. (Internal work):					

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Item No	Description Of Item	Total Qty	Unit	Rate in fig.	Rate in words	Amount
1	2		4	5	6	7
a)	Exposed on Wall					
I)	15 mm dia nominal bore	15.00	Metre			
ii)	20 mm dia nominal bore	10.00	Metre			
iii)	25 mm dia nominal bore	5.00	Metre			
12.26	Providing and fixing brass gate valve with C.I. wheel of approved quality (screwed end).					
ii)	20 mm dia nominal bore	5.00	Each			
iii)	25 mm dia nominal bore	2.00	Each			
12.27	Painting G.I. pipes and fittings with white paint over a ready mixed priming coat, both of approved quality for new work..					
I)	15 mm dia nominal bore	10.00	Metre			
ii)	20 mm dia nominal bore	5.00	Metre			
iii)	25 mm dia nominal bore	5.00	Metre			
12.28	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality.					
I)	15 mm dia nominal bore	5.00	Metre			
ii)	20 mm dia nominal bore	5.00	Metre			
iii)	25 mm dia nominal bore	5.00	Metre			
12.29	Providing and fixing G.I. union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (new work)					
ii)	20 mm dia nominal bore	2.00	Each			

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1	2		4	5	6	7
iii)	25 mm dia nominal bore	2.00	Each			
12.30	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.					
a)	15 mm nominal bore	1.00	Each			
12.31	Providing and fixing C.P brass bib cock of approved quality.					
a)	15mm nominal bore.	2.00	Each			
12.32	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931.					
a)	15 mm nominal bore	4.00	Each			
12.33	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)	35 Litre Capacity	1.00	Each			
12.34	Making chases upto 7.5 x 7.5 cm in walls including making good after housing G.I. pipe etc.	15.00	Metre			
12.35	Cutting hole in RCC slab for providing and fixing S&S floor trap including extension piece for waste water line.	10.00	Nos			

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1	2		4	5	6	7
12.36	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C incl					
	Concealed work including cutting chases and making good the wall etc					
a)	1216 (16 mm OD) pipe	15.00	metre			
b)	1620 (20 mm OD) pipe	10.00	metre			
c)	2025 (25 mm OD) pipe	5.00	metre			
12.37	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pi					
	Internal work-Exposed on wall					
a)	15 mm OD pipe	10.00	metre			
b)	20 mm OD pipe	5.00	metre			
c)	25 mm OD pipe	5.00	metre			
12.38	Providing and fixing C.P brass stop cock (concealed) of standard design and of approved make conforming to IS : 8931	2.00	each			
13.00	SEWERAGE AND DRAINAGE					

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1	2		4	5	6	7
13.01	Constructing brick masonry manhole with 75 class designation bricks 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 (1cem					
	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 flo					
a)	Inside size 120x90 cm and 90 cm deep including Precast RCC. cover and frame (MD 10), circular shape 500 mm internal diameter	1.00	Each			
	TOTAL					

BOQ OF ELECTRICAL WORKS OF ANIMAL HOUSE & OTHER MISCELLANEOUS WORKAT VMMC, SAFDARJUNG, NEW DELHI.

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in words (in Rs.)	Amount (in Rs.)
1	2	3	4	5	6	7
1.00	WIRING					
1.01	Dismantling of existing light fixture, fans, wiring, switches, conduits, switch boxes, telephone points, any other items etc, and to handing over the same into the store.	1	Lot			
1.02	Relocation of light/fan point including switch box, conduit, wiring etc & complete including all associated civil work complete as required.	12	Points			
1.03	Relocation of telephone point switch box including conduit, wiring with 2 pair PVC telephone cable etc., complete including all associated civil work complete as required.	1	point			
1.04	Relocation of 16 amp power point, conduit, wiring etc & complete including all associated civil work complete as required.	8	Points			
1.05	Wiring for light point/fanpoint/ exhaust fan point/call bell point with 1.5 sq.mm. FR PVC insulated, copper conductor cable in surface/recessed steel 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 cable etc as required. Animal rooms and quarantine rooms light points will be controlled through automatic controller (item no. 1.08) no separate switch will be provided for these light points. (New points)	12	Points			

BOQ OF ELECTRICAL WORKS OF ANIMAL HOUSE & OTHER MISCELLANEOUS WORKAT VMMC, SAFDARJUNG, NEW DELHI.

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in words (in Rs.)	Amount (in Rs.)
1	2	3	4	5	6	7
1.06	Wiring for power plug with 2X4 sq.mm. FR PVC insulated, copper conductor, single core cable in recessed steel conduit along with 1 no 4 sqmm FR PVC insulated, copper conductor, single core cable for loop earthing, directly from MCB distribution board to the socket out let complete as per technical specifications & as required. (New point)	4	Point			
1.07	Wiring for A.C. point with 2X6 sq.mm. FR PVC insulated, copper conductor, single core cable in recessed steel conduit along with 1 no 6 sqmm FR PVC insulated, copper conductor, single core cable for loop earthing, directly from MCB distribution board to the socket out let complete as per technical specifications & as required. (New point)	2	Points			
1.08	Supply, installation, testing and commissioning of automatic controller of light points (for room no. AR-1 to AR-4 and quarantine room) in a separate sheet steel enclosure including timer, contactor of suitable rating, fuses etc complete as required. No separate switch will be provided for the light points controlled by this automatic controller.	1	Set			
2.09	Supplying and fixing of 16/20 A metal clad power switch with I.P. 65 protection, recess including all civil works etc complete as required.	12	Each			

BOQ OF ELECTRICAL WORKS OF ANIMAL HOUSE & OTHER MISCELLANEOUS WORKAT VMMC, SAFDARJUNG, NEW DELHI.

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in words (in Rs.)	Amount (in Rs.)
1	2	3	4	5	6	7
1.10	Supply and fixing following 32 Amps, 240 volts, 2P+E, Industrial Socket Outlet (with plugs) in a metal box with 32 SP MCB in a sheet steel cover on surface or recess complete with all accessories including connections, testing and commissioning etc. as required.	2	Each			
1.12	Supply, installation, testing and commissioning of distribution tap off box of following capacity in the existing rising mains complete with four pole moulded case circuit breaker, interconnection earthing etc complete as required.					
i	160 A tap off box	1	Each			
	TOTAL SUBHEAD 1.00					

BOQ OF ELECTRICAL WORKS OF ANIMAL HOUSE & OTHER MISCELLANEOUS WORKAT VMMC, SAFDARJUNG, NEW DELHI.

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in words (in Rs.)	Amount (in Rs.)
1	2	3	4	5	6	7
2.00	LIGHT FIXTURES AND FANS					
2.01	Supply of following compact flourescent light (CFL) fixture with electronic ballast, starter, capacitor, lamps, reflector, diffuser, MS body/housing holder etc. complete with all fixing accessories as required.					
	i) 4XTL5 14 W recess mounted light fixture similar to Philips TBS 570/414 FN or equivalent.	8	Each			
	ii) 2X13 watt CFL recessed down light fixture similar to Philips FBH 145/213 L or equivalent with Philips ZZG 145 recessed glass circline.	10	Each			
2.02	Installation, testing and commissioning of prewired, CFL fittings of all types, complete with all accessories and tube etc. directly on ceiling/wall/false ceiling, including connections with 1.5 sq.mm. PVC insulated, copper conductor, single core cable etc. as required.	18	Each			
2.03	Supply of following ceiling fans complete with double ball bearing, motor, blades, downrod, canopies, capacitor, modular type electronic fan regulator etc. suitable for operation on 230 volts, 50 Hz., 1 phase, AC supply complete as required					
	i) 900 mm sweep	1	Each			
2.04	Installation, testing and commissioning of ceiling fan and modular type electronic fan regulator including wiring the down rod and connection with 1.5 sqmm PVC insulated, copper conductor single core cable as required.	1	Each			
	TOTAL SUBHEAD 2.00					

BOQ OF ELECTRICAL WORKS OF ANIMAL HOUSE & OTHER MISCELLANEOUS WORKAT VMMC, SAFDARJUNG, NEW DELHI.

S.No.	Description.	Qty.	Unit.	Rate in Figures (in Rs.)	Rate in words (in Rs.)	Amount (in Rs.)
1	2	3	4	5	6	7
3.00	EARTHING, SAFETY EQUIPMENTS AND MISC. ITEMS					
3.01	Supplying and laying 25mmX5mm GI strip at 0.5 mtr below ground level as strip earth electrode, including soldering etc. as required. This include excavation and refilling of earth.	10	Metre			
3.02	Providing and fixing 25mmX5mm GI strip on surface/on existing cable trench/RCC pipe or in recess for earth electrode as required.	50	Metre			
3.03	Supplying and laying of 1.1kV grade 1 metre wide anti skid chequered type rubber mat.	4	Metre			
3.04	Supplying and fixing CO2 type 4.5 kgs capacity fire extinguishers as approved by ISI complete as required.	2	Set			
	TOTAL SUB HEAD - 3.00					
	GRAND TOTAL					

NAME OF PROJECT :- Animal House Facility & other Miscellaneous work at VMMC, Safdarjung						
NAME OF WORK :- S/I/T/C AIR-CONDITIONING SYSTEM FOR ANIMAL HOUSE (HVAC)						
<u>BILL OF QUANTITY</u>						
ITEM NO.	BRIEF DESCRIPTION OF ITEMS	UNIT	QTY.	Rate in figure (Rs)	Rate in words (Rs)	Amount (in Rs.)
<u>Sub Head - A, Equipments</u>						
1	Supplying, installation, testing and commissioning of 26TR, programmable microprocessor based, Air-cooled Package Type Split AC units complete with condensing unit, scroll compressor, air-cooled condenser with fan and evaporator. Microprocessor Based Control Panel should be capable for Heating, Cooling & Humidification controls and interlocking with control wiring etc. as required.	Nos.	1			
2	Supplying, installation, testing and commissioning of 10TR, programmable microprocessor based, Air-cooled Package Type Split AC units complete with condensing unit, scroll compressor, air-cooled condenser with fan and evaporator. Microprocessor Based Control Panel should be capable for Heating, Cooling & Humidification controls and interlocking with control wiring etc. as required.	Nos.	2			
3	Supplying, installation, testing and commissioning of hard drawn copper refrigerant piping per circuit alongwith kinni foam insulation with necessary clamps, supports, fittings such as bends, tees, reducers, etc, as per site requirement.	Mtrs.	150			
4	Supplying, installation, testing and commissioning of 3KW-Pan Type Humidifier made from minimum 2mm thick stainless steel sheet top closed and insulated with 50mm thick expanded polysterene (T.F. Quality).	Nos.	1			

<u>BILL OF QUANTITY</u>						
ITEM NO.	BRIEF DESCRIPTION OF ITEMS	UNIT	QTY.	Rate in figure (Rs)	Rate in words (Rs)	Amount (in Rs.)
5	Supplying, installation, testing and commissioning of 1.5KW-Pan Type Humidifier made from minimum 2mm thick stainless steel sheet top closed and insulated with 50mm thick expanded polysterene (T.F. Quality).	Nos.	2			
6	Supplying, installation, testing and commissioning of 1.5KW-Strip Type Electric Heater suitable to installed in Main Ducts/Duct Plenums/Blower Unit as required & specification.	Nos.	12			
	<u>Sub Head - B, Air Distribution</u>					
1	Supplying, installation, testing & commissioning of GSS DUCTING of following thikness I/c necessary supports, hangers, nuts bolts, gaskets, splitters dampers, vanes canvass connections etc. comlete as per specification.					
a)	1.25 MM THICK	Sq. Mtr.	30			
b)	1.00MM THICK	Sq. Mtr.	50			
c)	0.80 MM THICK	Sq. Mtr.	200			
d)	0.63 MM THICK	Sq. Mtr.	300			
2	Supply, installation, testing & commissioning of FIRE DAMPERS with fusible links made out of 16 Gauge, GI sheets of at least 90 minutes fire rating complete with as per specification.	Sq. Mtr.	3			
3	Supply, installation, testing & commissioning of VOLUME CONTROL DAMPERS made out of 16 Gauge GI Sheet for main Ducting Braches & Headers.	Sq. Mtr.	3			

<u>BILL OF QUANTITY</u>						
ITEM NO.	BRIEF DESCRIPTION OF ITEMS	UNIT	QTY.	Rate in figure (Rs)	Rate in words (Rs)	Amount (in Rs.)
4	Supply, installation & balancing of square/circular SUPPLY AIR DIFFUSERS of powder coated aluminium construction with attached volume control dampers as per specification and drawings	Sq. Mtr.	3			
5	Supply, installation & balancing of square/circular RETURN AIR DIFFUSERS of powder coated aluminium construction without attached volume control dampers as per specification and drawings.	Sq. Mtr.	3			
6	Supply, installation & balancing of SUPPLY AIR GRILLES of powder coated aluminium construction with attached volume control dampers as per specification and	Sq. Mtr.	5			
7	Supply, installation & balancing of RETURN AIR GRILLES of powder coated aluminium construction without attached volume control dampers as per specification and drawings	Sq. Mtr.	5			
8	Supplying, installation, testing & commissioning of 9mm Nitrile Rubber insulation on supply / return air ducts.	Sq. Mtr.	200			
9	Supplying, installation, testing & commissioning of 25 mm thick & 24 Kg/cm resin bonded fibre glass Acoustic Insulation covered with tissue paper & 26 gauge aluminium perforated sheet as specification & drawings.	Sq. Mtr.	40			
	<u>Sub Head - C, Electrical</u>					
1	Electrical Panel for A/C Units					

<u>BILL OF QUANTITY</u>						
ITEM NO.	BRIEF DESCRIPTION OF ITEMS	UNIT	QTY.	Rate in figure (Rs)	Rate in words (Rs)	Amount (in Rs.)
	Febrication, Supply, Installation, Testing & Commissioning of Cubical Sectionalized floor standing Electrical Panel suitable for working 415, 50HZ, 3Phase A/C Supply make out of 2mm thick CPRA Sheet having suitable cable alley, 4Strip, 400A Bus Bar of Electolytic grade aluminium, duly powder coated with S/F for folloing accessories including making conection, interconnection with aluminium strip, Solid copper conductor, glande plate, making etc. complete in all respect.					
	INCOMER					
	400A FP ACB with (0-200A) ammeter with 3CT & selctor switch, (0-500 volts) Voltmeter with selector switch, phase indication lighth with protection fuse, On/Off/Trip indicating light with protection fuse.					
	OUTGOINGS					
	i) For 26TR A/C Unit x 01 No.					
	125A TP MCB with confirming to , ammeter (0-125A) with three CT, on-off/trip indication lights with protection fuse, etc. as required.					
	ii) For 10TR A/C Unit x 02 Nos.					
	63A TP MCB with confirming to , ammeter (0-63A) with three CT, on-off/trip indication lights with protection fuse, etc. as required.					
	iii) For 12KW Heaters Unit x 01 No.					
	63A TP MCB with confirming to , ammeter (0-63A) with three CT, on-off/trip indication lights with protection fuse, etc. as required.					
	iv) For 3KW Heaters Unit x 02 Nos.					
	40A TP MCB with confirming to , ammeter (0-40A) with three CT, on-off/trip indication lights with protection fuse, etc. as required.					
	v) For umidifier Unit x 03 Nos.					

<u>BILL OF QUANTITY</u>						
ITEM NO.	BRIEF DESCRIPTION OF ITEMS	UNIT	QTY.	Rate in figure (Rs)	Rate in words (Rs)	Amount (in Rs.)
SUMMARY SHEET						
NAME OF PROJECT :- Animal House Facility & other Miscellaneous work at VMMC, Safdarjung Hospital, New Delhi.						
		Quoted Price				
	CIVIL					
	ELECTRICAL					
	HVAC					
	GRAND TOTAL					