

**BUILDING DEPARTMENT
ALIGARH MUSLIM UNIVERSITY ALIGARH**

DETAILED ESTIMATE

**Construction of Additional Record Room for Cash Section,
Finance & Account Department, Administrative Block AMU**

(BASED ON CPWD. DSR 2021)

S.No	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
1	15.2 Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. 15.2.1 Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	1.50	cum	2007.10	3,010.65
2	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. 15.7 In cement mortar 15.7.4	18.00	cum	1698.45	30,572.10
3	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 upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil. (2.8.1)	30.00	Cum	218.60	6,558.00
4	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 atering, lead up to 50 m and lift upto 1.5 m. (2.25)	30.00	Cum	161.60	4,848.00
5	Excavating, supplying and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc. complete. (2.25A)	25.00	cum	564.00	14,100.00
6	P/L in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
a	1:5:10 (1 cement : 5 coarse sand (zone-III) driven from natural sources: 10 graded brick aggregate 40 mm nominal size). (MR)	10.00	Cum	4815.72	48,157.20
b	1:2:4 (1 cement : 2 coarse sand (zone-III) driven from natural sources : 4 graded stone aggregate 20 mm nominal size) (4.1.3)	3.00	Cum	7365.15	22,095.45
7	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand) (6.1.2)	25.00	Cum	6658.25	1,66,456.25
8	P/L damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) driven from natural sources: 4 graded stone aggregate 12.5mm nominal size) driven from natural sources. (4.10)	15.00	Sqm	370.85	5,562.75

S.No. ITEM OF WORKS

S.No.	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
	Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil. 4.13	15.00	sqm	113.85	1,707.75
10	P/L LDP Film of approve brand and quality as approved by Engineer Incharge	15.00	sqm	41.20	618.00
11	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:6 (1 cement : 6 coarse sand) (6.4.2)	35.00	Cum	8288.40	2,90,094.00
12	6.13 Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level. 6.13.2 Cement mortar 1:4 (1 cement :4 coarse sand)	10.00	sqm	1018.05	10,180.50
13	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry. 6.15	10.00	sqm	86.45	864.50
14	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) driven from natural sources : 3 graded stone aggregate 20 mm nominal size) driven from natural sources. (5.3)	10.00	Cum	10391.40	1,03,914.00
15	Centering and shuttering including strutting, propping etc. and removal of form for all heights :				
a	Lintels, beams, plinth beams, girders, bressumers and cantilevers (5.9.5)	6.00	Sqm	608.35	3,650.10
b	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick. (5.9.20)	60.00	Sqm	853.75	51,225.00
c	Weather shade, Chajjas, corbels etc., including edges. (5.9.19)	6.00	Sqm	821.35	4,928.10
16	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more. (5.22.6)	1100.00	Kg	89.65	98,615.00
17	12 mm cement plaster of mix: 1:6 (1 cement: 6 coarse sand) (13.4.2)	40.00	Sqm	294.35	11,774.00
18	15 mm cement plaster on the rough side of single or half brick wall of mix : 1:6 (1 cement: 6 coarse sand) (13.5.2)	150.00	Sqm	339.10	50,865.00
19	6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand) (13.16.1)	65.00	Sqm	253.05	16,448.25
20	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement. -12 mm cement plaster. (13.9.1)	25.00	Sqm	386.55	9,663.75

S.N. ITEM OF WORKS

S.N.	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
1	P/F M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to steel windows by welding. (9.48.1)	80.00	Kg	181.00	14,480.00
22	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete. 10.2	120.00	kg	111.95	13,434.00
23	P/F fly proof galvanized M.S. wire gauge to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm all complete. With 2nd class teak wood beading 62X19 mm. (9.51.1)	6.00	Sqm	1164.90	6,989.40
24	9.21 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 veneering with vertical grains or cross bands and face veneers on both faces of shutters: 9.21.1 35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws sqm 1886.70	7.25	sqm	2015.75	14,614.19
25	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete 125 mm (9.100.1)	10.00	Nos	60.05	600.50
26	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 : 200x10 mm (9.97.3)	8.00	Nos	90.80	726.40
27	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 (9.96.1) b 250x16 mm (9.96.2)	2.00 1.00	Nos. Nos	260.30 234.90	520.60 234.90
28	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) : (21.1)				
A	For fixed portion (21.1.1) Powder coated aluminium (minimum thickness of powder coating 50 micron) (21.1.1.2)	50.00	Kg	466.30	23,315.00

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S.N.	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
B	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately). (21.1.2) Powder coated aluminium (minimum thickness of powder coating 50 micron) (21.1.2.2)	20.00	Kg	553.55	11,071.00
29	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): (21.3) With float glass panes of 5.50 mm thickness (21.3.2) weight not less than 12.50 kg/m2	6.00	Sqm	1325.55	7,953.30
30	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer in-charge.(21.2) Pre-laminated particle board with decorative lamination on both sides(21.2.2)	1.50	sqm	951.05	1,426.58
31	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in charge(21.16) Powder coated minimum thickness 50 micron aluminium (21.16.2)	4.00	each	89.60	358.40
32	Providing and fixing Brass 100mm mortice latch and lock with 6 levers without pair of handles (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.(21.13)	1.00	each	449.55	449.55
33	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm) with necessary accessories and screws etc. complete. (9.83)	1.00	No.	1025.65	1,025.65
34	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 up to 300 mm height including cleaning the surface before treatment.				



S.No ITEM OF WORKS

QTY UNIT RATE ₹ AMOUNT ₹

	b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm 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 waterproofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
	c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.				
	d) Finishing the surface with 20 mm thick joint less 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 :				
	With average thickness of 120mm and minimum thickness at khurra as 65 mm. (22.7.1)	58.00	Sqm	1502.95	87,171.10
35	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement: 4 coarse sand) and making good the wall etc. complete. 110 mm (Item No12.43.2)	40.00	each	310.85	12,434.00
36	P/F PVC pipe dia 110mm of approved brand and quality	8.00	mtr	256.88	2,055.04
37	P/L PVC Pipe of approved brand and manufacturer approved by engineer incharge 150mm dia MR	6.00	mtr	430.82	2,584.92
38	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion. Bend 87.5° .				
a	110 mm bend . 12.42.5.2	10.00	each	132.00	1,320.00
b	Shoe (Plain) 12.42.6.2 110 mm Shoe	2.00	each	115.95	231.90
c	12.42.4 Single tee without door 12.42.4.2 110x110x110 mm	2.00	each	190.75	381.50
d	12.42.3 Single tee with door 12.42.3.2 110x110x110 mm	3.00	each	205.45	616.35
39	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors: PVC Trap 100 mm x 100 mm. (M.R.)	2.00	Nos.	122.27	244.54

S.No. ITEM OF WORKS

S.No.	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
0	18.8 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.				
a	18.8.1 15 mm nominal dia Pipes	4.00	Mtrs	439.80	1,759.20
b	18.8.2 20 mm nominal dia Pipes	6.00	Mtrs	512.40	3,074.40
41	18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work				
	18.9.3 25 mm nominal dia Pipe	10.00	Mtrs	370.65	3,706.50
42	18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work				
	18.12.5 40 mm dia nominal bore	2.00		558.35	1,116.70
43	18.46 Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :				
	18.46.5 40 mm nominal bore	30.00	each	523.20	15,696.00
44	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) : 40 mm nominal bore (18.17.3)	1.00	Nos	707.30	707.30
45	11.49 Providing and laying Vitrified tiles in floor with different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS : 15477, in average 6 mm thickness, including grouting of joints (Payment for grouting of joints to be made separately). Size of Tile 600x600 mm	50.00	Sqm	1537.40	76,870.00
46	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete. Size of Tile 600x600 mm (11.46.2)	5.00	sqm	1466.50	7,332.50

S.No ITEM OF WORKS

S.No	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
7	P/F 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 bergundy, 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 jointed with grey cement slurry @ 3.3 kg per sq m including pointing in white cement mixed with pigment of matching shade complete. (8.31)	30.00	Sqm	1063.45	31,903.50
48	P/L ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacture) of Ist quality conforming to IS: 15622 of approved make in colours,shades except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1cement: 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete. (11.37)	7.00	Sqm	935.60	6,549.20
49	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required : W.C. pan with ISI marked white solid plastic seat and lid . 17.2.1	1.00	each	5540.55	5,540.55
50	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required : One urinal basin with 5 litre white P.V.C. automatic flushing cistern . 17.4.1	1.00	each	5268.85	5,268.85
51	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required: White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests. (17.1.1)	1.00	Nos	5781.35	5,781.35
52	P/F wash basin with C.I brackets, 15 mm C.P brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap. (17.7.4)	2.00	Nos	1679.60	3,359.20
53	P/F 600x450mm beveled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete. (17.31)	3.00	Nos	1411.15	4,233.45

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S.No ITEM OF WORKS

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4	18.54 Providing and fixing PTMT bib cock of approved quality and colour. 18.54.1 15mm nominal bore, 86 mm long, weighing not less than 88 gms	3.00	Nos	109.85	329.55
55	18.55 Providing and fixing PTMT stop cock of approved quality and colour. 18.55.1 15 mm nominal bore, 86 mm long, weighing not less than 88 gms	4.00	Nos	103.15	412.60
56	17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete. 17.28.1 Semi rigid pipe 17.28.1.1 32 mm dia	2.00	Nos	90.95	181.90
57	Providing and fixing PTMT grating of approved quality and colour Circular type.100 mm nominal dia. (18.58.1.1)	3.00	Nos	33.20	99.60
58	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour. 15 mm nominal bore with 45 cm length. (18.74.2)	4.00	Nos	107.95	431.80
59	18.65 Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements, weighing not less than 106 gms.(18.65)	2.00	each	96.75	193.50
60	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size),foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 (19.7.1.1)	1.00	Nos	11530.20	11,530.20
61	P/A white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. (13.80)	200.00	Sqm	123.85	24,770.00
62	Distemping with oil bound washable distemper of approved brand and manufacture to give an even shade. New work (two or more coats) over and including water thinnable priming coat with cement primer (13.41.1)	170.00	Sqm	154.60	26,282.00

S.No ITEM OF WORKS

S.No	ITEM OF WORKS	QTY	UNIT	RATE ₹	AMOUNT ₹
53	Finishing walls with Acrylic Smooth exterior paint of required shade : New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm) (13.46.1)	225.00	Sqm	147.45	33,176.25
64	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade : Two or more coats on new work . (13.61.1)	30.00	Sqm	131.45	3,943.50
65	13.85 Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content. 13.85.1 With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre sqm 61.45	17.00	sqm	59.95	1,019.15
66	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour. 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms (17.73.1)	2.00	each	573.60	1,147.20
67	Supplying and fixing Peter Petals with febric strips blinds Delux Model of thickness 0.50 to 0.60 mm of required shaded colour & design and of approved make with drappy rod complete with necessary accessories. (MR)	6.30	sqm	963.32	6,068.92
				Total Rs.	14,42,632.03

University Engineer

Junior Engineer (T)

Assistant Engineer

Junior Engineer