

SUMMARY OF COST FOR CONSTRUCTION OF AUDITORIUM AT RAU-PUSA			
BASED ON DSR 2007			
A)	SCHEDULE WORKS :		RS.
1)	Civil Works	Rs.	80,05,390.51
2)	Site Development & Landscaping Works	Rs.	44,628.20
3)	Storm Water Drain Works	Rs.	84,059.10
	Sub Total :	Rs.	81,34,077.81
B)	NON - SCHEDULE WORKS :		
1)	Civil Works	Rs.	34,22,300.00
2)	Electrical Works	Rs.	7,57,250.00
3)	Road Works	Rs.	38,000.00
4)	Storm Water Drain Works	Rs.	2,000.00
5)	Fire	Rs.	2,40,382.00
6)	Septic Tank (Including Soak Pit & Inspection Chambers)	Rs.	80,000.00
	Total :	Rs.	45,39,932.00
	Grand Total	Rs.	1,26,74,010.00

**ABSTRACT OF COST FOR SHEDULE CIVIL WORKS FOR
AUDITORIUM AT RAU-PUSA**

Sl. No.	Description	Amount (Rs.)
	SCHEDULE ITEM (Based on DSR-2007)	
1	EARTH WORK	33,843.85
2	REINFORCED CEMENT CONCRETE WORK	18,74,181.24
3	STEEL REINFORCEMENT	5,77,344.99
4	BRICK WORK	13,89,365.48
5	WOOD WORK	1,53,774.35
6	STEEL WORK	7,79,925.60
7	PVC WORK	1,24,996.00
8	FLOORING	13,37,136.10
9	FINISHING	9,30,722.75
10	ROOFING	4,23,223.20
11	INTERNAL WATER SUPPLY	43,970.05
12	INTERNAL SANITARY INSTALLATIONS	3,28,275.90
13	WATER PROOFING	8,631.00
	TOTAL CIVIL WORK :	80,05,390.51
	SAY :	80,05,391.00

**DETAIL ESTIMATE FOR CIVIL WORKS FOR AUDITORIUM AT RAU-PUSA
BASED ON DELHI SCHEDULE OF RATES 2007**

Sl. No.	Description of Items	Qty	Unit	Rate	Amt. (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5.00	6	7
1	SCHEDULE ITEM					
I.	EARTH WORK					
1	Earth work in excavation by mechanical means (Hydoaulic excavtor) / 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.					
	a. All kinds of soil.	327.31	Cum.	103.40	33,843.85	2.8.1
	SUB TOTAL :				33,843.85	
III.	REINFORCED CEMENT CONCRETE WORK					
4	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centring, shhattering, finishing and reinforcement including admixtures in recommended portions (as per IS:9103) to accelerate, retard setting of concrete imporve workability without imparing strength and durability as per direction of Engineer-in-Charge M-25 grade reinforced cement concrete by using 410kg of cement per cum of concrete.					
	(a) All work up to Roof level	297.43	Cum	4,147.40	12,33,561.18	5.33
5	Centering and shuttering including strutting, propping etc. and removal of form for :					
	a) Foundation, footings, bases of columns, Pile Cap etc. for mass concrete.	10.42	Sqm.	119.25	1,242.59	5.9.1
	b) Suspended floors, roofs, landings, balconies and access platform	1,053.54	Sqm.	187.35	1,97,380.72	5.9.3
	c) Lintels, beams, plinth beams, girders, bressumers and cantilevers	835.16	Sqm.	162.65	1,35,838.77	5.9.5
	d) Columns, Pillers, Piers, Abutments, Posts and Struts.	1,121.51	Sqm.	238.40	2,67,367.98	5.9.6
	e) Weather shad, chajjas, corbels etc. including edges	150.00	Sqm.	258.60	38,790.00	5.9.19
	SUB TOTAL :				18,74,181.24	
IV.	STEEL REINFORCEMENT					
6	Providing and fixing Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.					
	Thermo - Mechanically Treated Bars	13,520.96	Kg.	42.70	5,77,344.99	5.22.6
	SUB TOTAL :				5,77,344.99	
V.	BRICK WORK					
7	Brick work with F.P.S. bricks of class designation 75 in super structure above plinth level upto floor V level in all shapes and sizes in cement mortar 1 : 6 (1cement : 6 coarse sand).	569.26	Cum.	2,357.40	13,41,973.52	6.4.2
8	Half brick masonry with F.P.S. bricks of class designation 75 in super structure above plinth level upto floor V level in Cement mortar 1 : 3 (1 cement : 3 coarse sand).	147.18	Sqm.	322.00	47,391.96	6.13.1
	SUB TOTAL :				13,89,365.48	
VI.	WOOD WORK					
9	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position: Sal wood	2.00	cum	30,511.90	61,023.80	9.1.2
10	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part-1) non decorative type, core of block board construction with frame of M.S angle iron and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters : 35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	84.00	Sqm.	929.95	78,115.80	9.21.1
11	Providing and Fixing IS: 12817 marked satinless steel butt hinges with stainless steel screws etc. complete: 100 x 58 x 1.90 mm	117.00	Each	35.25	4,124.25	9.70.2
12	Providing and fixing aluminium sliding door bolts ISI marked anodized (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 : 300 x 16 mm.	39.00	Each	158.50	6,181.50	9.96.1
13	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 : 250 x 10 mm.	39.00	Each	62.20	2,425.80	9.97.2
14	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.	39.00	Each	48.80	1,903.20	9.100.1
	SUB TOTAL :				1,53,774.35	
VII.	STEEL WORK					

Sl. No.	Description of Items	Qty	Unit	Rate	Amt. (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5.00	6	7
16	Providing and fixing factory made ISI marked steelglazed doors, windows and ventilators side/top/centre hung with beading and all members such as K11B and K12B etc. complete of standard rolled steel sections, joints mitred and flash butt weldedandsash bars tenoned and riveted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1cement : 3coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing or hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approval design.	1,530.00	kg	178.90	2,73,717.00	10.11
17	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.	10,000.00	kg	46.35	4,63,500.00	10.2
18	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in RCC slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete	168.00	Nos.	75.20	12,633.60	10.17
19	Providing and fixing hand rail of approved size by welding etc. to steel ladder, railing, balcony railing & staircase railing including applying a priming coat of approved steel primer - M.S. tube.	500.00	Kg.	60.15	30,075.00	10.26.1
SUB TOTAL :					7,79,925.60	
VIII. PVC WORK						
20	Providing and fixing factory made PVC door frame of size 50 x 47 mm with a wall thickness of 5 mm, made out of extruded 5 mm rigid PVC foam sheet mitred at corners and joined with 2 nos. of 150 mm long brackets of 15 x 15 mm M.S. square tube, the vertical door profile to be reinforced with 19 x 19 mm M.S. square tube of 19 guage, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100 mm size complete as per manufacturers specification and direction of Engineer-in-Charge.	110.00	Metre	353.10	38,841.00	9.119
21	Providing and fixing to existing door frame 30mm thick factory made Polyvinyl Chloried (PVC) door shutter made ofstyles and rails of a UPVC hollow section of size 60x30 mm and wall thickness 2mm ± 0.2mm with inbuilt decorative moulding edging on one side. The styles and rails mitred and joined at the corners bymeans of M.S. galvanised / plastic brackets of size 75x220mm having wall thickness 1.0mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1mm ± 0.1mm wall thickness. The lock rail made up of 'H' section, a UPVC hollow section of size 100x30 and 2mm ± 0.2mm wall thickness fixed to the shutter styles by means of plastic / galvanised M.S. 'U' cleats. The shutter frame filled with a UPVC multi-chambered single panel of size not less than 620mm, having over all thickness of 20mm and 1mm ± 0.1mm wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6mm galvanised M.S. rod and fastened with nuts and wasers, complete as per manufacturer's specification and direction of Engineer-in-charge.	35.00	Sqm.	2,271.80	79,513.00	9.118.2
22	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts, and wooden plugs and embeddings in cement concrete block 30 x 10 x 5 cm 1:3:6 mix (1 cement : 3 coarsese sand : 6 graded stone aggregate 20 mm nominal size).	108.00	Each	61.50	6,642.00	9.53
SUB TOTAL :					1,24,996.00	
IX. FLOORING						
23	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.: Size of Tile 50 x 50 cm	902.00	Sqm.	1,308.05	11,79,861.10	11.41.1
24	Tile Work in skirting, risers of steps and dado (upto 2m height) over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry @3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade complete	86.00	Sqm.	570.40	49,054.40	11.22.1.1
25	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 thickness to be specified by the manufactures (of approved make in all colors, 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 @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	191.00	Sqm.	566.60	1,08,220.60	11.36
SUB TOTAL :					13,37,136.10	

Sl. No.	Description of Items	Qty	Unit	Rate	Amt. (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5.00	6	7
X. FINISHING						
26	20 mm cement plaster on the rough side of single or half brick wall of mix - 1:6 (1 cement : 6 core sand) on the internal surface of wall.	2,292.00	Sqm.	102.90	2,35,846.80	13.6.2
27	15 mm cement plaster of mix 1:6 (1 cement : 6 fine sand) on external surface of wall.	3,362.00	Sqm.	78.55	2,64,085.10	13.2.2
28	15mm cement plaster 1:4 (1cement : 4fine sand) on the rough side of chajja.	250.00	Sqm.	90.35	22,587.50	13.2.1
29	6mm cement plaster 1:3 (1cement : 3fine sand) to ceiling.	961.00	Sqm.	62.15	59,726.15	13.16.1
30	Finishing walls with water proofing cement paint of required shade : New work (Two of more coats applied @ 3.84 kg/10sqm.)	2,350.00	Sqm.	30.80	72,380.00	13.44.1
31	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whitening to give an even shade.	7,700.00	Sqm.	26.30	2,02,510.00	13.40
32	Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	1,234.00	Sqm.	47.20	58,244.80	13.26
33	Applying one coat of cement primer of approved brand and manufacture on wall surface : Cement primer.	892.00	Sqm.	17.20	15,342.40	13.43.1
SUB TOTAL :					9,30,722.75	
XI. ROOFING						
34	Painting top of roofs with bitumen of approved quality at 17kg per 10sqm impregnated with a coat of coarse sand at 60 cudm per 10 sqm including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete with residual type petroleum bitumen of penetration 80/100.	932.00	Sqm.	63.00	58,716.00	12.15.1
35	Providing and laying pressed clay tiles (as per approved pattern 20mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 (1cement : 4coarse sand) mixed with 2% intergal water proofing compound laid over a bed of 20mm thick cement mortar 1:4 (1cement : 4coarse sand) and finished neat complete.	932.00	Sqm.	390.60	3,64,039.20	12.20
36	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diametre and weighing not less than 440 grams.	20.00	Each	23.40	468.00	12.44
SUB TOTAL :					4,23,223.20	
XII. INTERNAL WATER SUPPLY						
37	Cutting holes upto 40 x 40 cm in walls including making good the same.					
	i) With FPS bricks	4.00	Nos.	90.90	363.60	18.76.1
38	Providing and fixing GI pipes complete with GI fittings including trenching and refilling etc. (external work)					
	a) 25 mm dia. nominal bore.	30.00	Metre	156.85	4,705.50	18.12.3
	b) 32 mm dia. nominal bore.	10.00	Metre	193.60	1,936.00	18.12.4
39	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. (internal work) - Exposed on wall:					
	a) 15mm dia. nominal bore.	12.00	Metre	105.85	1,270.20	18.10.1
40	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. (internal work) - Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall.					
	a) 15 mm dia. nominal bore.	10.00	Metre	156.85	1,568.50	18.12.3
41	Making connection of G.I. Distribution branch with G.I. Main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete. 25 to 40 mm nominal bore.	50.00	Each	166.05	8,302.50	18.13.1
42	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end).					
	a) 25 mm dia. nominal bore.	10.00	Each	285.50	2,855.00	18.17.1
	b) 32 mm dia. nominal bore.	4.00	Each	358.00	1,432.00	18.17.2
43	Providing and fixing uplasticised PVC connection pipe with brass unions. (15 mm nominal bore) 45 cm length.	15.00	Each	44.75	671.25	18.21.2.1
44	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 (15 mm nominal bore)	55.00	Each	207.00	11,385.00	18.49.1
45	Providing and fixing C.P. brass angle valve for basin mixer and gyser points of approved quality conforming to IS : 8931 (15 mm nominal bore)	16.00	Each	347.65	5,562.40	18.53.1
46	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS : 8931. 15mm nominal bore.	14.00	Each	262.55	3,675.70	18.52.1
47	Providing and fixing C.P. brass shower ross with 15 or 20mm inlet. 100mm dia.	6.00	Each	40.40	242.40	18.22.1
SUB TOTAL :					43,970.05	
XIII. INTERNAL SANITARY INSTALLATIONS						

Sl. No.	Description of Items	Qty	Unit	Rate	Amt. (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5.00	6	7
48	Providing and fixing water closet squatted pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required. (White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	18.00	Each	2,304.65	41,483.70	17.1.1
49	Providing and fixing wash basin with C.I.brackets, 15mm 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 : (Wash basin size 630 x 450 mm with a single 15 mm C.P. brass pillar taps)	16.00	Each	1,201.70	19,227.20	17.7.2
50	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing. (Rectangular shape 453x357mm)	16.00	Each	465.10	7,441.60	17.32.2
51	Providing and fixing unplasticised PVC connection pipe with brass unions. (45 cm length) (15 mm nominal bore)	16.00	Each	44.75	716.00	18.21.2.1
52	Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40mm long screws, rawl plugs etc., complete.	16.00	Each	218.80	3,500.80	17.33
53	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete. - Semi rigid pipe (32 mm dia)	16.00	Each	42.15	674.40	17.28.1.1.
54	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 for 100 mm inlet and 100 mm outlet. (Sand Cast iron S&S as per IS : 3989)	16.00	Each	544.30	8,708.80	17.60.1.1
55	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with C.P brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.]	24.00	Each	329.50	7,908.00	17.73.2
56	Providing and fixing soil, waste and vent pipes. a) 110mm dia. (Centrifugally cast (spun) iron S&S pipe as per IS : 3989)	80.00	Metre	730.40	58,432.00	17.35.1.2
	b) 75mm dia. (Centrifugally cast (spun) iron S&S pipe as per IS : 3989)	100.00	Metre	629.85	62,985.00	17.35.2.2
57	Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2 (1cement : 2 fine sand) in S.C.I. / C.I. pipes. a) 75mm dia.	12.00	Each	25.30	303.60	17.36.1
	b) 110mm dia.	12.00	Each	29.80	357.60	17.36.2
58	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete. a) 100 x 100 x 100mm Sand cast iron S&S as per IS : 1729.	12.00	Each	374.60	4,495.20	17.43.1.1
	b) 100 x 100 x 100mm Sand cast iron S&S as per IS : 1729.	12.00	Each	250.65	3,007.80	17.44.2.1
59	Providing and fixing plain bend of required degree. 100 mm Dia. a) 110mm dia. Sand cast iron S&S as per IS : 1729.	4.00	Each	222.45	889.80	17.39.1.1
	b) 75mm dia. Sand cast iron S&S as per IS : 1729.	50.00	Each	175.15	8,757.50	17.39.2.1
60	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter. a) 110 mm	32.00	Each	126.50	4,048.00	17.58.1
	b) 75 mm	40.00	Each	107.80	4,312.00	17.58.2
61	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 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. a) For 110 mm dia. pipe	12.00	Each	65.35	784.20	17.37.1
	b) For 75 mm dia. pipe	40.00	Each	63.00	2,520.00	17.37.2
62	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete. 100 x 100 x 100 x 100mm. Sand cast iron S&S as per IS : 1729.	6.00	Each	513.85	3,083.10	17.41.1.1
63	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:(150 x 100 mm size P type) (With F.P.S. bricks class designation 75).	12.00	Each	961.95	11,543.40	19.4.2.1
64	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete (100 mm diameter).	2.00	Metre	105.90	211.80	19.1.1
65	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 : (100 mm diameter S.W. pipe)	25.00	Metre	331.20	8,280.00	19.2.1

Sl. No.	Description of Items	Qty	Unit	Rate	Amt. (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5.00	6	7
66	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design: (Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455 x 610 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 F.P.S. bricks with class designation 75]	12.00	Each	5,383.70	64,604.40	19.7.1.1
SUB TOTAL :					3,28,275.90	
XIV WATER PROOFING						
67	Providing and laying water proofing treatment is sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying: a) First layer of slurry of cement @ 0.488 kg/sqm. mixed with water proofing cement compound @ 0.253 Kg/Sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm. mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	60.00	Sqm.	143.85	8,631.00	22.5
SUB TOTAL :					8,631.00	
2 NON-SCHEDULE ITEM						
2	False ceiling : Providing and fixing of suspended false ceiling of plain Gypsum board of thickness of 12.5mm conforming to IS 2095- 1982 and as per the approved design, pattern , shape etc and including providing and fixing GI suspended system conforming to India Gypsum specifications made up of following: i) GI intermediate channels spaced at 1000 mm c/c(instead of 1200 mm c/c as per India Gypsum specifications) of size 45x15x0.9mm thick having fixed to ceiling angle of size 25x10x0.5mm thick, fixed to soffits at 1000mm c/c using GI soffit cleat of size 22x37 mm which in turn fixed to RCC ceiling with the help of Steel expansion fasteners/dash fasteners as per India Gypsum specifications. Load carrying capacity of each fastener shall not be less than 250 kgs. ii) Perimeter channel of size 20x27x30x0.5mm shall be fixed to brick/partition with the help of nylon sleeves and screws at 610mm c/c. iii) Ceiling section of size 80x26x0.5mm having knurled web of 51.5mm shall be fixed to the intermediate channel with the help of connecting GI clips and in directions perpendicular to the intermediate channel, spacing not exceeding 457 mm c/c	450.00	Sqm.	800.00	3,60,000.00	Non-Schedule
3	Wooden Flooring : Providing and fixing slotted angle base frame made of 38mmx38mmx6mm thick slotted angles frame work at 600mm c/c (bothways on floor and at top as shown in drawing) using 38mm x38mm 6mm slotted angles maintaining proper line, levels as indicated in Drawing and as specified as per site conditions and requirement, cutting to required size and shape , fixing the slotted angles to the floor or adjacent walls using dash fasteners of approved quality, make and size and fixing the intersection, junctions of slotted angles with approved quality and make fittings, fixtures and hardware, including Cross diagonal bracings to avoid lateral movement as indicated below: i. Diagonal double cross bracings along the line of slotted angles (width of the Auditorium) wherever there is change of floor levels as indicated in the drawing (between +0.00 & +150mm, +150mm & +300mm, +300mm & +450mm. +450mm & +600mm) including cost of framing.	120.00	Sqm.	4,000.00	4,80,000.00	Non-Schedule

Sl. No.	Description of Items	Qty	Unit	Rate	Amt. (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5.00	6	7
4	<p>Acoustic Wall Panelling : Providing, fabricating and fixing plain/curved panelling on RCC/Masonry /plaster surfaces using standard anodized extruded aluminium box sections of approved quality and make, fixed firmly to the floor at base and adjacent wall/partition/ceiling complete including the following specifications: The exposed panels between the top panel and bottom panel of the plywood shall be finished by fixing 21mm thick ARMSTRONG 'SOUND SOAK' Acoustical wall panelling (2200mm x 600mmx21mm thick) approved make and shade, fixing as per manufacturer's specifications and design with additional hardware, fittings, fixing etc all complete as per manufacturers specifications and Note: a. The panelling area will be measured from floor to the false ceiling level including the skirting. Rate should be inclusive of the framing, raceways, skirting, wire carrier, plywood, laminate, Armstrong 'Sound soak' wall panelling(2200x600x21mm)labour, etc all complete b. All exposed aluminium sections shall be powder coated (60 microns) of approved shade and colour as directed</p>	504.00	Sqm.	1,200.00	6,04,800.00	Non-Schedule
5	Providing & fixing 0.5mm (26 SWG) Galvalonium sheet with selfdrilling screws & neoprine washer complete along with gutter & RW pipe.	550.00	Sqm.	850.00	4,67,500.00	NS
6	Cost of 4nos. Fan coil Unit with ducts		LS		2,00,000.00	NS
7	Cost of Sound System		LS		3,00,000.00	NS
8	Cost of Stage Equipments		LS		2,00,000.00	NS
9	Cost of Sitting arrangement including fixing for 50nos. Executive PVC cushions	50.00	each	1,800.00	90,000.00	NS
10	Cost of Sitting arrangement including fixing for 600nos. PVC cushions	600.00	each	1,200.00	7,20,000.00	NS
	SUB TOTAL :				34,22,300.00	

DETAIL ESTIMATE FOR ELECTRICAL WORKS FOR AUDITORIUM AT RAU-PUSA			
BASED ON PRESENT MARKET RATE			
1	Internal Electrical Works	Rs.	7,47,250.00
2	External Electrical Works	Rs.	10,000.00
	Total	Rs.	7,57,250.00

Schedule of Electrical Estimate for Auditorium Building					
RAJENDRA AGRICULTURAL UNIVERSITY, PUSA, SAMASTIPUR, BIHAR					
Based on Present Market Rate					
Sl. no.	Description	Unit	Quantity	Rate(CPWD DSR-2007)	Amount (INR)
1	2	3	4	5	6
1	Points Wiring				
	Wiring of light / fan / 6 amps plug point with 1.5 sq.m FRPVC insulated multistranded copper wire as per IS:694 1.1 KV grade in RPVC medium grade conductor as IS:9537 part III including 1.5 sq.mm copper wire as earth wire complete with heavy duty FR rigid PVC conduit accessories like circular boxes / bends etc. complete with Piano Key switches & including fixing of light / fan etc. The conduit work should include cutting & refilling the chases etc. as required & inclusive of circuit wiring from sub distribution boards.				
a)	Light points	Nos.	213	700.00	1,49,100.00
b)	Fan point (Ceiling Fan and Bracket Fan)	Nos.	22	700.00	15,400.00
c)	16 A Plug Point	Nos.	12	800.00	9,600.00
d)	6 A Plug Point on Wall	Nos.	20	700.00	14,000.00
e)	Exhaust fan point	Nos.	14	700.00	9,800.00
2	Supply, Installation, Testing, Commissioning of Main line				
	Wiring of sub main / main wiring with following size of PVC insulated multistranded copper wire as per IS:694, 1.1 KV grade in RPVC medium grade conduit as per IS:9537 part III complete with heavy duty RPVC conduit accessories like circuit boxes bends etc. The copncuit work should include cutting & refilling the chases etc. as required including termination				
	2 x 2.5 sq.mm + 1 x 1.5 sq.mm	Mtrs.	250	100.00	25,000.00
	2 x 4 sq.mm + 1 x 1.5 sq.mm	Mtrs.	484	200.00	96,800.00
3	Supply, Installation, Testing, Commissioning of distribution boards.				
	18 swg CRCA sheet steel clad dust & vermine proof wall mounting type double door. IP 52 panel having following filling equipments fitted in DIN channel complete with accessories like neutral bus & necessary connection :-				
a)	INCOMER - 1 no. 40 Amps, 4P ISOLATOR (MCB) OUTGOINGS - 6A SPN MCB 9.0 KA-6 Nos.	Set	10	3,300.00	33,000.00
b)	INCOMER - 1 no. 40 Amps, 4P ISOLATOR (MCB) OUTGOINGS - 6A SPN MCB 9.0 KA- 15 Nos.	Set	1	7,000.00	7,000.00
c)	INCOMER - 1 no. 40 Amps, 4P ISOLATOR (MCB) OUTGOINGS - 6A SPN MCB 9.0 KA- 12 Nos.	Set	1	8,800.00	8,800.00
4	Supply, Installation, Testing, Commissioning of Switch Board consisting Cadmium paltd MS Box with suitable acrylic cover as required				
a)	8" x 10 "	Nos.	14	175.00	2,450.00
b)	4" x 6"	Nos.	7	100.00	700.00
5	Silent DG Set (25kVA)	No.	1	3,50,000.00	3,50,000.00
6	3 Phase, Manual ChangeOver Switch (32 A)	No.	1	3,000.00	3,000.00
7	Main EMLDB (I/C: 1 No.- 125A TPN MCB ISOLATOR, O/G : 5 Nos. 40A TPN MCB ISOLATOR, 2 Nos.63A TPN MCB ISOLATOR)	No.	1	11,300.00	11,300.00
8	Main MLDB (I/C: 1 No.- 125A TPN MCB ISOLATOR, O/G : 5 Nos. 40A TPN MCB ISOLATOR, 2 Nos.TPN MCB ISOLATOR)	No.	1	11,300.00	11,300.00
				Total Rs.	7,47,250.00

DETAIL ESTIMATE FOR FIRE WATER FOR PROPOSED AUDITORIUM AT RAU-PUSA**Based on present Market Rate**

Sl. No.	Description	Unit/Qty	Rate (INR)	Amt. (INR)
A	2	3	4	5
1	Elect. Motor Driven Fire water Pump of Capacity - 15M3 /Hr. at 12M Head, RPM-1500 along with base plate, coupling, coupling guard & Foundation bolt.	1 Set	24,000.00	24,000.00
2	Diesel Engine Driven Fire water Pump model Capacity - 15M3/Hr. at 15M Head, Rpm-1500 along with base plate, coupling, coupling guard & foundation bolt.	1 Set	24,000.00	24,000.00
3	Motor Driven Jockey Pump Capacity-2M3/Hr at 15M Head. Rpm-2900 along with base plate, coupling, coupling guard & foundation bolt.	1 Set	60,000.00	60,000.00
4	Sprinkler Pump of Capacity - 15M3/Hr. at 15M Head, RPM-1500 along with base plate, coupling, coupling guard & foundation bolt	1 Set	24,000.00	24,000.00
5	CI Gate Valves to IS:14846 PN1.6			
(a)	80 NB	2 Nos.	358.00	716.00
(b)	50 NB	2 Nos.	230.00	460.00
6	Non-return Valve			
(a)	80 NB	1 Nos.	5,100.00	5,100.00
7	Pressure guage	1 No.	200.00	200.00
8	Pressure Switch	1 No.	150.00	150.00
9	Power Cable	1 Lot.	12,000.00	12,000.00
10	RRL Fire Hose C/W coupling to IS:636 & 9037.5M long	4 Nos.	39.00	156.00
11	House cabinet	4 Nos.	1,950.00	7,800.00
B	CONVENTIONAL FIRE DETECTION AND ALARM SYSTEM	Unit/Qty	Rate (INR)	Amt. (INR)
1	Main fire Alarm Panel	1 Set.	2,000.00	2,000.00
2	Conventional Smoke Detector	20 Nos.	900.00	18,000.00
3	Fire Extinguisher	10 Nos.	2,500.00	25,000.00
4	Manual Call Point	2 Nos.	1,000.00	2,000.00
5	Hooter	2 Nos.	1,000.00	2,000.00
6	Internal Hydrant System	4Nos.	3,800.00	15,200.00
7	External Hydrant System	2 Nos.	3,800.00	7,600.00
6	Auto Sprinkler System	2 Nos.	5,000.00	10,000.00
				2,40,382.00
(Rupees two lakh fourty thousand three hundred eighty two only)				

**DETAIL ESTIMATE FOR LAND SCAPING WORKS FOR PROPOSED AUDITORIUM AT RAU-PUSA
BASED ON DELHI SCHEDULE OF RATES 2007**

Sl. No.	Description of Items	Quantity	Unit	Rate(CPW D DSR-2007)	Amount (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3	4	5	6	7
SCHEDULE ITEM:						
1	Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing off by spreading and neatly levelling within a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or / and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	153	Cum	16.95	2,593.35	23.1
2	Supplying and stacking of good earth at site including royalty and carriage upto 1 km (earth measured in stacks will be reduced by 20% for payment).	39	Cum	144.05	5,617.95	23.2
3	Supplying and stacking of sludge at site including royalty and carriage upto 1 km (earth measured instacks will be reduced by 8% for payment).	13	Cum	136.85	1,779.05	23.3
4	Supply and stacking at site dump manure from approved source, including carriage upto 1 km (manure measured in stacks will be reduced by 8% for payment).					
	i) Screened through sieve of IS designation 20mm.	3	Cum	82.90	248.70	23.4.1
	ii) Screened through sieve of IS designation 16mm.	3	Cum	90.75	272.25	23.4.2
	iii) Screened through sieve of IS designation 4.75mm.	3	Cum	97.05	291.15	23.4.3
5	Rough dressing the trenched ground including breaking clods.	3	100 Sqm.	33.05	99.15	23.5
6	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	3	100 Sqm.	106.85	320.55	23.6
7	Fine dressing the ground.	3	100 Sqm.	80.20	240.60	23.7
8	Spreading of sludge, dump manure or/and good earth in required thickness (Cost of sludge, dump manure or/and good earth to be paid separately).	15	Cum	11.60	174.00	23.8
9	Mixing earhand sludge or manure in proportion specified or directed.	30	Cum	7.85	235.50	23.9
10	Grassing with 'Doob' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (the good earth shall be paid for separately).	3	100 Sqm.	121.00	363.00	23.10.1
11	Digging holes in ordinary soil and refilling the same with excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction be 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately): Holes 1.2m dia and 1.2m deep.	18	Each	146.65	2,639.70	23.14.1
12	Providing and fixing MS flat iron tree guard 60cm dia and 1.2m height above ground level formed of 4 nos. 25 x 6mm and 8 nos. 25 x 3mm vertical MS flats rivetted to 3 nos. 25 x 6mm MS flat iron rings in two halves, bolted together with 8mm dia and 30mm long bolts including painting two coats with paint of approved brand and manufacturer over a coat of priming, complete in all respects.	18	Each	1,592.10	28,657.80	23.16
13	Edging with bricks laid dry length wise including excavation, refilling, consolidating with hand packing and spreading neatly surplus earth within a lead of 50m 75 class designation FPS bricks.	72	metre	15.05	1,083.60	23.19.1.1
14	Filling mixture of earth and sludge or manure in the desired proportion in trenches, flooding with water and leveling (Cost of supplying earth and sludge or manure and mixing excluded).	3	Cum	3.95	11.85	23.20
TOTAL (SCHEDULE ITEM)				Rs.	44,628.20	
(Rupees Forty Four Thousand Seven Hundred & Sixteen only)						

DETAIL ESTIMATE FOR ROAD WORKS FOR PROPOSED AUDITORIUM AT RAU-PUSA					
BASED ON MARKET RATE					
Sl. No.	Description of Items	Quantity	Unit	Rate(CPWD DSR-2007)	Amount (Rs.)
1	2	3	4	5	6.00
1	Single Brick flat soling with picked jhama bricks including ramming and dressing bed to proper level and filling joints with powdered earth or local sand all complete.	304	sqm.	125.00	38,000.00
	ALL TOTAL			Rs.	38,000.00
	Say			Rs.	38,000.00
(Rupees one lakh thirty seven thousand five hundred only)					

**DETAIL ESTIMATE FOR DRAIN WORKS FOR PROPOSED AUDITORIUM AT RAU-PUSA
BASED ON DELHI SCHEDULE OF RATES 2007**

Sl. No.	Description of Items	Quantity	Unit	Rate (CPWD DSR-2007)	Amount (Rs.)	CPWD DSR-2007 Item Code No.
1	2	3.00	4	5	6	7
SCHEDULE ITEMS						
1	Earth work excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm. on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50m.					
	a) All kinds of soil.	67.00	Cum	103.40	6,927.80	2.8.1
2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	10.00	Cum	45.70	457.00	2.25
3	Providing and laying in position cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) excluding the cost of centering and shuttering - All work up to plinth level.	12.00	Cum	2,713.05	32,556.60	4.1.6
4	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in : Cement mortar 1:6 (1 cement : 6 coarse sand).	14.00	Cum	2,121.75	29,704.50	6.1.2
5	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished 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.	12.00	Sqm.	192.95	2,315.40	11.3.1
6	12mm cement plaster 1:4 (1 cement : 4 fine sand)	156.00	Sqm.	77.55	12,097.80	13.1.1
TOTAL OF SCHEDULE ITEMS				Rs.	84,059.10	
NON-SCHEDULE ITEM						
7	Single Brick flat soling with picked jhama bricks including ramming and dressing bed to proper level and filling joints with powdered earth or local sand all complete.	16.00	Sqm.	125.00	2,000.00	Non-Schedule
TOTAL OF NON-SCHEDULE ITEMS				Rs.	2,000.00	