



इंजीनियरिंग प्रोजेक्ट्स (इंडिया) लि.
(भारत सरकार का उद्यम)
ENGINEERING PROJECTS (INDIA) LTD.
(A Government of India Enterprise)

AN ISO 9001 & 14001 COMPANY

TENDER DOCUMENT

TENDER No: DLI / CON / 692 / 368

FOR

**Construction of Building for School of Engineering & Technology (Academic Block –B) at
Central University Campus at Manatu, Ranchi, Jharkhand**

VOLUME – III

Price Bid / BOQ

TENDER DOCUMENT (VOLUME-III)

DETAILED ESTIMATE & PRICE BID

NIT NO. : DLI/CON/692/368

CONSTRUCTION OF BUILDING FOR SCHOOL OF ENGINEERING & TECHNOLOGY, (BLOCK-B)

AT CENTRAL UNIVERSITY CAMPUS, RANCHI

ISSUED TO

ENGINEERING PROJECTS (INDIA) LIMITED
(A GOVT. OF INDIA ENTERPRISE)

**REPORT ON THE ESTIMATE
FOR THE FOR THE PROPOSED CONSTRUCTION OF BUILDING FOR
SCHOOL OF ENGINEERING & TECHNOLOGY- (BLOCK –B)
FOR CENTRAL UNIVERSITY OF JHARKHAND, RANCHI**

This estimate amounting to Rs.37,28,40,000.00 (Rupees Thirty Seven Crores, Twenty Eight Lacs, Forty Thousand Only) has been framed for the construction of Building (Civil work only) for School of Engineering & Technology – Block B of Academic Building for Central University of Jharkhand at University campus, Ranchi.

The following are the general specification of the building

1. Structure : Design mix Concrete of M-25 grade framed structure with Flyash brick work in external side and 125mm thick brick work in internal side
Provided Random stone wall work in external surface of building.
Unless otherwise stated, cement shall be PPC.
2. Doors : 35mm thick Particle Board with both side laminate doors shutters with aluminium frame
Provided Collapsible gate as per requirement.
3. Windows : Anodised aluminium fully glazed sliding windows with grill
4. Flooring : Provided Vitrified tiles and Kota flooring in flooring and skirting
: Provided Antiskid ceramic tiles in toilets
: Provided glazed wall tiles in toilets dados
: In stair case provided Kota stone
: Provided granite in counters.
: Provided Checkered tiles, interlocking tiles as per areas

$$\vdots$$

The rates of the major items have been adopted from:

Preamble

1. Details of items and specifications given in BOQ are indicative. Any difference, if found between BOQ and drawing at a letter stage, information given in the drawing will prevail.
2. The BOQ are prepared based on DSR-2012 (Civil & Electrical) for DSR items and Market rates for no-schedule rates.
3. The quoted rate i.e. at Par/below/above as quoted in Price Bid Format shall apply to any extra items covered in DSR-2012 for Civil and Electrical items.
4. The extra items beyond DSR-2012 for Civil and Electrical shall be paid as per approved market rate analysis as per the provision of Contract.

PROPOSED CONSTRUCTION OF BUILDING FOR SCHOOL OF ENGINEERING AND TECHNOLOGY FOR CENTRAL UNIVERSITY AT CENTRAL UNIVERSITY CAMPUS, KANKE, RANCHI						
	SUMMARY OF COST					
SL.No.	ITEM	ESTIMATED COST (IN Rs.)	BIDDER'S PRICE		AMOUNT IN Rs. After adding percentage above/ below/ at par	
			% QUOTE ABOVE / BELOW / AT PAR		In figures	In words
			In figures	In words		
1	Civil Works (As per DSR 2012 of CPWD)	296,617,468.00				
2	Civil Works (As per Non Scheduled)	20,674,130.00				
3	Plumbing, Sanitary , Water supply work & sewerage work (As per DSR 2012 of CPWD)	11,609,924.00				
4	Plumbing, Sanitary , Water supply work & sewerage work (As per Non Scheduled))	1,345,040.00				
5	Electrification work including DG sets, Transformers, LT panels etc., (As per DSR 2012 of CPWD)	8,869,719.00				
6	Electrification work including DG sets, Transformers, LT panels etc., (As per Non Scheduled)	24,367,835.00				
7	Fire fighting and Prevention system	9,355,384.00				
	Total:	372,839,500.00				

BIDDER'S FINANCIAL OFFER :

Rs. _____

In Figures

Rs. _____

In Words

SEAL

SIGNATURE

**ABSTRACT OF COST
FOR THE PROPOSED CONSTRUCTION OF BUILDING FOR SCHOOL OF
ENGINEERING & TECHNOLOGY**

SL.NO.	PARTICULARS	AMOUNT
1	COST OF CONSTRUCTION: CIVIL WORK :	317,291,598.00
2	PLUMBING SANITARY & WATER SUPPLY WORK	12,954,964.00
3	ELECTRIFICATION WORK	33,237,554.00
4	FIRE FIGHTING INSTALLATIONS	<u>9,355,384.00</u>
	TOTAL COST OF CONSTRUCTION	<u>372,839,500.00</u>
		SAY <u>37,28,40,000.00</u>

**RUPEES THIRTY SEVEN CRORES, TWENTY
EIGHT LACS, FORTY THOUSAND ONLY**

**ESTIMATE FOR THE PROPOSED CONSTRUCTION OF SCHOOL OF ENGINEERING
& TECHNOLOGY (BLOCK B)**

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as per as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	CUM	3873.00	129.35	500972.55
2	2.9.	Earth Work in foundation trenches or drains not exceeding 1.5m in width or 10sqm on plan including dressing of sides and ramming of bottoms lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within lead of 50m				
	2.9.1	Ordinary rock	CUM	5809.00	212.00	1231508.00
	2.92	Hard rock (requiring blasting)	CUM	9682.00	378.80	3667541.60
3	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering , lead up to 50 m and lift up to 1.5 m.	CUM	16380.00	83.80	1372644.00
4	2.27	Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.	CUM	2610.00	749.30	1955673.00
5	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - all work upto plinth level.				
	4.1.9	1:4:8 (1 cement :4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	CUM	2714.00	3331.25	9041012.50
6	7.1.1	Random, Rubble Masonary - Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete (1:6:12) (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) upto plinth level with cement mortar (1:6) (1 cement : 6 coarse sand)	CUM	580.00	3059.20	1774336.00
7	6.1	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)	CUM	573.50	3316.55	1902041.43
8	6.32.	Brick work with clay flyash F.P.S (non modular) brick of class designation 7.5 in superstructure above plinth level upto floor five level in				
	6.32.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	CUM	3077.00	3910.35	12032146.95

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
9	7.2.1	Random rubble masonry with hard stone in superstructure above plinth level and upto floor five level, including levelling up with cement concrete (1:6:12 (1 cement : 6 coarse sand: 12 graded stone aggregate 20mm nominal size) at window sills, ceiling level and the like with cement mortar (1:6) 1 cement : 6 coarse sand	CUM	5115.00	3615.35	18492515.25
10	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	SQM	8432.00	476.85	4020799.20
11	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	SQM	8432.00	63.00	531216.00
	5.33	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work in cluding pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement. including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. M-25 grade reinforced cement concrete by using 410Kg. of cement per cum of concrete. All work up to floor V level.	CUM			
12	5.33.1	In Foundation	CUM	3150.00	5242.15	16512772.50
13	5.33.2	In Column super structure	CUM	1555.00	5781.50	8990232.50
14	5.33.2	In Plinth beam	CUM	286.00	5781.50	1653509.00
15	5.33.2	In Lintel	CUM	172.00	5781.50	994418.00
16	5.33.2	In roof beam	CUM	1294.00	5781.50	7481261.00
17	5.33.2	In roof slab	CUM	3051.00	5781.50	17639356.50
18	5.33.2	In expansion joints cover	CUM	29.00	5781.50	167663.50
19	5.33.2	In walls	CUM	149.00	5781.50	861443.50
20	5.33.2	In railing	CUM	84.00	5781.50	485646.00
21	5.33.2	In stair case	CUM	191.00	5781.50	1104266.50
22	5.33.2	In chajja	CUM	154.00	5781.50	890351.00
23	5.33.2	In precast slab	CUM	97.00	5781.50	560805.50
		Total RCC quantity		10212.00		
	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:				
24	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	SQM	4408.00	166.90	735695.20
25	5.9.2	Wall (any thickness) including attached pillasters buttersses, plinth and string courses etc.	SQM	2917.00	285.15	831782.55

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
26	5.9.3	Suspended floors, roofs, landings, balconies and access platforms ply 12mm thick	SQM	26698.00	311.20	8308417.60
27	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proof ply 12mm thick	SQM	20023.00	262.25	5251031.75
28	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	SQM	20088.00	365.60	7344172.80
29	5.9.7	Stairs, (excluding landings) except spiral staircases	SQM	952.00	326.30	310637.60
30	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
	5.22.6	Thermo-Mechanically Treated bars.	KG.	1249300.00	62.25	77768925.00
31	4.10	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 12.5mm nominal size)	SQM	334.00	207.55	69321.70
32	4.12	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50 kg of cement	per 50 kg cement	90.00	35.35	3181.50
33	DSR 21.1.1	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 DPDM 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/panelling C.P. brass/stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge (Glazing, panelling and dash fasteners to be paid for separately)				
	21.1.2.	Powder coated aluminium (minimum thickness of powder coating 50 micron)	KG	21342.00	387.60	8272159.20
34	9.7.	Providing and fixing panelling or panelling and glazing in panelled or pannlled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be mesured) Panelling for panelled or panelled and glazed shtters 25mm to 40mm thick				
	9.7.5.4	Pre-laminated particle board with decorative lamination on both sides, grade 1, Type II, IS:12823 marked	SQM	1030.00	1332.00	1371960.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
35	DSR 21.3	Providing and fixing glazing in aluminium door, widnows, ventilators shutters and partitions etc.,. With EPDM rubber/neoprene gasket etc., complete as per the architectural drawings and the direction of Engineer incharge (cost of aluminium snap beading shall be paid in basic items)				
	21.3.1	With float glass panes of 4.0mm thickness	SQM	2140.00	725.35	1552249.00
	21.3.2	With float glass panes of 5.5mm thickness	SQM	677.30	905.75	613464.48
36	10.3	Providing and fixing in position collapsible steel shutters with vertical channels 20X10X2mm and braced with flat iron diagonals 20X5mm size, with top and bottom rail of T-iron 40X40X6mm with 40mm dia steel pulleys complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer	SQM	107.30	4234.25	454335.03
37	9.103	Providing and fixing bright finished brass 100mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS:1868) aluminium lever handles with necessary screws etc. complete (best make of approved quality)	EACH	295.00	706.15	208314.25
38	9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour and shade with necessary screws etc. complete				
	9.101.2	Twin rubber stopper	EACH	295.00	71.55	21107.25
39	9.100	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:				
	9.100.1	125 mm	EACH	450.00	62.50	28125.00
40		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:				
	9.97.1	300x10 mm	EACH	450.00	100.40	45180.00
41	9.84	Providing and fixing aluminium extruded sedction body tubular type universal huydraulic door closer (having brand log with ISI, IS:3564) embossed on the bodyu, door weight upto 36kg. To 80 kg. and door width from 701mm to 1000mm) with double speed adjustment with necessary accessories and screws etc. complete	EACH	274.00	981.75	268999.50
42	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
	9.48.1	Fixed to steel windows by welding.	KG	51304.00	90.75	4655838.00
43	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.				
44	10.26.1	M.S. tube.	Kg	2272.00	86.45	196414.40
44	10.17	Providing and fixing M.S. fan clamp type I or II of 16mm dia M.S. bar bent to shape with hooked ends in RCC slabs, beams durign laying including painting the exposed portion of loop all s per standard design complete.	Each	448	106.30	47,622.40
45	DSR 11.41.2	Providing and laying Vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorptions 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 tiles 600X600mm	SQM	15257.00	1337.10	20400134.70
46	DSR 11.40	Providing and laying rectified glazed ceramic floor tiles 300x300mm or more (thickness to be specified by manufacture) of 1st quality conforming to IS:15622 with approved make in colours white, ivory, grey, fume red, brown laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including pointing the joints with white cement and matching pigments, etc all complete. - Antiskid Ceramic tiles	SQM	1071.00	961.25	1029498.75
47	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of 1:4 (1 cement :4 coarse sand):				
	11.26.1	25 mm thick	SQM	7458.00	945.70	7053030.60
48	11.27	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match te shade of the slabs, including rubbing and polishing complete.	SQM	1890.00	954.10	1803249.00
49		Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand)				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
	11.20.2	Medium shade with 50% white cement and 50% ordinary cement.	SQM	161.20	789.55	127275.46
50	16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grde made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50mm thick compacted bed of course sand, filling the joints with coarse sand etc. all complete as per the durement of Engineer-in-charge.	SQM	1608.00	536.65	862933.20
51	11.36	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacture) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-charge in skirting. risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	SQM	3587.00	724.25	2597884.75
52	8.2.2.2	Providing and fixing 18mm thick gang saw cut mirror polished (premoulded & prepolished) machine cut for kitchen platform and similar locations of required size of approved shade, colour and texture laid over 20 mm thick base of cement mortar 1:4 (1cement :4 coarse sand) laid and jointed with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels. Granite slab	SQM	972.00	3083.40	2997064.80
53	8.3.2	Extra for providing edge moulding to Granite stone counters, vanities etc. over above including machine polishing to edge to give high gloss finish etc. complete as per design approved by Architects / E/I.	RMT	1296.00	178.75	231660.00
54	13.1	12mm cement plaster in (1:6) (In internal wall)				
	13.2.2	1:6 (1 cement: 6 fine sand)	SQM	57609.00	130.20	7500691.80
55	13.16	6 MM CEMENT PLASTER				
	13.16.1	1:3 (1 cement: 3 fine sand)	SQM	34326.00	101.00	3466926.00
56	13.5	15 mm cement plaster (In external surfaces)				
	13.5.1	1:4 (1 cement: 4 coarse sand)	SQM	22007.00	153.60	3380275.20

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
57	13.76	Forming groove of uniform size from 12X12mm and up, 25X15mm in the top layer plastered surface as per approved pattern including providing and fixing aluminium channels of appropriate size and thickness (not less than 2mm) nailed to the under layer with rust proof screws and nails and finishing the groove complete as per specifications and direction of the Engineer incharge	Rmt	1574.00	72.15	113564.10
58		Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of:				
	22.3	i) 1st course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding of junction of vertical and horizontal surface. ii) 2nd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area. iii) 3rd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm area. iv) 4th course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm.)	SQM	851.00	399.60	340,059.60
59		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/sq. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 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 water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
54	22.7	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 approve by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth aproved 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 to 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-Chage:				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sq.M	5234.00	786.70	4,117,587.80
60	13.41	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade				
	13.41.1	New work (tow or more coats) over and including priming coat with cement primer.	SQM	57609.00	66.70	3842520.30
61	13.37	White washsing with lime to give an even shade				
	13.37.1	New work (three or more coats	SQM	34326.00	11.75	403330.50
62	13.46.1	Finishsing walls with Acrylic smooth exterior paint of required shade - New work (two or more coat applied @ 1.67ltr/10sqm. Over and including priming coat of exterior primer applied @ 2.20kg/10sqm)	SQM	22263.00	67.50	1,502,752.50
	13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:				
	13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.				
63		In wood work	SQM	2678.00	78.80	211,026.40
64		In steel work	SQM	4276.00	78.80	336,948.80

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
65	12.1	Providing corrugated G.S. sheet roofing including vertical/curved surface fixed with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. lipmet washers filled with white lead and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (upto any pitch in horizontal/vertical or curved surfaces) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required				
	12.1.2	0.80mm thick with zinc coating not less than 275gm/M2	SQM	600.00	742.80	445,680.00
66	10.16..1	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc, including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc., complete	KG		85.10	
	10.16.1	Hot finished welded type tubes	MT	11.00	85100.00	936,100.00
67	12.41.1	Providing and fixing on wall face unplastisied rigid PVC rain water pipes conforming to IS:13592 type A incouding jointing with seal ring conforming to IS : 5382 leaving 10mm gap for thermal expansion single socketed pipes	RMT	2016.00	206.90	417,110.40
68	4.17	Making plinth protection 50mm thick of cement concrete (1:3:6) (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal mix) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth	SQM	818.00	338.75	277097.50
NON SCHEDULED ITEMS						
69		Proviidng and Fixing structured glazing using glazing section on direct stick mullion & transom system of which mullion shall be of 80x50x2mm & trnsom to be of 50x50x2mm using 5mm thick toughened SGG Cool Lite ST reflective glas of make Saint Gobian to be pasted with 6x6 spacer foam tape & tructural silicon of Dow corning 995 or its equivalent 795 & shall be weather sealed with Dow corning weather sealant 789 or equivalent. The job includes all necessary hardwares, cleat, dash fastners etc. Complete job.	SQM	744.00	5600.00	4166400.00
70		Supplying, fitting and fixing of Stainless steel hand rail with railing of approved design and drawings all cost complete	RMT	1146.00	6000.00	6876000.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
71		Providing and fixing expansion joints cover over the expansion gaps in vertical or horizontal gaps between RCC beam and columns/bricks wall with epoxy coated 350wide, 18 SWG aluminium sheet with running groove with 50X6mm round heads stainless steel screws and stainless steel washers at 200 C/c staggered including cost of all labour and mterials all complete as per direction of E/I.	RMT	2442.00	800.00	1953600.00
72		Supplying, fitting and fixing at site in expansion joints bitumin in pregnetected fibre board of Shalitek make or equivalent 25mm thick in tow lyers including the cost of fitting, fixing, scaffolding, nailing and making good the dmaged surfaces all cost complete as per specification and direction of E/I.	SQM	1465.00	900.00	1318500.00
73		Providing 1.5mm cement punning including curing, carriage of water with all leads and lifts as per building specification and direction of E/I.	SQM	371.00	60.00	22260.00
74		Providing dressed natural stone sett pavement with stone bricks of hard igneous rock as per size 250X125mm X100mm over 12mm thick local sand of F.M. 1.8 as cushion including watering stone bricks placed true to line level grde and camber or superelevation, keeping at least 8mm space in between the sett joints, staggered and filled with cement mortar (1:4) sand of F.M. not less than 2.5 including curing for not less than 7 days, cost of water and carriage with all leads and lifts, cost of all materials, labour, screening of sand taxes and royalty, providing light, barrier, danger signal regulation of traffic etc., all complete as per M.O.S.T. specification and direction of E/I.	SQM	865.50	250.00	216375.00
75		Providing designation 75 A one brick flat soling joints filled with local sand including cost of watering taxes royalty all complete as per building specification and direction of E/I.	SQM	16791.00	165.00	2770515.00
76		Providing 250 mm wide BRICK DRAIN in cement mortar (1:6) with avarage 150mm. Clear depth and 250 mm apron including cost of earthwork involved with 75m cement concrete (1:2:4) over one brick designation 75A, flat soling in proper grade and slope at the base , the drain dully plastered in C.M.(1:3) with puning over exposed surface all complete as per building specification and direction of E/I.	RMT	1090.00	800.00	872000.00
77		Providing and fixing chicken wire wesh of approved size with rectangular as per instruction of the E/I. all cost complete	SQM	4800.00	40.000	192,000.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
78		Diluting and injecting chemical emulsion for PRE-CONSTRUCTIONAL Anti-termite treatment and creating a continous chemical barrier , wall trenches, top surface of plinth filling, along the external perimeter of building, over the top surface of consolidated earth of which apron is to be laid, surroundings of pipes and conduits etc. complete as per specification. (Plinth area of the building at ground floor only shall be measured for payment). Chlorpyriphos Emulsifiable concentrate of 20% with 1% Concentration.	SQM	7000.00	225.00	1575000.00
79		Providing and fixing Armstrong Butt edge fine fisured 15mm tiles in 600X600mm size to be suspended by amstrong prelude SI. Grid system wtuih 24mm wide aluminium T section fingers main runners to be securely fixed to the structural soffit by approved hangers (12mm dia G.I wire) at 1200mm maximum centres, The last hanger at the end of each main runner should not be grater than 450mm from the adjacent wall, flush fitting 1200mm corss fees to be interlocked between main runners at 600mm module cut corss tees longer than 600mm require independents support 600X600mm module to be formed by fitting 600mm cross tees. perimeter trim to be Armstrong wall angle in white colour secured to walls at 450mm maximum centres . The job to be done as per direction of Architect/Engineer incharge manufacturers representatives	SQM	616.00	1155.00	711480.00
					Total	317291598.34

**ESTIMATE FOR THE PROPOSED CONSTRUCTION OF SCHOOL OF ENGINEERING
& TECHNOLOGY (BLOCK B)**

PLUMBING, SANITARY & WATER SUPPLY WORK						
SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
1	17.1	Providing and fixing water closet squatting pan (Indian type WC pan) with 100mm sand cast Iron P or S Trap, 10 litre low level white PVC flushing cistern with manually controlled device (handel lever), conforming to IS 7231, with all fittings & fixtures complete including cutting and making good the walls and floors wherever required.				
	17.1.1	White vitreous china Orissa pattern WC pan of size 580 x 440mm with intergal type foot rests.	EACH	76.00	2964.10	225271.60
2	17.2	Providing and fixing white vitreous china pedestral type water closet (European type W.C. pan) with seat and lid, 10litre low level white PVC flushing cistern including flush pipe, with manually controlled device (handle lever), confirming to IS: 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required.				
	17.2.1	WC Pan with ISI marked white solid plastic seat and lid	EACH	52.00	2885.10	150025.20
3	17.4.1	Providing and fixing white vitreous China flat back or wall corner type lipped front urinal basin of 430X260X350mm and 340X410X265mm sizes respetively 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:				
	17.4.1	One urinal basin with 5 litre white PVC automatic flushing cistern	EACH	108.00	2844.40	307195.20
4	17.7.	Providing and fixing wash basin with C.I. brackets 15mm C.P; brass pillar taps, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required.				
	17.7.1	White Vitreous China wash basin size 630X450mm with pair of 15mm C.P. brass pillar taps	EACH	152.00	1848.35	280949.20
5	17.31	Providing & fixing 600 x 450mm 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.	EACH	152.00	674.05	102455.60
6	18.49	Providing & fixing C.P brass bib cock of approved quality conforming to IS :8931				0.00
	18.49.1	15 mm nominal bore	EACH	390.00	397.50	155025.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
7	18.21.2	Providing & fixing unplasticised PVC connection pipe with brass unions				
	18.21.2.1	15 mm nominal bore	EACH	390.00	61.70	24063.00
8	18.53	Providing and fixing C.P. brass angle valve 15mm dia for basin mixer and gysar points of approved quality conforming to IS : 8931				
	18.53.1	15mm nominal bore	EACH	32.00	449.35	14379.20
9	17.34	Providing and fixing toilet paper holder .				
	17.34.1	C.P brass	EACH	128.00	250.95	32121.60
10	18.51	Providing and fixing C.P brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms .				
	18.51.1	15 mm nominal bore	EACH	2600.00	430.60	1119560.00
11	17.28	Providing & fixing P.V.C waste pipe for sink or wash basin including PVC waste fittings complete .				
	17.28.2	Flexible pipe				
	17.28.2.1	32 mm dia	EACH	350.00	65.30	22855.00
	17.28.2.2	40 mm dia	EACH	400.00	67.60	27040.00
12	18.58	Providing and fixing PTMT grating of approved quality and colour.				
	18.58.1	Circular type				
	18.58.1.2	125 mm nominal dia with 25 mm waste hole.	EACH	1400.00	50.15	70210.00
13	18.75.1	Providing and fixing PTMT extension nipple for wter tank pipe fittings of approved quality and colour				
		15mm nominal bore. Weighing not less than 32 gms.	EACH	400.00	43.00	17200.00
14	18.52.1	Providing and fixing C.P. brass stop cock (cocealed of standard design and of approved make conforming to IS: 8931 - 15mm nominal bore	EACH	644.00	426.55	274698.20
15	12.41	Providing and fixing on wall face unplasticised- PVC pipes confirming to IS: 13592 TYPE A, including jointing with seal ring confirming to IS: 5382 leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.41.1	75mm diameter.	RMT	1600.00	124.90	199840.00
	12.41.2	110mm diameter.	RMT	2100.00	206.90	434490.00
16	12.42	Providing and fixing on wall face unplasticised- PVC moulded fitting/ accessories for unplasticised- PVC rain water pipes confirming to IS: 13592 TYPE A,including jointing with seal ring confirming to IS: 5382 leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.42.3	Single Tee with door				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
	12.42.3.1	75x75x75 mm	EACH	220.00	207.95	45749.00
	12.42.3.2	110x110x110 ,mm	EACH	160.00	302.05	48328.00
	12.42.5	Bend 87.5 degree				
	12.42.5.1	75x75x75 mm	EACH	220.00	104.55	23001.00
	12.42.5.2	110 mm bend	EACH	310.00	156.95	48654.50
17	18.8	Providing and fixing chlorinated poly vinyl chloride (CPVC) pipes hyaving thermal stability for hot & coldwater supply, including all CPVC plain & brass threaded fitting, including fixing the pipewith clampsat 1 m spacing. This includesjointing of pipes & fittingwith one step CPVC solvent cement and cost ofcutting chases and making good the same including testing ofjoints complete as per direction ofEngineer in Charge.				
		Concealed work including cutting chases and making good the walls etc.				
	18.8.1	15mm nominal outer dia. Pipes.	RMT	2800.00	218.65	612220.00
	18.8.2	20mm nominal outer dia. Pipes.	RMT	1410.00	243.05	342700.50
	18.8.3	25mm nominal outer dia. Pipes.	RMT	1100.00	297.95	327745.00
	18.8.4	32mm nominal outer dia. Pipes.	RMT	840.00	358.90	301476.00
	18.9.5	40 mm nominal outer dia. Pipes.	RMT	350.00	309.60	108360.00
18	18.10	Providing & fixing GI pipes complete with GI fittings				
		Internal Work- Expose on wall				
	18.10.3	25mm nominal bore	RMT	240	243.15	58356.00
	18.10.4	32mm nominal bore	RMT	625	296.50	185312.50
	18.10.5	40mm nominal bore	RMT	375	364.10	136537.50
	18.10.6	50mm nominal bore	RMT	180	243.15	43767.00
19	18.38	Painting GI pipes and fittings with synthetic enamel paint over a ready mixed priming coat, both of approved quality for new work.				
	18.38.3	25mm nominal bore	RMT	240	11.40	2736.00
	18.38.4	32mm nominal bore	RMT	625	13.45	8406.25
	18.38.5	40mm nominal bore	RMT	375	16.00	6000.00
	18.38.6	50mm nominal bore	RMT	180	18.80	3384.00
20	18.18.3	Providing & fixing ball valve (brass) of approved quality , High or low pressure, with plastic floats				
		25 mmdia nominal bore	EACH	128.00	421.65	53971.20
21	18.49.1	Providing and fixing C.P. brass stop cock of approved quality				
		15mm nominal bore	EACH	644.00	397.50	255990.00
22	18.59	Providing & fixing C.I double air valve of approved quality with bolts , nuts , rubber insertion etc complete (The tail pieces , tapers etc if required will be paid separately)				
	18.59.1	50 mm dia	EACH	12.00	4018.15	48217.80

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
23	18.76.	Cutting holes upto 30X30cm in walls including making good the same - with common burnt clay FPS (non modular) bricks	EACH	612.00	152.00	93024.00
24	18.77	Cutting holes upto 15X15cm. In RCC floors and roofs, chajjas for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc,. With cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20mm nominal size) including fnishing complete so as to make if leak proof.	EACH	310.00	143.95	44624.50
25	2.10	Excavating trenches of required width for pipes, cables etc. Including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5M including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cms in depth including consolidating each deposited layer by ramming, watering, etc. And disposing of surplus excavated soil as directed within a lead of 50 m Hard/dense soil.				
	2.10.1	All kind of soil				
	2.10.1.2	Pipes, cables etc, exceeding 80mm dia but not exceeding 300 mm dia	RMT	560.00	165.60	92736.00
						0.00
26	19.1	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				
	19.1.1	100 mm diameter	RMT	308.00	150.10	46230.80
	19.1.2	150 mm diameter	RMT	212.00	219.05	46438.60
27	19.6	Providing and laying Non pressure NP2 RCC Pipes with collars jointed with stiff mixture of cement mortar in the propoertion of 1:2 (1 cement : 2 fine sand) including testing and jointing etc complete.				
	19.6.2	150 mm diameter	RMT	40.00	254.50	10180.00
28	19.2	Providing and laying cement concrete 1:5:10 (1 cement: 5 coarse sand: 10 graded stone aggregate 40 mm nominal size) alround stoneware pipes including in bed for pipes to be laid in trenches as per standard details.				
	19.2.1	100 mm diameter	RMT	308.00	496.90	153045.20
	19.2.2	150 mm diameter	RMT	212.00	607.70	128832.40

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
29	19.4	Providing and fixing square mouth S.W. gully trap grade 'A' complete with C.I. Grating brick masonry chamber with bricks of class designation 75 and 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				
	19.4 .2	100x100 mm size P type				
	19.4.2.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	EACH	510.00	1278.30	651933.00
30	19.7	Constructing brick masonry manhole with 75 class designation bricks in cement mortar 1:4 (1 cement: 4 coarse sand) R.C.C. top slab 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 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
	19.7.1	Inside size 90x80 cm and 45 cm deep including CI Cover with frame (light duty as per IS:12592) 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)				
	19.7.1.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	EACH	48.00	7132.00	342336.00
31	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement :4 coarse sand) including 500x450 mm precast RCC horizontal grating with frame complete as per standard design .				
	19.27.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	EACH	160.00	3193.50	510960.00
32	17.11	Providing and fixing white vitreous China Laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40mm C.P. brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete including painting of fittings and brackets, cutting and making good the walls wherever required				
	17.11.2	size 600X450X200mm	EACH	1200.00	2758.65	3310380.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
33	19.32.1	Making soak pit 2.5M diameter 3.00 metre deep with 45X45cm dry brick honey comb shaft with bricks and S.W. drain pipe 100mm diameter 1.8M long complete as per standard design - with common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	EACH	4.00	15228.15	60912.60
						-
NON SCHEDULED ITEMS						
34		Supplying and fixing PVC fittings of approved make conforming to IS: 1729 including supplying, nails and bobbins lead and yarn for making lead cabled joints including earth work for providing scaffolding as the case may be all complete as per specification direction of E/I.				
		PVC double junction with door and ear 110mm dia.	EACH	208	460.00	95,680.00
		PVC door bend - 110mm dia.	EACH	380	180.00	68,400.00
		PVC side door bend (right/left) 100mm dia.	EACH	110	300.00	33,000.00
		PVC cowl - 100mm dia.	EACH	24	50.00	1,200.00
35		Providing, fixing and applying the following items:				
		Ring rubber	EACH	1080	15.00	16,200.00
		Lubricant	KG	120	250.00	30,000.00
		Solvent cement	KG	120	240.00	28,800.00
		Door piece	EACH	1460	80.00	116,800.00
		15mm C.P. nipple with coupling	EACH	868	85.00	73,780.00
		Flush valve	EACH	50	4500.00	225,000.00
36		Supplying, fitting and fixing C.P. brass towel rail 20mm X600mm with bracket container	EACH	208	415.00	86,320.00
37		Supplying, fitting and fixing steel jali	EACH	132	75.00	9,900.00
38		Constructing septic tank of 150 users all cost complete as per specification, drawings & direction of E/I	EACH	4	75000.00	300,000.00
39		Providing & fixing CP brass Health faucet with PVC Flexible Tube with wall hook.(JAQUAR MODEL NO-583)	EACH	630	20.00	12,600.00
40		Providing, fixing and testing of uPVC SWR P or S trap including jointing with solvent cement and making good the walls, floors etc., complete of nominal size.	EACH	128	370.00	47,360.00
		110x 110mm				
						-

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
41		Supply, Installation, testing & Comissioning of vertical/horizontal multistage centrifugal pumping set with stainless steel S S-304 stage casing and SS-304 impellers with stainless steel SS-316L shaft as per IEC standards and GJL250 cast iron suction & discharge casing, connected to TEFC ventilated induction motor of 2 pole, 2900 RPM, suitable for 400/440 Volts, 3 phase, 50 Hz A.C. supply with pressure gauge and with gunmetal isolation cocks, vibration elimination pads, control panel and required electrical cable etc. complete with base and frame, nuts and bolts and necessary RCC foundations as per requirement as per instructions and pump shall have following duty:	EACH	1	200000.00	200,000.00
		No. of Pumps: 2(1 Working + 1 Stand by)				
		Capacity : 350lpm				
		Head : 75m				-
					Total	12954964.15

**ESTIMATE FOR THE PROPOSED CONSTRUCTION OF SCHOOL OF ENGINEERING &
TECHNOLOGY (BLOCK B)**

INTERNAL ELECTRIFICATION WORK						
SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
1	1.8	Point Wiring in PVC Conduit, with Modular type Switch: Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface/recessed PVC conduit, with modular type switch, modular plate, suitable size of GI box etc as required.				
	1.8.1	Group- A	Per Pnt	1025.00	416.00	426400.00
	1.8.2	Group- B	Per Pnt	1025.00	499.00	511475.00
	1.8.3	Group- c	Per Pnt	1950.00	619.00	1207050.00
2	1.12	Wiring for light/power plug with 2x4 Sq.mm FR PVC insulated copper conductor songle core cable in surface/recessed PVC conduit along with 1 No. 4 Sq.mm FR PVC insulated copper conductor single core cable for loop earthing etc. as required.	RMT	7840.00	162.00	1270080.00
3	1.31	Supply and Fixing Light Plug Point with Modular Type Accessories: Supply and Fixing GI box with modular plate and cover in front on surface or in recess including providing and fixing 3 pin, 5/6 amps modular socket outlet and 5/6 amps modular type switch, connection, painting etc as required.	EACH	750.00	288.00	216000.00
4	1.32	Supply and Fixing Light Plug Point with Modular Type Accessories: Supply and Fixing GI box with modular plate and cover in front on surface or in recess including providing and fixing 6 pin, 15/16 amps modular socket outlet and 15/16 amps modular switch, connection, etc as required.	EACH	400.00	366.00	146400.00
5	1.33	Supplying and fixing 3 pin, 5 amp. Ceiling rose on the existing junction box/wooden block including connection etc, as required	EACH	2215.00	34.00	75310.00
6	1.14	Wiring for circuit/submain wiring along with earth wire with the flowint sizes of FR PVC insulated copper conductor, single core cable in surface/recessed medium class PVC conduit as required				
		2x1.5 Sqmm + 1x1.5 sqmm earth wire	RMT	2000.00	107.00	214000.00
		2x2.5 Sqmm + 1x2.5 sqmm earth wire	RMT	18000.00	131.00	2358000.00
		2x4.0 Sq.mm + 1x4.0 Sq.mm earth wire	RMT	2500.00	162.00	405000.00
		2x6.0 Sq.mm + 1x6.0 Sq.mm earth wire	RMT	1300.00	206.00	267800.00
		2x10 Sqmm + 1x10 sqmm earth wire	RMT	1200.00	310.00	372000.00
		2x16 Sqmm + 1x16 sqmm earth wire	RMT	1300.00	429.00	557700.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
7	2.19	Supplying and fixing 30 amps 415 volts, TPN industrial type socket outlet, with 4 pole and earth, metal enclosed plug top along with 20 amps C curve, TPMCB in sheet steel enclosure on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc, as required	EACH	40.00	1718.00	68720.00
8	1.13	Wiring for light/power plug with 4X4 sq.mm FR PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit alongwith 2 nos., 4 sq.mm. FR PVC insulated copper conductor single core cable for loop earthing as required	RMT	800.00	268.00	214400.00
9	1.18	Supply and drawing telephone wire of following pair, 0.5 sq.mm. FR PVC insulated copper conductor, unarmoured telephone cable in the existing surface / recessed conduit as required.				
		2 Pair	RMT	1500.00	15.50	23250.00
10	1.23	Supplying and fixing following piano type switch / socket on the existing switch box / cover including connections etc as required				
		Telephone Socket outlet	EACH	75.00	29.50	2212.50
11	1.38	Supplying and fixing call bell/buzzer suitable for single phase, 230 volts, complete as required	EACH	70.00	54.50	3815.00
12	1.34	Supplying and fixing brass batten/angle holder including connections etc. As required	EACH	750.00	54.50	40875.00
13	1.35	Erection of wall bracket/ceiling fittings of all sizes and shapes containing upto two GLS lamps per fittings,complete with all accessories including connections etc, as required	EACH	1071.00	39.00	41769.00
14	1.51	Extra for fixing the louvers/shutters complete with frame for a exhaust fan of all sizes	EACH	675.00	68.50	46237.50
15	5.6	Earthing with copper earth plate 600mmX600mmX3mm thick including accessories and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc., with charcoal/coke and salt as required	Per set	25.00	8559.00	213975.00
16	5.7	Supplying and laying 6 SWG G.I earth wire at 0.50 metre belw grund level for conductor erth electrode, including connection/termination with G.I. thimble etc., as required	RMT	750.00	23.00	17250.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
17	5.8	Supplying and laying 25mm X 5mm copper strip 0.50 metres below ground as strip earth electrode, including connection/termination with nut, bolt, spring, washer etc. as required (jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm	RMT	250.00	680.00	170000.00
		NON SCHEDULED ITEMS				
18		Supply of wall / ceiling surface mounted fluorescent tube light luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required nos. fluorescent tube etc complete as required as per the standard catalogue				
		Box type Tube Light 1x 40 W T5 (Philips TMS 122/128	EACH	725.00	1450.00	1051250.00
		Box type Tube Light 2x 40 W T5 (Philips TMS 122/228	EACH	485.00	2175.00	1054875.00
19		Supplying, fitting and fixing on ceiling/wall mounted single box type/patti type 1X40watt fluorescent tube with copper chock complete set as required as per direction of E/I. of approved make	EACH	150.00	750.00	112500.00
20		Supplying, fitting and fixing fancy wall bracket of anodised aluminium 12mm diameter pipe fixed on 3mm thick M.S. painted plate of size 170mmX40mm with brass bracket holder including CLF lamp as required	EACH	750.00	350.00	262500.00
21		Supplying and fixing flush type circular ceiling fitting complete with holder aluminium anodised back plate and glass globe including connection etc including cost of required lamp	EACH	320.00	250.00	80000.00
22		Supply of surface mounted GLS / CFL type Wall light fixtures complete as per standard item with copper wiring and GLS / CFL lamps as required as per the standard catalogue item				
		15 W CFL tornado Bulk Head (Philips NXC 101)	EACH	60.00	1146.00	68760.00
23		Supply, fitting and fixing of of AC 230/250 volts, 50 HZ ceiling fan with standard down rod, blades, 2 nos. caps & regulator etc. ISI marked complete as required.				
		1200 mm sweep	EACH	375.00	2150.00	806250.00
		1400 mm sweep	EACH	425.00	2250.00	956250.00
24		Supply, fitting and fixing of AC 230/250 volts, 50 HZ exhaust fans including providing nuts, bolts, mounting frame and other accessories etc. complete				
		(Make : Bajaj / Crompton / Havells)				
		300 mm sweep 900 rpm	EACH	320.00	2200.00	704000.00
25		Supply of AC 230/250 volts, 50 HZ fresh air fans including providing nuts, bolts, mounting frame and other accessories etc. ISI marked complete as				
		300 mm sweep	EACH	60.00	1850.00	111000.00

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
26		Supply, fitting, fixing and installation of Wall fan (Rotostar) farrata, swing planta high speed. (for Auditorium) Make- Havells / Crompton / Khaitan.	EACH	15.00	3500.00	52500.00
27		Supply of down lighter recess mounted round circular ceiling light fixture with reflector & required nos. of CFL lamps (2x18W-P), control gear box, electronic blast etc. complete in all respect as required and as per the standard catalogue item. Make:- Philips- FBH 225/218 HF / Bajaj- BJDR218HM/F, Crompton- DDLH218EB, equivalent in Wipro.	EACH	165.00	2410.00	397650.00
28		Supply of recess mounting luminaire with mirror optics 600mmX600mm suitable for FTL with required nos.of 4x14W (T5)lamps,control gears. copper wiring etc. complete in all respect as required and as per the standard catalogue. Make:- Philips- TBS 088X4TL5-14W EBP-M2 / Bajaj-BMLA-0114-LHD / Crompton - T5CO 11414EB, Wipro- WVF 78414 SGA FTL-T5.	EACH	10.00	7600.00	76000.00
29		Supply of surface mounted GLS / CFL type Wall light fixtures complete as per standard item with copper wiring and GLS / CFL lamps as required as per the standard catalogue item.				
		15 W CFL tornado Bulk Head (Philips NXC 101)	EACH	90.00	1150.00	103500.00
30		Supplying, fitting and fixing 250 Watt HPSV lamp with complete set with choke, lamp etc. as required with G.I. bracket for mouting of sodium vapors light as per direction of E/I. including connection etc. all cost complete	EACH	24.00	9000.00	216000.00
31		Fabrication, assembling 200A HRC TPN switch incoming and 100/63A TPN, 35KA MCCB outgoing 4 nos. lighting I.T.electrical sub distribution control panel with the following	EACH	14.00	130000.00	1820000.00
		a. 200A TPN HRC switch - 1 no.				
		b. 300A alm. Busbar - 1 set				
		c. 100/63A TPN 35KA MCCB - 4 nos.				
		d. 0-500V voltmeter with selector switch - 1 set				
		e. 200/5A Amperemeter with selector switch 1 set				
		f. 200/5 CTS - 3 Nos				
		g. RYB indication lamp - 3 nos.				
		h. 15A HRC kitkat with fuse - 3nos.				
		i. Panel wiring materil copper wire, lug hardware etc. - 1 set				
		j. 16 SWG MSCR sheet suitable size and enclosures duly painted dust and verbing proof with locking arrangement complete set				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
32		Light distribution board (LBD) 4 way TPN LBD, containing the following : 63amp. 10KA TPN MCB 1 no. as incoming b. 4 amp to 10amp. SPN MCB for lighting circuit - 12 nos.	EACH	36.00	26000.00	936000.00
33		Power distribution board (LBD) 4 way TPN LBD, containing the following : 63amp. 10KA TPN MCB 1 no. as incoming b. 10 amp to 32 amp. SPN MCB for lighting circuit - 12 nos.	EACH	36.00	27000.00	972000.00
34		Power Distribution Board (Main LT Panel) for JSERC Building) - Supplying, designing, manufacturing, instalation, testing, fitting, fixing and commissioning in correct alignment position, effecting proper connection of all incomer and outgoing of LT panel of 14 SWG CRCA Sheet (2mm) steil IP-54 floor mounting cubical type LT Panel suitable for operation on 415V, 50Hz, 3Ph, AC supply and fault level 50KA. Apporexmate size (Shall be given at the time of work order) with front operated construction including seperate fabrication arrangement for fixing of switchgears and meters.	EACH	1.00	2047000.00	2047000.00
		The sheet steel under go minimum seven tanks treatement followed by finishing poder coating of minimum 60 microns thickness duly compartmentalized with locking arrangement duly fixed on base channel size 100mm X 75mm X 6mm having accessories mounted inside cubicale panel, earthing with 2 Nos. of appropriate size earth studs and suitable lifiting arrangement.				
		All opening shall be covered by soft rubber				
		The panels includes 415V, 800A, 3ph, 35KA, 50Hz electrolytic aluminium bus bar (E91 EWP) size (50mm X 8mm)X3X4 with removal gland plates, cable glands, at sending and receiving ends, enclusing connections with outgoing feeders complete in all respect.all interconnections shall be with 2.5, 4, 6 and 10 sq.mm. PVC insulated Copper conductor.				
		All FP MCCB should have Themo Magnetic Release, with front rotary handle. Make:- Legrand-DPX / Siemens-3VL / L&T- D- Shine.				
		1000A 50KA FP ACB EDO microprocessor release type with under /over voltage protection, earth fault/short circuit protection and displayof I.V.F.PF.KW.KVR. facility as incomer with trunk handle. Multi run cable entry arrangement shall be made in ACB incommer. 3 R/300Sq mm and 2 R/185 Sq mm 3.5 C Al cable.+.				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
		Out going:-				
		250 A TPN open execution, panel mounted center of Change over with front rotary handle for DG Supply.	1			
		250A/25KA FP MCCB for centrally AC. Of auditorium hall as out going.(without D.G.) and 1 no. for LDBs (with DG)	2			
		63A 25KA FP MCCB (4 Nos. for SDBs of all LDBs, 1 No. for external area lighting, and 2 Nos. as spare.(with D.G.)	7			
		160A 25KA FP MCCB for 1 No. for all UPS SDBs.(with D.G.)	1			
		100/125A 25KA FP MCCB 4 Nos.for all SDBs of PDB and AC TP DBs.(without D.G.) 1 No. as spare.(without DG.	5			
		32A 25KA FP MCCB with front rotary handle for building outer lighting. (without D.G.)	1			
		Multifunctional meter (Digital) of different range of 96 sq.mm. Make :- Conserve(Scheinder)/HPL/Legrand /L&T.	15			
		LED indicator (RYB) of 220V. Make :- ESSEN / L&T - ESBEE / Binay / Teknik (All out going shall have 1 Set of individual RYB indicators.	45			
		Bakelite Fuse base with HRC Fuse 20A. 1 Set. Make :- Legrand / L&T / Schinder.	3			
		CT 1000/5VA -5 class one Epoxy resin cast CT 1 Set, for each Multi functional meter. Make :- Kappa / Matrix / SG Electricals / EPICAST.	45			
		Aluminium Bus Bar for panel :- Al. E91EWP Bus bar size (50mm x 8mm)X3 X 4 RYB & N, 1000A, 415V, 3Ph, 35KA, 50Hz Aluminium bus bar shall be with heat shrinkable PVC Slived Red,Yellow,Blue & Black as (RYB & N) after temperature and incloser derating maximum allowable temp.of bus bar shall be 90 ⁰ C.	Set			
		Material for panel :-14 SWG (2mm) CRCA sheet steel including fabrication base channel size 100mm X 75mm X 6mm fixed on iron angles 100mm X 75mm x 6mm with nut- bolts, washer, earth studs-2 Nos, lifting arrangement including seven tank treatment of CRCA sheet followed by finishing powder coating painting of minimum 60 micron thickness,covered by soft rubber gasket locking arrangement etc as required and approximate size shall be provided at the time of work execution / work order.	Set			
35		Fabrication, assembling 630A 4 pole MCCB incoming and 160A, 12nos. 4 pole MCCB outgoing lighting LT electrical main distribution control panel with the following accessories.	EACH	2.00	800000.00	1,600,000.00
		a. 630A, 4 pole, 35KA MCCB 1 no.				
		b. 800A, TPN, aluminium bus bar - 1 set				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
		c. 630A, 4 pole, changeover switch - 1 set				
		d. 160A, 4 pole, 35KA MCCB - 7 nos.				
		e. 0-500V voltmeter with selector switch - 1 set				
		f. 600/5A A meter with selector switch - 1 no.				
		g. 600/5A CT - 3 nos.				
		h. RYB indication lamp - 3 nos.				
		i. 800A bakelight insulator - 97 nos.				
		j. 200A TPN cable connector - 12 nos.				
		k. Panel wiring material, copper wire, coppuer lug, hardware etc.				
		l. 16SWG, MSCR, sheet panel enclosure LS size 71/2' X 6' X 15" duly painted dust and verbing proofing locking arrangement enclosure - 1 set				
36		Providing and laying 1.1 KV grade aluminium armoured cable as per IS:1554 (Part -I) heavy duty all cost complete including cost of brass compression gland, cable jointing and end termination as per specification and direction of E/I.				
		a. 3 & half core 300 sq.mm.	RMT	450.00	3358.00	1511100.00
		b. 3 & half core 185 sq.mm.	RMT	750.00	2176.00	1632000.00
		c. 3 & half core 50 sq.mm.	RMT	900.00	703.00	632700.00
		d. 3 & half core 25 sq.mm.	RMT	1800.00	440.00	792000.00
		e. 3 & half core 35 sq.mm.	RMT	1600.00	545.00	872000.00
37		Transformer 500 KVA 11/0.433KV:-	EACH	1	1500000.00	1500000.00
		Supply, installation, testing, fixing and commissioning in correct alignment position, effecting proper connections of continuous rating 500 KVA, 11/0.433KV, Off Circuit, oil cooled, copper wound, outdoor Transformer and civil foundation work (making a 6"RCC plinth 4'(H)X8' (W)X 8' (L) on 10"X10" RCC columns and all the columns shall be covered by 250 mm brick wall and then compressed earth filling) along with required size & length of MS channels as per the norms of 500KVA outdoor Transformer with all accessories as per IS:2026, air filled cable box suitable for 11KV 1 Run, 3 Core 70 Sq mm XLPE Al. Ar. Cable and LV termination box shall have suitable arrangement for 1.1 KV, 3 Run, 3.5 Core, 300 Sq mm XLPE Al. Ar. Cable etc as required. (Make:- Universal / Kirloskar / Raychem RPG Pvt. Ltd. / Crompton)				
		Note:- Technical specification of above OCTC outdoor Type Transformer shall be provided at the time of work order.				
		Apart- from the above standard fittings followings items should be included:-				
		1. Oil Temperature indicating with One Set of Contacts.				
		2. Winding Temperature indicating with One Set of Contacts.				
		3. Marshaling Box with complete wiring.				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
		4. Magnetic Oil Level Gauge with Contacts.				
		5. Bucholz Relay with set of Contacts and Shut off Valve.				
		Tests: - Routine test as per IS: 2026				
		Type Test: - Type test shall be conducted, if there is any charge then mention in the price bid.				
		Test Certificate: - Two Copies of test routine certificates have to be submitted along with the OCTC Transformer.				
		Transformer Size:- 3760 mm (L) x 3340 mm (B) x 2645 mm (H) approx or as per company specification.				
		The technical specification of Transformers are as follows:-				
		Rating - 500 KVA				
		Installation - outdoor				
		No of Phase - Three				
		Primary Voltage - 11 KV				
		Secondary Voltage - 433 V				
		Vector Group - DYN – 11				
		Taping in Primary - + 5% to – 10% in 2.5 steps				
		Type of Tap changer - OCTC				
		Insulation class - A				
		Cooling - Onan				
		Temp. rise @ 50 Deg. C. Ambient				
		Oil by Thermo Meter :- 50 Degree C.				
		In winding by Resistance :- 55 Degree C.				
		Impedance :- 6.25% subject to IS Tolerance				
		Paint shade - Enamel Painting as per IS standard / Powder Coating / Conforms to IS 335				
		First Filling of Oil - HV – Cable Box				
		Terminal Arrangement - LV – Cable Box (For Multi Run Cable jointing arrangement - 3 Runs 300 Sq.mm 3.5 Core)				
		CRGO Core used shall be of M/3 Grade in the Transformer				
		Copper Woond.(Vedanta Group Copper wire)				
38		125 KVA Silent D.G. Set :-	EACH	2	2000000.00	4000000.00
		Supply, fitting, fixing, erection and commissioning along with civil foundation work of 125 KVA D.G. Set, 415 Volts, 3 Ph. Silent Diesel Engine driven generating set as per IS:10001 / 10002 and alternator as per IS:13364 complete with sound proof company make canopy (Acoustic Enclosure suitable for 125 KVA D.G. Set.) with breaker panel (Standard Mannual Control Panel)/ A.M.F. Panel and civil foundation work as per the norms of 125 KVA Silent D.G. Set with suitable arrangement for 2 Run 185 Sq mm 3.5 C/Al./Ar./C etc as required. (Make:- Sterling and Wilson Powergen Private Limited with MTU Engine SDGSC - 3 Cotroller / Kirloskar / Jakson Limited / Mitsubishi / Cater Pillar)				

SI No	IT.NO.	ITEM OF WORK	UNIT	QUANTITY	RATE	AMOUNT
		Supply of acoustic enclosure for 125 KVA CPCB approved Acoustic enclosure with 80 mm MS base plate, 2 mm CRCA sheet, 50 mm thick foam / 100 mm Rock Wool Insulation, 14 surface tank treatment, dully powder coated and painted with Brilliant Blue colour with integrate Fuel Tank, services door, louvers (Fresh Air / Radiator), 1020 dia residential type Silencer, approx dimension L x W x H - 4500 mm x 2000 mm x 2350 mm, complete with following accessories :-				
		a) Fuel Tank.				
		b) Batteries and leads.				
		c) Residential Silencers.				
		d) First fill of lube oil.				
		e) A.M.F. Panel.				
		f) AVM Pads.				
		In above supply item following work are also included :- i) Installation, fitting, fixing, testing and commissioning of the same. ii) Civil part for commissioning of D.G. Set. iii) Installation of Exhaust system for D.G. Set shall be as per Central & State Pollution Board Norms along with iron structure i.e. 5 mtr. above the height of nearest building. iv) Test run for D.G. Sets without load and with load (part wise).				
		Supply of Control Breaker Relay Panel/ AMF Panel for having all type of meters (Voltmeter, Ammeter, KW/m, Hz/m) with suitable arrangement for 2 Runs 185 Sq mm 3.5 Core Al. Ar. Cable etc as required. Note:- Technical specification of above 125KVA Silent D.G. Set shall be provided at the time of work order.				
					Total	33237554.00

SUMMARY OF COST FOR FIRE PROTECTION WORKS

Sl. No.	Description	Amount
1	Sub Head - I (Pumps & Equipments)	520524.00
2	Sub Head-II (Fire hydrant System)	2239580.00
3	Sub Head-IV(Smoke Detection system)	6595280.00
	G.TOTAL	9355384.00

Estimate For Installation of Fire Fighting System At G + 3 CENTRAL UNIVERSITY, Ranchi.

ITEM NO.	DESCRIPTION	QTY.	UNIT	Unit Rate (Rs.)	AMOUNT
	Sub Head - I (Pumps & Equipments)				
1	Supply, Installation, Testing and Commissioning of electric driven, horizontal type, single/multistage, end suction type, centrifugal pump of cast iron body, C.I impallers with carbon steel shaft & mechanical seal directly coupled with TEFC SQ cage foot mounted type induction motors suitable for operation on 3 phase, 415 volts 50 Hz AC supply with IP 55 protection for enclosure with F class insulation confirming to IS: 325 including common base frame fabricated from min. 75X50 mm M.S channel, coupling with guard foundation bolts, pressure gauge, cement concrete foundation etc. complete in all respect as required or as directed by engineer incharge.				
a)	Main fire pump 2400 LPM, 50 M head & 2900 RPM	1	Each	224000.00	224,000.00
b)	Jockey pump 180 LPM, 50 M head & 2900 RPM	1	Each	74000.00	74,000.00
2	Fabrication, Supplying, Installation, Testing & Commissioning of electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm. thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, interconnection, having switchgears and accessories mounting and internal wiring, earth terminals, numbering etc. complete in all respects, suitable for operation on 415 V, 3 phase 50 HZ AC supply with enclosure protection class IP 42 with 400 Amp aluminium bus bar as required.				
A)	<u>Fire pumps panel</u>				
	Incoming				
a)	1 No. 200 Amp, TP&N MCCB				
b)	0-400 Amp digital ammeter with one set of current				
	Outgoing				
I a)	1 Nos of 400 Amp TP&N MCCB (1 No for EDFP)				
b)	1 Nos of (suitable for 100 HP pump) star delta starter with over load protection, current sensing type single				
d)	1 sets of selector switches for auto / manual operation, Local / Remote / OFF and ON / OFF /				
II a)	1 Nos of 63 Amp TP&N MCCB (Jockey pump)				
b)	1 No of (suitable for 7.5 HP pump) HP DOL starter with over load protection, current sensing type single				
c)	1 set of 0-63 Amp digital ammeter and 1 set current				
d)	Selector switches for auto / manual operation, Local / Remote / OFF and ON / OFF / TRIP indications.				
III a)	1 Nos of 63 Amp TP&N MCCB				

ITEM NO.	DESCRIPTION	QTY.	UNIT	Unit Rate (Rs.)	AMOUNT
d)	All standard relays and accessories for automatic operation of diesel engine.	1	Each	94000.00	94,000.00
	Note:- Potential free terminal to be provided for BMS				

ITEM NO.	DESCRIPTION	QTY.	UNIT	Unit Rate (Rs.)	AMOUNT
3	Providing, laying, Testing and commissioning of 6 mm thick black steel IS: 3589 marked M.S. pipes including fittings like elbows, tees, flanges, reducing socket, nuts bolts, gaskets etc. of suction/discharge pipes, supporting the pipes from the floor at suitable intervals or suspending the pipes from ceiling etc fixed with steel supports, hanged with clamp, including cutting,welding,edge preparation, cutting & making good the floor /wall where ever required complete in all respects or as directed by engineer incharge.(inside Pump room)				
4	Providing, fixing, testing and commissioning of black steel IS; 1239 marked Class "C" M.S pipe including all fittings (heavy class) i.e bend, tee, elbow, reducing socket, flanges, nuts & bolts etc. fixed with screwed or welded joints, hanged with clamps, hanger supports, dash fasteners, bolts, nuts, rubber insertions etc including threading, cutting, welding, edge preparation, cutting & making good the wall/ floorwherever required complete in all respects .				
a)	80 mm dia	6	mtrs	894.00	5,364.00
b)	150 mm dia	6	mtrs	1540.00	9,240.00
5	Providing and fixing IS marked butterfly valve (PN 1.6) of the following specifications complete with companion flanges, bolts, nuts, rubber insetions etc.				
	Body: Cast iron Epoxy / powder coated as per IS_10 Grade 220				
	Disc: S.G. Iron Epoxy /Powder coated as per B.S. : 2789 Gr. 420/12				
	Seat: Nitrile rubber replaceble seat with moulded "O" ring				
	Shaft : SS (Grade E N-8)				
a)	80 mm diameter	1	Each	6400.00	6,400.00
b)	100 mm diameter	6	Each	7400.00	44,400.00
c)	150 mm diameter	2	Each	9400.00	18,800.00
6	Providing and fixing IS Befor type check valve (NRV) of PN 1.6 with following specifications complete with companion flanges, bolts, nuts, rubber insetions etc				
	Body: Cast iron Epoxy / powder coated as per IS_10 Grade 220				
	Disc: SS with stop pin: SS410 & Spring: SS316				
	Seat: Nitrile rubber replaceble seat with moulded "O"				
a)	80 mm diameter	1	Each	5440.00	5,440.00
b)	100 mm diameter	6	Each	4000.00	24,000.00
c)	150 mm diameter	2	Each	7440.00	14,880.00
	Sub Total				520,524.00
	Sub Head-II (Fire hydrant System)				

ITEM NO.	DESCRIPTION	QTY.	UNIT	Unit Rate (Rs.)	AMOUNT
1	Providing, fixing, testing and commissioning of black steel IS; 1239 marked Class "C" M.S pipe including all fittings (heavy class) i.e bend, tee, elbow, reducing socket, flanges, union, nuts & bolts etc. fixed with screwed or welded joints, hanged with clamps, hanger supports, dash fasteners, bolts, nuts, rubber insertions etc including threading, cutting, welding, edge preparation, painting of approved colour over two coat of primer, cutting & making good the wall/ floor wherever required complete in all respects or as directed by engineer incharge.				
a)	25 mm dia	24	mtrs	324.00	7,776.00
b)	80 mm dia	42	mtrs	894.00	37,548.00
c)	100 mm dia	284	mtrs	1094.00	310,696.00
c)	150 mm dia	584	mtrs	1540.00	899,360.00

ITEM NO.	DESCRIPTION	QTY.	UNIT	Unit Rate (Rs.)	AMOUNT
2	Providing and fixing IS : 778 marked gun metal gate valve class I with CI wheel of approved quality with union (Screwed end)				
a)	25 mm nominal	24	Each	840.00	20,160.00
3	Providing and fixing S.S Fire Hydrant Valve of approved quality with 63 mm female, instant, ovlique, singal outlet , 80 mm flanged inlet, brass spindle, cast iron wheel m A.B.S. blank cap and chain (conforming to IS: 5290 complete with companion flange, bolts, nuts,rubber insertion / compressed asbestos gasket etc. and painted in fire red colour.	24	Each	7400.00	177,600.00
4	Providing and fixing swinging, wall mounting type First Aid Hose Reel of approved quality and made from compressed steel sheet with dust cover, cast iron brackets including 36 m long, 19 mm nominal bore, high presure braided rubber hose as per IS:444 Type hose guide, PVC shut off nozzle with 6 mm outlet and 25 mm nominal bore gun metal inlet valve, bolts, nuts rubber insetion etc. painted in Fire red colour including cutting and making good the walls wherever required.	20	Each	6740.00	134,800.00
5	Providing and fixing in position 63 mm nominal bore and 15 m long synthetic fibre, RLL fire hose pipe of approved make bearing IS: 636 -1988 type A mark and having TAC and MMD approved with a pair of 63 x 63 mm gun metal instantaneous type, heavy duty delivery hose coupling (conforming to IS: 903) bound and riveted to the hose pipe with copper rivets and copper wire compete.	32	Each	4700.00	150,400.00
6	Providing and fixing in position short SS brach pipe of approved quality with 63 mm male instatneous type inlet and 15 mm outlet nozzle complete conforming to IS : 903	16	Each	2400.00	38,400.00
7	Supplying and fixing of hose cabinet of size 900mm x 600mm x 250mm made of 2mm thick M.S. sheet with 6mm thick glazed glass door including necessary locking arrangment suitable to accomodate external hydrant with butterfly valve, 2 nos. 15 mtr. long hose pipe, 1 no. branch pipe mounted on wall or raised brick platform and duly painted with post office red externally and white internally with synthetic enamel paint complete in all respect for external hydrant as required complet in all respects.	16	Each	2640.00	42,240.00

ITEM NO.	DESCRIPTION	QTY.	UNIT	Unit Rate (Rs.)	AMOUNT
8	Supplying, fixing, testing & commissioning of 1 set of 63mm four way instantaneous fire brigade connection (FBC) with inbuilt NRV comprising of gunmetal body and four gunmetal instantaneous male inlet coupling confirming to IS:604 with plug and cap with chain as required with nut & bolts, washers, high pressure gasket as required.	1	Each	9000.00	9,000.00
9	Providing , fixing A B C type fire extinguisher with ABC powder confirming to ISI including wall supported hanger fixed on wall with PVC rawl plug at suitable location & height, complete in all respects (6 Kg capacity)	49	Each	8400.00	411,600.00
	Sub Total				2239580.00
	Sub Head-IV(Smoke Detection system)				
1	Supplying, installation, testing and commissioning of Addressable type optical Smoke detector and mounting base with LED light complete as required.Make- honywell	1,200	Nos.	2740.00	3,288,000.00
2	Supplying, installation, testing and commissioning of duel tone electronic Addressable type hooter suitable for wall mounted complete as required.	34	Nos.	4500.00	153,000.00
3	Supplying, installation, testing and commissioning of Addressable type manual call box in suitable enclosure with arrangement to raise the alarm when the glass is manually broken complete as required.	34	Nos.	4500.00	153,000.00
4	Supplying, installation, testing and commissioning of microprocess base 10 loop (each zone accessing 20 detectors) main fire alarm control panel with LCD Display lights. The panels shall have 240 volts AC power supply automatic Battery charger 24 Volts sealed lead acid maintenance free batteries as complete with batteries, battery charger illuminated numeric digram complete as required.	1	Nos.	740000.00	740,000.00
5	Supplying, installation, testing and commissioning of response indicator, as required.	120	Nos.	44.00	5,280.00
6	Providing and laying 19mm dia PVC conduit complete with required junction boxes in recessed / surface system PVC insulated copper conductor cable of 2x1.5 sq.mm. in existing conduit as required.	24,000	Mtrs.	94.00	2,256,000.00
	Sub Total				6,595,280.00