

**NED UNIVERSITY OF ENGINEERING AND  
TECHNOLOGY, KARACHI**

**BILL OF QUANTITIES**

**BIDDING DOCUMENTS**

**FOR**

**CONSTRUCTION OF 04 CLASSROOMS  
AT 2<sup>ND</sup> FLOOR, DEPARTMENT OF MATHEMATICS  
NED UNIVERSITY OF ENGINEERING AND  
TECHNOLOGY, KARACHI**

**( VOLUME – III )**

**FOUR VOLUMES**

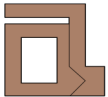
**Volume-I : Instructions to Bidders &  
Conditions of Contract**

**Volume-II : Technical Specifications**

**Volume-III : Bill of Quantities**

**Volume-IV : Tender Drawings**

**OCTOBER – 2020**



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**SUMMARY**

**BILL OF QUANTITIES**

**NAME OF WORK: CONSTRUCTION OF 04 CLASSROOMS AT  
2ND FLOOR, DEPARTMENT OF MATHEMATICS  
NED UNIVERSITY OF ENGINEERING  
AND TECHNOLOGY, KARACHI**

<b>S.NO</b>	<b>SUB HEAD</b>	<b>TOTAL AMOUNT (RS)</b>
1	CIVIL WORK	
2	ELECTRICAL WORK	
3	PLUMBING WORK	
	<b>Total cost</b>	

**SUB SUMMARY**

**BILL OF QUANTITIES**

**NAME OF WORK: CONSTRUCTION OF 04 CLASSROOMS AT  
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S.NO	SUB HEAD	TOTAL AMOUNT (RS)
<b>"A"</b>		
<b>CIVIL WORKS</b>		
1	Architecture Work (Schedule Items) (Page No. 03)	
2	Architecture Work (Non-Schedule Items) (Page No. 04)	
3	Structure Work (Schedule Items) (Page No. 05)	
4	Structure Work (Non-Schedule Items) (Page No. 06)	
<b>Sub Total : (A)</b>		
<b>"B"</b>		
<b>ELECTRICAL WORKS</b>		
1	Electrical Work (Non-Schedule Items) (Page No. 07 & 08)	
<b>Sub Total : (B)</b>		
<b>"C"</b>		
<b>PLUMBING WORKS</b>		
1	Plumbing Work (Schedule Items) (Page No. 09)	
2	Plumbing Work (Non-Schedule Items) (Page No. 10)	
<b>Sub Total : (C)</b>		
<b>Total cost of Day Care Center A + B + C</b>		

**CONSTRUCTION OF 04 CLASSROOMS AT 2nd FLOOR,  
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**BILL OF QUANTITIES**

(CIVIL WORKS)

SINDH GOVT SCHEDULE OF RATES 2012

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
<b>CIVIL WORK</b>					
<b>ARCHITECTURE WORK (SCHEDULE ITEMS)</b>					
1	Providing and laying 1:3:6 Cement concrete solid block masonry wall 6" and below in thickness set in 1:6 cement mortar in ground floor and superstructure, including racking out joints curing etc. (Item-24, 30, P/19)	2,097.42	15771.01	%Cft	330,784.32
2	Providing and laying Cement sand plaster 3/4" thick using ratio 1:6 Cement sand mortar on interior and exterior surface of walls, columns, beams and ceiling including curing etc. complete in all respects. (Item-13 (c), P/52)	20,665.77	2590.50	%Sft	535,346.77
3	Preparing the surface and painting with plastic emulsion paint of approved make i/c rubbing the surface with rubbing brick / sand paper filling the voids with chalk / plaster of Paris and then painting etc. complete. <b>(In 3 coats)</b> (Item-40.A & B, P/56)	16,246.18	2237.95	%Sft	363,581.39
4	Preparing the surface and painting with weather coat i/c rubbing the surface with rubbing brick / sand paper, filling the voids with chalk/plaster of Paris and then painting 03 coats of with weather coat of approved make. Including extra labour for external surface for distemper / paint / white wash / colour wash / weather coat above 20' - 0" height using long ladder or jhoola for each coat (For every 10' - 0" additional height. <b>(In 3 coats)</b> (Item-39.A, B & 42, P/56)	6,866.27	2346.42	%Sft	161,111.53
5	Providing and fixing in position doors, windows and ventilators of 1st class deodar wood frames and 1-1/2" thick teak wood ply wood shutters of 2nd class deodar wood skeleton (Solid) stiled and plywood stiled and rails core of partial wood and teak ply wood (3 ply) on both sides including hold fasts, hinges, iron tower bolts, handles and cleats with cord etc. complete. <b>(Ply wood doors)</b> (Item-57, P/65)	290.50	1182.56	P.Sft	343,533.68
6	Providing and fixing in position Aluminium channels framing for sliding windows & ventilators of Alcop made with 5 mm thick tinted glass glazing (Belgium) & Aluminum fly screen i/c handles, stoppers & locking arrangement etc. complete. (Item-84 (b), P/108) (b) - Deluxe model (Bronze)	420.00	1647.69	P.Sft	692,029.80
7	Providing and fixing iron steel grill using solid square bars of 1/2" x 1/2" placing at 4"c/c and frame of flat iron patti 3/4" x 3/4" including circle shape at 1-0 apart equivalent fitted with screws or pins i/c painting 03 coats with 1st coat of redoxide paint etc. (Inner side of windows) (Item-30, P/94)	360.00	194.16	P.Sft	69,897.60
Sub Total :					<b>2,496,285.09</b>
_____ % Above / Below					
Cost of Scheduled Items (Civil Work) Architecture					<b>Total :</b>

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**BILL OF QUANTITIES**

(CIVIL WORKS)

**NON-SCHEDULE ITEMS**

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
<b>CIVIL WORK</b>					
<b>ARCHITECTURE WORK (NON SCHEDULE ITEMS)</b>					
1	Providing and applying three coats of Spirit polish of approved make on new wood works including rubbing and repairing the surface to prepare the surface for polishing, including the cost of all labor and materials, Complete in all respects. (Non Schedule Item)	871.99		P.Sft	
2	Providing and fixing porcelene tiles non-skid full body of approved quality shade and design 24" x 24", setting in cement mortar or dry bond, filling joints with white cement and pigment cleaning curing including wastage, with cost of all material and labour etc. complete in all respects. (Non Schedule Item)	4,696.49		P.Sft	
3	Providing and fixing porcelene tiles for skirting of approved quality shade and design, setting in cement mortar or dry bond, filling joints with white cement with pigment, cleaning curing including skirting and wastage, with cost of all material and labour etc. complete in all respects. (Non Schedule Item)				
	Skirting in 4" height	678.59		P.Rft	
4	Providing and fixing Ceramic Tiles size 8" x 12" on floor and walls with boder imported of approved shade and quality laid over a base of class "C" concrete, setting tiles in cement slurry and filling the jointwith white cement or pigment of approved shade including wastage, washing, cleaning and curing complete. (Non Schedule Item)	499.83		P.Sft	
5	Providing and laying marble (matching to existing) on staircase steps of 3/4" thickness (In one piece) fine dressed on the surface without winding set in cement mortar 1:2 including rubbing / grinding and chemical polishing etc. or according to instruction of Engineer incharge. Complete in all respects. (Non Schedule Item)				
	(In one piece)	342.51		P.Sft	
6	Providing and fixing railing on outer side of staircae in 39" height, using pertal wood hand rail 3"x3/4" and 3/4"x 3/4" square solid bars as blusters @ 10" c/c and fixing 3/4" x 1/4" iron ptti on top of blusters including 03 coats of enemal paint on blusters, iron patti and 03 coats of spirit polish on hand rail, the work also includes cost of all materials, transportation charges etc., complete in all respects. (Non Schedule Item)				
	Railing in 39" height	22.00		P.Rft	
7	Providing and fixing pertal wood hand rail on inner sides of staircae in size 3"x3/4" fixing on 3/4" x 1/4" iron ptti fixed with pins in walls including 03 coats of enemal paint on iron patti and 03 coats of spirit polish on hand rail, the work also includes cost of all materials, transportation charges etc., complete in all respects. (Non Schedule Item)	38.00		P.Rft	
Cost of Non-Scheduled Items (Civil Work) Architecture			<b>Total :</b>		

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**BILL OF QUANTITIES**

(CIVIL WORKS)

SINDH GOVT SCHEDULE OF RATES 2012

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
<b>CIVIL WORK</b>					
<b>STRUCTURE WORK (SCHEDULE ITEMS)</b>					
1	Dismantling cement concrete plain 1:2:4. ( <b>Screeding</b> ) (Item-18 (b), P/4)	904.89	3327.50	%Cft	30,110.21
2	Reinforced cement concrete work including all labour and material except the cost of steel reinforcement & it's labour for bending and binding which will be paid separately, which including all kind of form work, moulds, lifting, curing rendering & finishing the exposed surface i/c screening and washing of shingle. (a) - R.C work in roof slab, beams, columns rafts, lintels and other structureal members laid in situ or precast laid in position complete in all respects. (I) - Ratio (1:2:4) 90 Lbs. cement 2 Cft. Sand 4 Cft. Shingle 1/8" to 1/4" gauge. (Item-6 (a) (I), P/17)	4,697.18	337.00	P.Cft	1,582,949.66
	(II) - RCC work in columns, retaining walls and water retaining structures, complete in all respects with ratio 1:1-1/2:3. (Item-6 (a) (II), P/16)	1,152.18	349.00	P.Cft	402,110.82
3	Fabrication of steel reinforcement for cement concrete using hot rolled deformed Billet steel bars confirming to ASTM-A615 i/c cutting, bending and laying in position, making joints, chairs & fastening i/c cost of binding wire (also i/c removal of rust from bars). (b) - Using Tor Bars. (Item-8 (b), (29), P/17)	490.10	5001.70	P.Cwt	2,451,333.17
4	Providing and laying 2" thick topping cement concrete 1:2:4 including surface finishing and dividing into panels ( <b>Screeding</b> ) (Item-16 (c), P/42)	5,418.51	3275.50	%Sft	177,483.30
5	Providing and fixing bitumen felt paper of 60 Lbs over roof i/c cleaning of roof with wire brush and removing dust, applying bitumen coat at the rate of 34 Lbs per % sft as premix inter coats and then laying felt with 10% over laps, then applying and spreading hill sand at the rate of 1 cft per hundred sft. The cost also includes necessary fire material, kerosene oil, wood etc. (Item-41, P/38)	5,418.51	54.70	P.Sft	296,392.50
				Sub Total :	4,940,379.66
				% Above / Below	_____
Cost of Scheduled Items (Civil Work) Structure				<b>Total :</b>	_____

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**BILL OF QUANTITIES**

(CIVIL WORKS)

**NON-SCHEDULE ITEMS**

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
<b>CIVIL WORK</b>					
<b><u>STRUCTURE WORK (NON SCHEDULE ITEMS)</u></b>					
1	Dismantling existing cement block masonry and shifting of dismantled material from site. <b>(Parapet Wall)</b> (Non-Schedule Item)	361.34		P.Cft	
2	Dismantling R.C.C 1:4:8 concrete of roof columns capping (extended columns) including cleaning and straightening of steel, also shifting of dismantled material from site. (Non-Schedule Item)	267.75		P.Cft	
3	Dismantling / removing, bitumen felt paper from roof , and shifting of dismantled material from site. (Non-Schedule Item)	5418.51		P.Sft	
Cost of Non-Scheduled Items (Civil Work) Structure			<b>Total :</b>		

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**BILL OF QUANTITIES**

**(ELECTRICAL WORKS)**

**NON-SCHEDULE ITEMS**

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
	<b>ELECTRICAL WORK (NON-SCHEDULE ITEMS)</b>				
1	<b>Distribution Panel</b> L.T. Distribution Board Supply installation testing and commissioning of the following distribution panel as per drawing and specs sheets including all mounting accessories and hardware. Design for top and bottom entry of cables with terminal blocks for power and control wiring, labeling for each circuit with screen printing. Schematic diagram in plastic lamination and pocket on side of panel door. Permanent tag for each incoming and outgoing cable. Panel to be concealed mounted. Contractor has to submit the shop drawing for approval of consultant.				
a	Main LPDB (Non Schedule item)	1.00		P.No.	
2	<b>Wiring for lighting</b> Supply, installation, testing and commissioning of following cables.				
2.1	<b>Cables</b> Circuit wiring from D.B. to switch and between switch to switch with 2Cx2.5 mm <sup>2</sup> Cu./pvc/pvc cable. (Non Schedule item)	275.00		P.Mtr.	
b)	First light point controlled by one switch with 2Cx2.5mm <sup>2</sup> cable. (Non Schedule item)	780.00		P.Mtr.	
c)	Point to point (looping) with 2Cx1.5mm <sup>2</sup> cable. (Non Schedule item)	1,200.00		P.Mtr.	
2.2	<b>Conduits</b> 1" dia medium gauge rigid PVC conduit with all accessories embed in wall / floor / ceiling or surface installed complete in all respect for the following circuits. (Non Schedule item)	975.00		P.Mtr.	
b)	Flexible conduit of 3/4" dia wherever is required. (Non Schedule item)	125.00		P.Mtr.	
c)	3/4" dia medium gauge PVC conduit with all accessories embed in wall / floor / ceiling or surface installed complete in all respect for low current systems. (Non Schedule item)	350.00		P.Mtr.	
3	<b>Wiring for small power:</b>				
i	Circuit wiring from D.B. to switch socket with 2Cx2.5 mm <sup>2</sup> Cu./pvc/pvc cable. (Non Schedule item)	425.00		P.Mtr.	
ii	Point to point (looping) with 2Cx1.5mm <sup>2</sup> Cu./pvc cable. (Non Schedule item)	80.00		P.Mtr.	
iii	Circuit wiring from D.B. to floor outlet boxes with 2Cx2.5 mm <sup>2</sup> Cu./pvc/pvc cable as shown in drawing. (Non Schedule item)	175.00		P.Mtr.	
C/O					

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
				B/F	0.00
<b>4</b>	<b>M.S. back boxes of the following sizes, fabricated with 16SWG powder coated, with brass earth terminal for switches, sockets, telephone &amp; Data points concealed / surface type boxes Clipsal make or equivalent .</b>				
a)	Back Box for single outlet. (Non Schedule item)	16		P.No.	
<b>4.1</b>	<b>10A switches (Clipsal E - series)</b>				
a)	Two gang (Non Schedule item)	2		P.No.	
b)	Four gang (Non Schedule item)	2		P.No.	
c)	Six gang (Non Schedule item)	12		P.No.	
c)	Eight gang (Non Schedule item)	1		P.No.	
<b>4.2</b>	<b>Switch socket outlets (Clipsal E-Series or Equivalent as directed by Architect / Consultant).</b>				
a)	15A-3pin international switch socket outlet. (Non Schedule item)	12		P.No.	
b)	Wiring shall be done for the circuits with cables & circuit shall be laid in 25mm dia medium gauge rigid PVC pipes complete in all respect and as per Specifications / Drawings and to the approval of the Engineer. The looping of wiring should be done in switch boxes or light point boxes & to be done in open /concealed manner complete in all aspects.				
<b>5</b>	<b>Lighting Fixture and Exhaust fans</b>				
	Supply, installation, testing & commissioning of following as per drawings including all mounting & fixing accessories.				
a)	Celling Mounted Down LED tube Light 1' x 4' complete with all mounting and fixing accessories as per drawing. (Non Schedule item)	47		P.No.	
b)	Recessed LED Philips ceiling lights 4" dia 12W. (Non Schedule item)	7		P.No.	
c)	Ceiling fan 56" of approved quality and make. (Non Schedule item)	24		P.No.	
d)	Wall mounting type 12" x 12" exhaust fan of voldam or approved equivalent make. (Non Schedule item)	2		P.No.	
<b>6</b>	<b>Basic Electrical Requirements</b>				
	Obtain NOC/Approved certificate for the entire electrical installation work from electrical inspector Govt. of Sindh. (Non Schedule item)	1		P.Job.	
Cost of Non-Scheduled Items (Civil Work) Electrical			<b>Total :</b>		

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**BILL OF QUANTITIES**

(PLUMBING WORKS)

SINDH GOVT SCHEDULE OF RATES 2012

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
<b>PLUMBING WORK (SCHEDULE ITEMS)</b>					
1	Providing and fixing 24" x 18" lavatory Basin in white or coloured glazed earthen ware complete with & i/c the cost of W.I or C.I cantilever brackets 6 inches built into wall, painted white in two coats after a primary coat red lead paint, a pair of 1/2" dia rubber plug and chrome plate brass chain 1-1/4" dia malleable iron or c.p brass traps malleable iron or brass unions and making requisite number of holes in walls, plinthe and floor for pipe connection and making good in cement concrete 1:2:4 (Standard Pattern) (W/S & S/I, Item-8, P/3)	3.00	4,253.70	P.No.	12,761.10
2	Extra for labour for providing and fixing of earthen ware pedestal white or coloured glazed. (Foreign or Equivalent) (W/S & S/I, Item-9, P/3)	3.00	938.47	P.No.	2,815.41
3	Providing and fixing Orisa type white or colour glazed earthen ware W.C pan with cost of low level plastic flush tank of 3 gallons capacity of approved quality i/c making requisite number of holes in wall, plinth and floor and making good in cement concrete 1:2:4. A. W.C pan Orisa type 23" with plastic tank of low down 3 gallons C.I trap & C.I thumble (Superior Quality) (ii). With 4" dia earthen ware trap & plastic thumble. (W/S & S/I, Item-3 (ii), P/2)	3.00	6,166.60	P.No.	18,499.80
4	Providing and fixing C.I Manhole cover & frame i/c cost of material etc. (2' x 2') (P.H.E, Item-6, P/35)	1.00	6985.000	P.No	6,985.00
Sub Total :					<b>41,061.31</b>
_____ % Above / Below					
Cost of Scheduled Items (Civil Work) Plumbing			<b>Total :</b>		

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**BILL OF QUANTITIES**

**(PLUMBING WORKS)**

**NON-SCHEDULE ITEMS**

ITEM NO.	DESCRIPTION	QUANTITY	RATE	UNIT	AMOUNT (RS)
<b>PLUMBING WORK (NON-SCHEDULE ITEMS)</b>					
1	Providing and laying schedule-40 uPVC pipe of AGM (Jeddah) or approved make and quality for waste water, including cost of all specials, i.e. sockets, all types of tees, elbows, cross etc. and solutions, complete as directed by the Engineer incharge. (Non Schedule item)				
	a. For 3" dia pipe	45.00		P.Rft	
	b. For 4" dia pipe	40.00		P.Rft	
2	Providing, jointing and laying hot type PPRC pipe of FIRAT or as approved equivalent make including cutting, heat jointing, testing etc. and the cost of all required specials, hooks, providing and applying 1" wide and 3/8" thick layer of silicone around all the joints etc. as per site requirements and as directed by the Engineer incharge. (Non Schedule item)				
	a. For 1" dia PPRC pipe	55.00		P.Rft	
	b. For 3/4" dia PPRC pipe	60.00		P.Rft	
3	Providing and fixing in position powder coated single Bib cock of approved quality and make, complete in all respects as per site requirement and as directed by the Engineer incharge. (Non Schedule item)	6.00		P.No.	
4	Providing and fixing in position powder coated T-stop Cock of approved quality and make, complete in all respects as per site requirement and as directed by the Engineer incharge. (Non Schedule item)	6.00		P.No.	
5	Providing and fixing in position uPVC P-trap for floor drains of approved quality, with stainless steel jali set of 6" x 6" size, complete in all respects as per site requirement and as directed by the Engineer incharge. (Non Schedule item)	7.00		P.No.	
6	Providing and fixing in position long neck pillar cock, powder coated in approved colour, quality and make, complete in all respects as per site requirement and as directed by the Engineer incharge. (Non Schedule item)	3.00		P.No.	
7	Providing and fixing in position best quality looking mirror set of approved design and shape with all accessories including cost of all material and labour charges etc. Complete in all respects as per site requirements as directed by Engineer incharge. (Non Schedule item)	3.00		P.Set.	
Cost of Non-Scheduled Items (Civil Work) Plumbing			<b>Total :</b>		