

GOVERNMENT OF PAKISTAN



**NATIONAL TEXTILE UNIVERSITY
FAISALABAD**

Sheikhupura Road, Faisalabad, Pakistan.
Tel. # 041-9230094 Fax # 041-9230098

BID DOCUMENT FOR

Construction of Foreign Faculty Residential Block.



NATIONAL TEXTILE UNIVERSITY, FAISALABAD

Tender Notice Civil Works

Tender No.

C.W 18-02-01

National Textile University, Faisalabad invites single stage two envelopes (Technical & Financial) {PPRA Rule 36(b)} sealed bids on Market Rates System (MRS), 1st BI-ANNUAL-2018 (1st January to 30th June) based on District Faisalabad for the works mentioned below. Contractors/Firms enlisted with Pakistan Engineering Council (PEC), C&W Building Department and Punjab Revenue Authority for the current financial year 2017-18 in the respective category can participate.

Interested eligible bidders may download Bidding Documents from the official website of NTU (www.ntu.edu.pk). Bidding documents may also be obtained from the Registrar/Assistant Director (Civil) office of NTU from Monday to Friday during office hours.

Tender fee non-refundable may be deposited online in Allied Bank Limited, Manawala Branch, (Code: 0260) Faisalabad (0010005349040117).

Date, time & venue: Tenders will be dropped in Tender Box placed out-side the office of undersigned on **26-02-2018** up to **11:00 am** and will be opened at **11:30 am** on same day in the presence of intending Contractors or their representatives in the **Meeting Room of NTU**.

Eligible Contractors/Firms will submit their bids along with 2% earnest money of the estimated cost in sealed envelope of Financial Bid, only in the shape of CDR/Bank Draft in favors of National Textile University, Faisalabad, **drawn on Faisalabad**.

In case of any query the tenderers may contact to the undersigned.

Sr. No.	Name of Work	Estimated Cost	Earnest Money	Time Limit	Tender fee
1.	Construction of Foreign Faculty Residential Block.	44,544,674.00	890,895/-	18 Month	5,000/-
2.	Construction of Service Station for Vehicles.	1,575,000.00	31,500/-	03 Month	2,000/-
3.	Construction of Room and Veranda for Horticulture.	840,000.00	16,800/-	02 Month	1,000/-

Registrar

National Textile University, Faisalabad-37610

Tel: 041-9230081-5 Ext: 179, Fax: 041-9230098

16 cm x 4 col

Manat Associates

02/70

Terms and Conditions of the Tender

1. The National Textile University, Faisalabad, will not be responsible for any costs or expenses incurred by bidders in connection with the preparation or delivery of bids.
2. The Rector (Competent Authority) reserves the right to accept or reject one or all the tenders.
3. An affidavit duly attested by the Oath Commissioner/Notary Public showing that the firm is not Black-listed from any Govt./Semi Govt. Department
4. In case the offer is withdrawn, amended or revised during the validity period of the tender, the earnest money will be forfeited.
5. If the contractor fails to start the work as mentioned in work order the 02% Call Deposit (CDR) amount will be forfeited and the firm will not be allowed to participate in future tenders as well.
6. Failure to complete the project within the stipulated time period will invoke penalty up to 10% of the tender amount.
7. Execution/installation of the said tendered will be carried out at NTU Faisalabad.
8. Electricity (WAPDA) can be supplied by the university, on sub-meter to be provided by the contractor, the contractor will pay the electricity charges on actual basis.
9. All terms and conditions of Contract Agreement (Punjab Building Department) will be incorporated.
10. The Firm should be enlisted with (C&W) Building Department, Pakistan Engineering Council and Punjab Revenue Authority.
11. It shall be the responsibility of the contractor to remove debris / rubbish form the site of works and leave the place neat and tidy after the completion of work. Nothing extra shall be paid for it.

3/70

12. If the Contractor fails to fulfill the clause (11) of this tender terms & conditions, the University will shift the rubbish material outside the university and the expenses occurs will be deducted from the contractor's bill/ retention money.
13. The Competent Authority reserves the right to change, replace any item of BOQ and such standardized item (including any missing item in BOQ) will be paid according to (MRS) 1st BI-ANNUAL-2018 (1st January to 30th June) DISTRICT FAISLABAD and non-standardized item will be paid on the basis of analysis of rate.
14. In case of bid rate quoted by the Contractor 5% below on Engineers estimate, the contractor shall within 15 days of the receipt by him of the notification of the acceptance of his tender furnish to the engineer in-charge in cash, bank draft, or payment order or Bank Guarantee from any scheduled bank of Pakistan, the amount to make up the full performance security.
15. Conditional (any condition imposed by the bidder) Tender will not be accepted.
16. No telephonic tender are by post will be entertained.
17. Tender rates and amount should be filled in figure as well as in word and every page of the tender should be stamped and signed by the Bidder.
18. If there is any conflict in B.O.Q, it is fundamental term of the tender that the bidders acknowledges and accepts that the terms and condition of the university shall prevail.
19. Please note that any typographical/copying mistake in the B.O.Q/ Tender is amendable according to its appropriate manner. No benefit due to typographical/copying mistake can be claimed at any stage by the firm.
20. The university will award the contract to the successful bidders whose tender has been determined to be substantially responsive and has been determined as lowest evaluated tender.
21. In case any material is found not in conformity with the specification provided in the tender either on account of inferior quality defective workmanship the contractor demolish the work and rectify the same on the entire satisfaction of the engineer in charge
22. The payment will made on the availability of funds (approval from government planning agencies other relevant authorities and university management) if delay due

Memor Associates

04/70

to any reason no extra interest/mark up any type of claim will be accepted/paid to the firm/contractor.

Note: - For any query regarding tender, feel free to contact to the following person from Monday to Friday during office hours.

Muhammad Aslam
Assistant Director (Civil)
Contact# 041-9230081-90, Ext: 179

Memar Associates

Qualification criteria

The bidding firm should submit their bids along with the following information/documents

Technical bids contain the following information.

- a. Valid licenses of Pakistan Engineering Council, i.e. categories CE10
- b. Enlistment with C&W Department Punjab in C-4
- c. Copy of NTN.
- d. Copy of PST.
- e. Affidavit that the company has not been black listed in any Govt., Semi Govt. and local Govt. institutions.
- f. The bidder submits banks statement for last one year showing minimum transactions amount **20 Million** per year
- g. Tender fee Rs. 5,000/- non-refundable.

The financial bid prepared by the bidder should comprise the following documents

- a. covering letter
- b. financial proposal
- c. bids security @2% of bidding value

Note: *The Financial proposal will only be open of the bidders who fulfill the technical evaluation criteria. The financial bids of the bidders who do not qualify in the technical evaluation will be returned unopened/ sealed.*

Memar Associates

06/70

Certificate (Mandatory)

I authorized person ----- on behalf of company name--
----- solemnly declare that i have read
all terms and conditions of this tender documents for National Textile University carefully i also
undertake the responsibility that all given information in the tender proposal against the above
said tender are correct.

Signature & company stamp-----

Date:

Dr. Zafar Javed
Registrar
National Textile University
Faisalabad.
Tel. No. 041-9230091, 9230081-90 (Ext. 158)

Munir Associates

07/70

National Textile University Faisalabad

Name of Work: Construction of Foreign Faculty Residential Block.

Name of the Contractor/Firm _____

Full Address _____

Telephone No (Office) _____

(Mobile) _____

Amount of earnest money
Rs @ 2% of Tender Cost _____

Deposit at call no _____

Proprietor's/Managing Director' _____

SUMMARY OF COST

Schedule rates are based on MRS BI-ANNUAL PERIOD

(1st January to 30th June) DISTRICT FAISLABAD

And

Non Schedule rates are the rates based on open market rate

Total Estimated Cost Rs. 44,544,674.00/-

Contractor's Bid:

Seal and signature of Contractor/Firms

09/70

M.ABSTRACT OF COST

Item	Summary	Amount PK.Rs.
	GROUND FLOOR BUILDING PORTATION	16,076,621
	FIRST FLOOR BUILDING PORTATION	9,190,308
	2ND FLOOR BUILDING PORTATION	10,113,523
	PUBLIC HEALTH PORTATION	2,392,329
	ELECTRIC/COMMUNICATION PORTATION	2,624,583
	EXTERNAL DEVELOPMENT	790,500
	Total :-	41,187,864
	Add 3% Contingency	1,235,636
	Total	42,423,499
	Add 5% PST	2,121,175
	TOTAL	
	Carried to Grand Summary	PK Rs. 44,544,674

Memar Associates

NTU FOREIGN FACULTY APARTMENTS
M.ABSTRACT OF COST

(BUILDING PORTATION)

SUMMARY

Item	Summary	Amount PK.Rs.
	GROUND FLOOR PART - A	16,076,621
TOTAL Carried to Grand Summary		PK Rs. 16,076,621

16,076,621
TRUE

Memar Associates

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Site Clearing</u>						
	<u>Site clearance as described in Specifications, complete</u>						
1	Site Clearance (As required by Site, Contractor shall be visit the site)	1	Item				
	<u>Excavation and Fill</u>						
	<u>Excavation and backfilling as described in Specifications and shown on drawings, complete</u>						
2	Excavation in foundation of buildings, bridges, and other Structure i/c dag belling, refilling, around structure with excavated earth watering & ramming lead up to one chain (in ordinary soil).	28,120	%0Cft	6,614.80	186,008		
	<u>Dewatering</u>						
	<u>Dewatering as described in Specification Sections and shown on drawings, complete</u>						
3	Dewatering (As Site Required but cost will be Involve Lumsum)	1	Item				
	<u>Termite Control</u>						
	<u>Termite proofing of building by spraying anti termite liquid with water by spraying 1 liter chemical mixed with 40 liter water & spraying this mixture over an area of 175-Sft using Anti termite chemical of Biflex/Dursban / Al-Mirage, applying with pressure pump, the contractor will provide guarantee for 10years. (Payment is subject to production of certificate from Biflex/Dursban/Al-Mirage) complete in all respect as approved and directed by the Engineer Incharge.</u>						
4	Soil treatment to horizontal surfaces	4,873	P.Sft	6.50	31,675		
5	Ditto, to vertical surfaces	5,410	P.Sft	6.50	35,165		
6	Filling, watering, ramming earth under floor. surplus earth from foundation.	18,747	%0Cft	3,170.65	59,440		
	<u>Masonry Works</u>						
1	Pacca brick work in cement sand mortar (1:6) foundation and plinth.	6,872	% Cft	17,549.30	1,205,988		
	<u>Internal & External</u>						
2	Pacca brick work in c/s mortar 1:6 in G.F	5,602	% Cft	18,845.00	1,055,697		
3	Pacca brick work in c/s mortar 1:4 in G.F	634	% Cft	19,681.65	124,782		
	<u>Cast In-Place Concrete</u>						
	<u>Substructure</u>						
	<u>Cement sand screed protection layer as described in Specifications, complete</u>						

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	P/L, cement concrete brick or stone ballast 1 1/2" to 2" gauge in foundation & plinth (ratio 1:6:12).						
1	In screed (assumed)	3,908	% Cft	10,795.80	421,900		
2	Cement concrete plain including placing, compacting, finishing and curing complete (Ratio 1:4:8) In footings	890	% Cft	17,683.40	157,382		
3	<u>RCC in Raft/strip foundation laid in situ or pre cast laid in position pre stressed members cost in situ complete in all respect Type 'C' Nominal mixture 1:2:4.</u> In footings	5,393	P-Cft	255.55	1,378,181		
4	<u>RCC in roof slab, beams, column, lintels girder & other structural member laid in situ / precast laid in position in prestressed member complete in all respect type 'B' nominal mixture (1: 1½: 3).</u> In column Footing Superstructure <u>RCC in roof slab, beams, column, lintels girder & other structural member laid in situ / precast laid in position in prestressed member complete in all respect type 'B' nominal mixture (1: 1½: 3).</u>	267	P-Cft	380.10	101,487		
5	In column Up DPC <u>RCC in roof slab, beams, column, lintels girder & other structural member laid in situ / precast laid in position in prestressed member complete in all respect type 'C' nominal mixture (1:2:4).</u>	480	P-Cft	380.10	182,448		
6	In Roof Slab, Opening, Beam etc	2,891	P-Cft	352.35	1,018,644		
7	Extra cost for labour & shuttering for making ornamental moulding and Design as per drawing roof, Entrance and window shade complete as shown in the drawing as approved by the Engineer Incharege	190	P-Sft	110.00	20,900		
8	Making 1" wide Groves in Concrete Finish on walls as per shown in Drawings	1	P-Job	80,000.00	80,000		
9	Envicrete Split Blocks Front side at Edge of Building (3 No' Corner) Horazntly as per shown in Drawings	1	P-Job	12,000.00	12,000		
	<u>Metal , Fabrications</u>						

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastening, cost of binding wire and labour charges for binding of steel reinforcement (also includes the removal of rust from bars). 60 Grade (Karachi Built)</u>						
1	In Footing	24,463	% Kg	11,650.45	2,850,050		
2	In Columns	5,421	% Kg	11,650.45	631,571		
3	In Roof Slab	13,114	% Kg	11,650.45	1,527,840		
	<u>Waterproofing to Substructure</u>						
	<u>Waterproofing system to substructure as described in Specifications, including necessary auxiliary materials, fixing in position, complete</u>						
	<u>P/L, 2" thick DPC of cement concrete (1:2:4) using cement sand and shingle with 1 coat of bitumen and 1 coat of polythene sheet.</u>						
1	To top surfaces of substructure	585	% Sft	5,059.45	29,598		
	<u>P/L, Vertical DPC of cement concrete (1:2:4) using cement sand and shingle including bitumen coating (1:3) ¾" thick</u>						
2	To vertical surfaces of substructure	2,010	% Sft	3,121.35	62,739		
	<u>Waterproofing to Superstructure</u>						
	<u>1/2" thick cement plaster (1:3) with 14 Lbs % Sft bitumen and polythene sheet 500 gauge.</u>						
3	Top of Walls before Concrete Slab Protection board (assumed)	585	% Sft	2,980.30	17,435		
	<u>Doors and Windows</u>						
	<u>Doors and Frames</u>						
1	P/F, mild steel chowkat of doors, windows, C.window, etc. i/c holdfast, making and threading holes for hinges, etc. complete M.S. angle iron 1½"x 1½"x ¼" welded with M.S. flat 2"x ¼" "	330	P-Sft	155.30	51,249		
	<u>Door handles, ironmongery, fixings, accessories and the like, all as described in Specifications and shown on Drawings, fixing in position, complete</u>						
2	Providing and fixing 1½" (40 mm) thick deodar wood panelled or panelled and glazed, doors and windows, etc. complete in all respects	330	P-Sft	558.85	184,421		

Memorandum
8

14/70

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
3	Providing and fixing of 2" thick decorative deodar wood panelled door i/c deodar wood chowkat and brass fitting complete as per C.A drawing and as approved by the Engineer Incharge.	84	P-Sft	1,855.00	155,820		
4	Providing & fixing of PVC doors for Duct or Open area with Upvc strips including all necessary hardware's, locks, handle etc. complete in all respect as per direction of Engineer Incharge.	84	P-Sft	770.00	64,680		
5	P/F, handle door lock (Best quality) with face plate 2" Tee 2-1/2" wide 8" to 10" long C.P on both side complete in all respects and as approved by the Engineer Incharge.	12	No.	2,200.00	26,400		
6	P/F, brass sliding bolts 12" long.	14	No.	383.55	5,370		
7	P/F, brass sliding bolts 10" long.	7	No.	186.75	1,307		
8	P.F Kickplate Consisting Of Glaze Aluminum Suitable Size Fix With All Necessary Hardware's Complete In All Respect as per direction of Engineer Incharge. <u>Glazed Windows</u> <u>Window handles, ironmongery, fixings, accessories and the like, all as described in Specifications and shown on Drawings, fixing in position, complete</u>	22	Each	1,500.00	33,000		
9	Providing and fixing all types of glazed aluminium windows of anodized bronze color partly fixed and partly sliding using deluxe section of M.S Al-cop of Pakistan cables having frame size 100mm x 30mm x 1.6mm using frame (DC26) at bottom (DC30) at top and side leaf frame size 60mmx23mmx1.6mm (M24) at top and bottom and size 45mmx25mmx1.6mm (M28) at centre and size 45mm x 25mmx1.6mm (M23) at sides jali leaf frame (D29) size 43mm x 13mm x 1.6mm all section of 1.6mm thick approved standard latches, wheel stopper, brush channel angle joint and hardware etc as per design and complete in all respect as approved by the Engineer Incharge. (all section 1.6 mm thick) Flash Openable <u>Doors and Windows (Continued)</u> <u>Window & Door Grill</u>	238	P-Sft	1,080.00	257,040		
10	Providing and fixing 3/8" M.S. square bar 'grill including 1-1/4"x3/16" M.S. Flat Frame 'of windows of approved design including painting 3 coat complete in all respect.	238	P-Sft	245.00	58,310		
11	Providing and fixing & Fixing Geometric Pattern MS Grill of pipe having box section 3/4"x3/4"including 'of windows of approved by Drawings including painting 3 coat complete in all respect. (Changing required by the Clint if Required)	52	P-Sft	327.00	17,004		

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Wardrobe,Cabinet</u>						
12	Providing and fixing wooden box type laminted wardrobe 15" deep including ¾" thick boxing and shelves, hanger rods, hard board back drawers, brass fittings, locking arrangements, handles, internal bolts, shoe rods, etc. including three coats of enamel paint Deodar wood boxing, and laminted sheet shelves and leaves, etc.	362	P-Sft	933.90	338,072		
13	P/F Vin board cabinet ¾"thick with drawer 3" deep in kitchen i/c termite proofing and polishing with synthetic enamel as specified with handl hinges screw etc complete 2 ft deep with back. Al Noor Lamination Of Code 3044	186	P-Sft	667.85	124,220		
14	P/F curtain railing to door and window comprising of T.O. S.O - E.L.I.T.E Japan made supriour type of railing are equilant fixed over 4"x3/4" deodar wood strip i/c painting.	58	P-Rft	128.70	7,465		
15	Providing and fixing ornamental wooden architrave 3" x (1½" tapered to ¼") all along the door frame complete in all respect Deodar wood architrave	198	P-Rft	39.70	7,861		
	<u>Stair & Terrace Railing</u> (Continued)						
	<u>Stair</u>						
16	Providing and fixing at any floor 2'-9" high stair railing 2" dia stainless steel brushed (dull finish) pipe (No. 304) on top fixed with 1-1/2"x3'-8" S.S flat baluster, having 3 nos 3/8" dia S.S solid rods placed at equal distance fixed with the help of rowel bolts, including the cost of S.S studs, complete in all respect as approved by the consultant.	36	P-Rft	1,650.00	59,400		
17	Provide & Fix 2" dia stainless steel pipe (No. 304) 14 SWG (Non Magnetic) hand rail including stainless steel flange screwed with rawal plug as per Hand rail & Baluster Fixing detail (typical), complete in all respect as directed by engineer in charge.	31	P-Rft	475.00	14,725		
18	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, revitting, handling, assembling and fixing, but excluding erection in position For jointing wall and Front Slab edge design	350	%Kg	12,766.85	44,684		
	<u>N.T.U Logo</u>						
19	P/F of stainless steel Word (Size of Word 12"x9") and Space 11" Among word fix in vertical and Horizontal Postation, fixing with steel screws and rawal bolt as required by the Consultant and Clint complete in all respect as approved by the Engineer Incharge Corian CNC	1	P-Job	40,000.00	40,000		

Memar Associates
16/70

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
20	P/F Univeristy Logo (4'x4') fixing with screws and rawal bolt as required by the Clint complete in all respect as approved by the Engineer Incharge. Corian CNC Cut letter "(RESIDENTIAL BLOCK)"	1	P-Job	40,000.00	40,000		
	<u>Doors and Windows</u> (Continued)						
	<u>Door & Window Hardware</u>						
	<u>Hardware set, fixing to PVC doors, complete</u>						
A	Hardware Set	6	No.	350.00	2,100		
	<u>Hardware set, fixing to Window , complete</u>						
A	Hardware Set	13	No.	400.00	5,200		
	<u>Hardware set, fixing to timber doors, complete</u>						
C	Hardware Set	18	No.	550.00	9,900		
	<u>Mirrors</u>						
	<u>Frameless mirror , fixing in position, complete</u>						
D	Facial mirror 3'X4' Size (If required in Door) fixing in Kitchen	3	No.	1,400.00	4,200		
	<u>Doors and Windows</u> (Continued)						
	<u>Door & Window Painting and Polshing</u>						
21	Painting doors and windows, any type on new surface 3 coats.	660	% Sft	1,289.35	8,510		
22	French polishing complete: on new work	660	% Sft	2,806.65	18,524		
	<u>Internal Finishes</u>						
	<u>Floor Finishes</u>						
1	<u>S/filling sand under floor or plugging into wells.</u>	1,117	%Cft	1,940.90	21,680		
2	Dry rammed brick or stone ballast 1-1/2" to 2" gauge under floor.	1,692	%Cft	3,932.30	66,535		
3	P/L, Plain cement concrete (1:2:4) complete in all respects.	824	%Cft	22,154.60	182,554		
	<u>Floor tiles and accessories set on levelling screed (measured separately) as described in Specifications and shown on Drawings, including adhesive, grouting, and pointing up joints, fixing in position, complete</u>						

Memar Associates

17/70

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
4	Providing and laying Porcelain Tiles Flooring 16"x16"x3/8" light colour laid in white cement and matching pigment over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment complete in all respect. (Master DWV Series class SB or Equivalent)	2,480	P-Sft	196.00	486,080		
5	Providing and laying Porcelain Tiles Dado/Skirting 16"x16"x3/8" light colour laid in white cement and matching pigment over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment complete in all respect. (Master DWV Series class SB or Equivalent)	536	P-Sft	208.00	111,488		
	<u>Dimension Stone Tile</u> <u>Threshold set on and including bedding as described in Specifications and shown on Drawings, including adhesive, grouting, and pointing up joints, fixing in position, complete</u>						
6	Granite threshold, 11" wide	22	Each	1,000.00	22,000		
7	Providing and laying Ceramic Tiles for Floor size 8"x24"x3/8" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer Incharge. (MASTER BELLO or Equivalent)	357	P-Sft	148.00	52,836		
8	Providing and laying Glazed Ceramic Tiles Dado / Skirting size 8"x24"x3/8" laid over 1/2" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer Incharge. (MASTER BELLO or Equivalent)	1,318	P-Sft	162.00	213,516		
9	P/L, Master Ceramic tile size 8"x24" shaded light colour / printed i/c border skirting over 3/4" thick and filling joints with White cement complete in all respect as approved by the Engineer Incharge. (Master Bello / Equivalent)	222	P-Sft	190.00	42,180		
10	P/F 3/4" thick Pre-Polished marble slab China Verona uniform texture full width area above 3 Sft laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges complete in all respect as approved / directed by the Engineer Incharge. (for Stairs Steps).	418	P-Sft	473.00	197,714		
11	P/L floor of Marble Plates of China Verona uniformed texture size 12"x12"x3/4" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement i/c matching pigment and chemical polishing complete in all respect as approved & directed by the Engineer Incharge.	688	P-Sft	208.00	143,104		

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	Roof Finishes <u>Cement sand plaster to concrete / Under Roof as described in Specifications, finished to receive paint finish, including corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction internally, all accessories and the like, fixing in position, complete</u>						
12	3/8" thick cement plaster plaster 1:3 under soffits of R.C.C roof slab only. Internal Finishes (Continued) Wall Finishes <u>Cement sand plaster to concrete / Brickwork as described in Specifications, finished to receive paint finish, including corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction internally, all accessories and the like, fixing in position, complete</u> To internal walls	3,384	%Sft	2,076.50	70,269		
13	1/2" thick cement sand plaster (1:4) upto 20' height. External Finishes Wall Finishes <u>Cement sand plaster to concrete / Brickwork as described in Specifications, finished to receive paint finish, including groove, corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction externally, all accessories and the like, fixing in position, complete</u>	15,366	%Sft	1,835.60	282,058		
15	To Plinth Proction & External walls (Iner and outer) 1/2" thick cement sand plaster (1:4) upto 20' height.	8,810	%Sft	1,835.60	161,716		
16	Providing and fixing Envicrete Slate Stone Size 390mmx190mmx90mm fixing with dheseive Material on Wall, including groove, corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction externally, all accessories and the like, fixing in position, complete as Approved by Engineer Incharge.	634	P-Sft	240.00	152,160		
	External Floor Finishes						
17	S/filling sand under floor or plugging into wells.	189	%Cft	1,940.90	3,668		
18	Dry rammed brick or stone ballast 1-1/2" to 2" gauge under floor.	285	%Cft	3,932.30	11,207		
19	Providing and fixing marble strip of any shade for dividing the mosaic flooring into panels size 1 1/2" x 3/8"	875	P-Rft	6.60	5,775		

Mohamed Associates
19/70

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
20	P/L, Mosaic flooring consisting of ½" thick Mosaic topping of one part of cement and marble powder in the ratio of 3:1 and 2 part of marble chips laid over 1" thick floor (1:2:4) cement concrete including rubbing polishing complete with using grey cement 1½" thick	570	%Sft	10,002.10	57,012		
21	P/L grey cement skirting or dado 3/8" thick including rounding of corner and straight ening of top edge and finishing to smooth surface afterplastering 1:2 cement, sand mortar	127	%Sft	10,859.00	13,791		
	<u>Internal & External Finishes</u> (Continued)						
	<u>Wall & Roof Finishes</u> (Continued)						
	<u>Distemper & Painting</u>						
	<u>Prepare, prime and apply paints and coatings to various internal wall surfaces as described in Specification including, accessories and the like, all as shown on Drawings, complete</u>						
22	Plastic Emulsion ICI/Nippon Three coats on new surface with finishing	15,366	P-Sft	23.00	353,418		
23	Painting doors and windows, any type on new surface 3 coats.	7,683	%Sft	1,289.35	99,061		
24	Providing & applying "Rock Wall" over smooth plaster for external walls finishes after proper preparing of surface as per approved sample complete in all respect.	2,756	%Sft	2,600.00	71,656		
25	Providing & applying seamless Water Resistant coating of (Seika/Ab-Pak/Pagel) admixtures over exterior finish to prevent it from weather resistant as per direction of engineer in charge.	2,756	%Sft	2,800.00	77,168		
26	Anti-fungal/protective paint on plastered wall above false ceiling	1,537	%Sft	1,600.00	24,592		
	<u>Internal Finishes</u> (Continued)						
	<u>Ceiling Finishes</u>						
	<u>Gypsum Board Assemblies</u>						
	<u>Suspended ceiling system as described in Specifications and shown on Drawings, including accessories, suspension system, trims and the like, fixing in position, complete</u>						
27	P/F, False ceiling made of plaster of Paris ornamental stepped design hanged with steel wire over lapped with jute mix material for strengthening / binding with nails fixed in ceiling i/c emulsion painting and polishing as approved by the Engineer Incharge.						

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

GROUND FLOOR PART -A
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	Only Rooms Kitchen,Living and Lobby <u>Plaster Gola</u>	2,109	P-Sft	105.00	221,445		
28	P/L of Plaster of Paris gola 6"wide size with nails, screws rawal plug, emulsion painting complete as approved by the Engineer Incharge. <u>Roof Panelling</u>	774	P-Rft	85.00	65,790		
29	Providing And Fixing Roof Panelling Of Approved Colour And Design Comprising of 1 "Thick Deodar Wood Panned Sheet With Gola At Top/Corner As Per Design Shown In Drawing Complete In All Respect As Approved By The Engineer Incharge. <u>Painting</u> <u>Prepare, prime and apply paints and coatings to various internal soffits as described in Specifications and shown on Drawings, including skim coat, complete</u>	120	P-Sft	280.00	33,600		
30	Anti-fungal/protective paint on bare concrete slab soffits above false ceiling <u>Kitchen Units</u> <u>Kitchen units with countertops as described in Specifications including decorations, splashback, ironmongery, accessories, fixings and the like, all as shown on Drawings, fixing in position, complete</u>	2,109	%Sft	1,600.00	33,744		
1	Provision of kitchen Counter consisting of 3' height of counter with marble slab 3/4" thick china verona with fixed M.S. angle iron holding around complete with Lacquer painting Burgandy colour complete in all respect as approved by Engineer Incharge.	64	P-Sft	444	28,416		
Ground Floor Total To Summary					PK Rs. 16,076,621		

Memar Associates

NTU FOREIGN FACULTY APARTMENTS
M.ABSTRACT OF COST

SUMMARY

(BUILDING PORTATION)

Item	Summary	Amount PK.Rs.
	FIRST FLOOR PART -B	9,190,308
TOTAL Carried to Grand Summary		PK Rs. 9,190,308

Memar Associates

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Masonry Works</u>						
	<u>Internal & External</u>						
1	Pacca brick work in c/s mortar 1:6 in First.F	5,602	% Cft	18,845.00	1,055,697		
2	Pacca brick work in c/s mortar 1:4 in First.F	634	% Cft	19,681.65	124,782		
3	Add extra labour on item No. 1& 2 for brick work in first floor	6,236	% Cft	804.40	50,162		
	<u>Cast In-Place Concrete</u>						
	<u>Superstructure</u>						
	<u>RCC in roof slab, beams, column, lintels</u> <u>girder & other structural member laid in situ /</u> <u>precast laid in position in prestressed</u> <u>member complete in all respect type 'B'</u> <u>nominal mixture (1: 1½: 3).</u>						
1	In column Up F.F (with extra Labour F.F)	502	P-Cft	403.60	202,607		
	<u>RCC in roof slab, beams, column, lintels</u> <u>girder & other structural member laid in situ /</u> <u>precast laid in position in prestressed</u> <u>member complete in all respect type 'C'</u> <u>nominal mixture (1:2:4).</u>						
2	In Roof Slab, Opening, Beam etc	2,897	P-Cft	352.35	1,020,758		
A	Extra labour for R.C. concrete in 2nd and subsequent storeys	2,897	P-Cft	23.50	68,080		
3	Extra cost for labour & shuttering for making ornamental moulding and Design as per drawing roof, Enterance and window shade complete as shown in the drawing as approved by the Engineer Incharege	190	P-Sft	110.00	20,900		
4	Making 1" wide Groves in Concrete Finish on walls as per shown in Drawings	1	P-Job	8,000.00	8,000		
5	Envicrete Split Blocks Front side at Edge of Building (3 No' Corner) Horizantly as per shown in Drawings	1	P-Job	12,000.00	12,000		
	<u>Metal , Fabrications</u>						

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastening, cost of binding wire and labour charges for binding of steel inforcement (also includes the removal of rust from bars), 60 Grade (Karachi Built)</u>						
1	In Columns	3,643	% Kg	11,650.45	424,426		
2	In Roof Slab	13,141	% Kg	11,650.45	1,530,986		
	<u>Waterproofing to Superstructure</u>						
	<u>1/2"thick cement plaster (1:3) with 14 Lbs % Sft bitumen and polythene sheet 500 gauge.</u>						
3	Top of Walls before Concrete Slab Protection board (assumed)	585	% Sft	2,980	17,435		
	<u>Doors and Windows</u>						
	<u>Doors and Frames</u>						
1	P/F, mild steel chowkat of doors, windows, C.window, etc. i/c holdfast, making and threading holes for hinges, etc. complete M.S. angle iron 1½"x 1½"x ¼" welded with M.S. flat 2"x ¼"	305	P-Sft	155.30	47,367		
	<u>Door handles, ironmongery, fixings, accessories and the like, all as described in Specifications and shown on Drawings, fixing in position, complete</u>						
2	Providing and fixing 1½" (40 mm) thick deodar wood panelled or panelled and glazed, doors and windows,etc. complete in all respects	305	P-Sft	558.85	170,449		
3	Providing and fixing of 2" thick decorative deodar wood panelled door i/c deodar wood chowkat and brass fitting complete as per C.A drawing and as approved by the Engineer Incharge.	84	P-Sft	1,855.00	155,820		
4	P/F, handle door lock (Best quality) with face plate 2" Tee 2-1/2" wide 8" to 10" long C.P on both side complete in all respects and as approved by the Engineer Incharge.	12	No.	2,200.00	26,400		
5	P/F, brass sliding bolts 12" long.	10	No.	383.55	3,836		
6	P/F, brass sliding bolts 10" long.	5	No.	186.75	934		

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

FIRST FLOOR PART- B
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
A	<p>P.F Kickplate Consisting Of Glaze Aluminum Suitable Size Fix With All Necessary Hardware's Complete In All Respect as per direction of Engineer Incharge.</p> <p>Doors and Windows (Continued)</p> <p>Glazed Windows</p> <p><u>Window handles, ironmongery, fixings, accessories and the like, all as described in Specifications and shown on Drawings, fixing in position, complete</u></p>	20	Each	1,500.00	30,000		
7	<p>Providing and fixing all types of glazed aluminium windows of anodized bronze color partly fixed and partly sliding using deluxe section of M.S Al-cop of Pakistan cables having frame size 100mm x 30mm x 1.6mm using frame (DC26) at bottom (DC30) at top and side leaf frame size 60mmx23mmx1.6mm (M24) at top and bottom and size 45mmx25mmx1.6mm (M28) at centre and size 45mm x 25mmx1.6mm (M23) at sides jali leaf frame (D29) size 43mm x 13mm x 1.6mm all section of 1.6mm thick approved standard latches, wheel stopper, brush channel angle joint and hardware etc as per design and complete in all respect as approved by the Engineer Incharge. (all section 1.6 mm thick) Flash Openable.</p> <p>Doors and Windows (Continued)</p> <p>Window & Door Grill</p>	303	P-Sft	1,080.00	327,240		
8	<p>Providing and fixing 3/8" M.S. square bar 'grill including 1-1/4"x3/16" M.S. Flat Frame 'of windows of approved design including painting 3 coat complete in all respect.</p>	303	P-Sft	245.00	74,235		
9	<p>Providing and fixing & Fixing Geometric Pattern MS Grill of pipe having box section 3/4"x3/4"including 'of windows of approved by Drawings including painting 3 coat complete in all respect. (Changing required by the Clint if Required)</p> <p>Wardrobe,Cabinet</p>	60	P-Sft	327.00	19,620		

25/70

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
10	Providing and fixing wooden box type laminated wardrobe 15" deep including ¾" thick boxing and shelves, hanger rods, hard board back drawers, brass fittings, locking arrangements, handles, internal bolts, shoe rods, etc. including three coats of enamel paint Deodar wood boxing, and laminated sheet shelves and leaves, etc.	362	P-Sft	933.90	338,072		
11	P/F Vin board cabinet ¾" thick with drawer 3" deep in kitchen i/c termite proofing and polishing with synthetic enamel as specified with handl hinges screw etc complete 2 ft deep with back. Al Noor Lamination Of Code 3044	186	P-Sft	667.85	124,220		
12	P/F curtain railing to door and window comprising of T.O. S.O - E.L.I.T.E Japan made supriour type of railing are equilant fixed over 4"x3/4" deodar wood strip i/c painting.	549	P-Sft	128.70	70,656		
13	Providing and fixing ornamental wooden architrave 3" x (1½" tapered to ¼") all along the door frame complete in all respect Deodar wood architrave <u>Stair & Terrace Railing</u> (Continued) <u>Stair</u>	342	P-Rft	39.70	13,577		
14	Providing and fixing at any floor 2'-9" high stair railing 2" dia stainless steel brushed (dull finish) pipe (No. 304) on top fixed with 1-1/2"x3'-8" S.S flat baluster, having 3 nos 3/8" dia S.S solid rods placed at equal distance fixed with the help of rowel bolts, including the cost of S.S studs, complete in all respect as approved by the consultant.	36	P-Rft	1,650.00	59,400		
15	Provide & Fix 2" dia stainless steel pipe (No. 304) 14 SWG (Non Magnetic) hand rail including stainless steel flange screwed with rawal plug as per Hand rail & Baluster Fixing detail (typical), complete in all respect as directed by engineer in charge.	16	P-Rft	475.00	7,600		
16	P/F Stainless steel Tubelor pipe 16-swg terrace / stair railing consisting of 2" dia top and newel post, 1-1/2" dia intermediate vertical sports, and 3/4" dia horizontal netting across the vertical member 3 rows i/c holdfast base plate carriage, welding, drilling, nailing, screws, rawal bolts etc: where necessary complete in all respect as approved by the Engineer Incharge.	77	P-Rft	596.90	45,961		

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

FIRST FLOOR PART- B
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
17	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, revitting, handling, assembling and fixing, but excluding erection in position For jointing wall air cavity <u>Doors and Windows</u> (Continued) <u>Door & Window Hardware</u> Hardware set, fixing to Window , complete	250	%Kg	12,766.85	31,917		
A	Hardware Set Hardware set, fixing to timber doors, complete	15	No.	400.00	6,000		
C	Hardware Set <u>Mirrors</u> Frameless mirror , fixing in position, complete	20	No.	550.00	11,000		
D	Facial mirror 3'X4' Size (If required in Door) fixing in Kitchen	3	No.	1,400.00	4,200		
	<u>Doors and Windows</u> (Continued) <u>Door & Window Painting and Polishing</u>						
18	Prepering surface and painting with emulsion paint on new surface 3 coats.	610	% Sft	1,289.35	7,865		
19	French polishing complete: on new work	610	% Sft	2,806.65	17,121		
	<u>Internal Finishes</u> <u>Floor Finishes</u>						
1	Dry rammed brick or stone ballast 1-1/2" to 2" gauge under floor.	1,692	%Cft	3,932.30	66,535		
2	P/L, Plain cement concrete (1:2:4) complete in all respects Floor tiles and accessories set on levelling screed (measured separately) as described in Specifications and shown on Drawings, including adhesive, grouting, and pointing up joints, fixing in position, complete	824	%Cft	22,154.60	182,554		

Memar Associates

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

FIRST FLOOR PART- B
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
3	Providing and laying Porcelain Tiles Flooring 16"x16"x3/8" light colour laid in white cement and matching pigment over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment complete in all respect. (Master DWV Series class SB or Equivalent)	2,480	P-Sft	196	486,080		
4	Providing and laying Porcelain Tiles Dado/Skirting 16"x16"x3/8" light colour laid in white cement and matching pigment over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment complete in all respect. (Master DWV Series class SB or Equivalent)	536	P-Sft	208	111,488		
	<u>Dimension Stone Tile</u>						
	<u>Threshold set on and including bedding as described in Specifications and shown on Drawings, including adhesive, grouting, and pointing up joints, fixing in position, complete</u>						
5	Granite threshold, 11" wide	26	Each	1,000	26,000		
6	Providing and laying Ceramic Tiles for Floor size 8"x24"x3/8" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer Incharge. (MASTER BELLO or Equivalent)	357	P-Sft	148	52,836		
7	Providing and laying Glazed Ceramic Tiles Dado / Skirting size 8"x24"x3/8" laid over 1/2" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer Incharge. (MASTER BELLO or Equivalent)	1,318	P-Sft	162	213,516		
8	P/L, Master Ceramic tile size 8"x24" shaded light colour / printed i/c border skirting over 3/4" thick and filling joints with White cement complete in all respect as approved by the Engineer Incharge. (Master Bello / Equivalent)	222	P-Sft	190	42,180		

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
9	P/F 3/4" thick Pre-Polished marble slab China Verona uniform texture full width area above 3 Sft laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges complete in all respect as approved / directed by the Engineer Incharge. (for Stairs Steps)	418	P-Sft	473	197,714		
10	P/L floor of Marble Plates of China Verona uniformed texture size 12"x12"x3/4" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement i/c matching pigment and chemical polishing complete in all respect as approved & directed by the Engineer Incharge. <u>Internal Finishes</u> (Continued) <u>Roof Finishes</u> Cement sand plaster to concrete / Under Roof as described in Specifications, finished to receive paint finish, including corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction internally, all accessories and the like, fixing in position, complete	688	P-Sft	208	143,104		
11	3/8" thick cement plaster plaster 1:3 under soffits of R.C.C roof slab only. <u>Internal Finishes</u> (Continued) <u>Wall Finishes</u> Cement sand plaster to concrete / Brickwork as described in Specifications, finished to receive paint finish, including corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction internally, all accessories and the like, fixing in position, complete To internal walls	3,384	%Sft	2,076.50	70,269		
12	1/2" thick cement sand plaster (1:4) upto 20' height. <u>External Finishes</u> <u>Wall Finishes</u> Cement sand plaster to concrete /Brickwork as described in Specifications, finished to receive paint finish, including groove, corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction externally, all accessories and the like, fixing in position, complete To external walls	15,366	%Sft	1,835.60	282,058		

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

FIRST FLOOR PART- B
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
13	1/2"thick cement sand plaster (1:4) upto 20' height.	3,390	%Sft	1,835.60	62,227		
14	Providing and fixing Envicrete Slate Stone Size 390mmx190mmx90mm fixing with dheseive Material on Wall,including groove, corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction externally, all accessories and the like, fixing in position, complete as Approved by Engineer Incharge. <u>Internal & External Finishes</u> (Continued) <u>Wall & Roof Finishes</u> (Continued) <u>Distemper & Painting</u> <u>Prepare, prime and apply paints and coatings to various internal wall surfaces as described in Specification including, accessories and the like, all as shown on Drawings, complete</u>	622	P-Sft	240	149,280		
15	Plastic Emulsion ICI/Nippon Three coats on new surface with finishing	15,366	P-Sft	23.00	353,418		
16	Preparing surface and painting with emulsion paint on new surface 3 coats.	7,683	%Sft	1,289.35	99,061		
17	Providing & applying "Rock Wall" over smooth plaster for external walls finishes after proper preparing of surface as per approved sample complete in all respect.	2,756	%Sft	2,600.00	71,656		
18	Providing & applying seamless Water Resistant coating of (Seika/Ab-Pak/Pagel) admixtures over exterior finish to prevent it from weather resistant as per direction of engineer in charge.	2,756	%Sft	2,800	77,168		
19	Anti-fungal/protective paint on plastered wall above false ceiling <u>Internal Finishes</u> (Continued) <u>Ceiling Finishes</u>	1,537	%Sft	1,600	24,592		
	<u>Gypsum Assemblies</u> <u>Suspended ceiling system as described in Specifications and shown on Drawings, including accessories, suspension system, trims and the like, fixing in position, complete</u>						

Went Associates
30/70

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
20	P/F, False ceiling made of plaster of Paris ornamental stepped design hanged with steel wire over lapped with jute mix material for strengthening / binding with nails fixed in ceiling i/c emulsion painting and polishing as approved by the Engineer Incharge. Only Rooms Kitchen,Living and Lobby <u>Plaster Gola</u>	2,109	P-Sft	105	221,445		
21	P/L of Plaster of Paris gola 6"wide size with nails, screws rawal plug, emulsion painting complete as approved by the Engineer Incharge.	774	P-Rft	85	65,790		
22	Providing And Fixing Roof Panelling Of Approved Colour And Design Comprising of 1 "Thick Deodar Wood Panned Sheet With Gola At Top/Corner As Per Design Shown In Drawing Complete In All Respect As Approved By The Engineer Incharge. <u>Kitchen Units</u> <u>Kitchen units with countertops as described in Specifications including decorations, splashback, ironmongery, accessories, fixings and the like, all as shown on Drawings, fixing in position, complete</u>	120	P-Sft	280.00	33,600		
1	Provision of kitchen Counter consisting of 3' height of counter with marble slab 3/4" thick china verona with fixed M.S angle iron holding around complete with Lacquer painting Burgandy colour complete in all respect as approved by Engineer Incharge.	64	P-Sft	444	28,416		
First Floor Total To Summary					PK Rs. 9,190,308		

Mernar Associates

NTU FOREIGN FACULTY APARTMENTS
M.ABSTRACT OF COST

SUMMARY

(BUILDING PORTATION)

Item	Summary	Amount PK.Rs.
	2ND FLOOR PART - C	10,113,523
TOTAL Carried to Grand Summary		PK Rs. 10,113,523

Memar Associates

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Masonry Works</u>						
	<u>Internal & External</u>						
1	Pacca brick work in c/s mortar 1:6 in 2nd.F	6,046	% Cft	18,845.00	1,139,369		
2	Pacca brick work in c/s mortar 1:4 in 2nd.F	950	% Cft	19,681.65	186,976		
3	Add extra labour for brick work in 2nd floor	6,996	% Cft	1,787.00	125,019		
	<u>Cast In-Place Concrete</u>						
	<u>Superstructure</u>						
	<u>RCC in roof slab, beams, column, lintels</u> <u>girder & other structural member laid in situ /</u> <u>precast laid in position in prestressed</u> <u>member complete in all respect type 'B'</u> <u>nominal mixture (1: 1½: 3).</u>						
1	In column Up 2nd.F	502	P-Cft	427.10	214,404		
	<u>RCC in roof slab, beams, column, lintels</u> <u>girder & other structural member laid in situ /</u> <u>precast laid in position in prestressed</u> <u>member complete in all respect type 'C'</u> <u>nominal mixture (1:2:4).</u>						
2	In Roof Slab, Opening, Beam etc	3,500	P-Cft	352.35	1,233,225		
A	Extra labour for R.C. concrete in 3rd and subsequent storeys	3,500	P-Cft	47.00	164,500		
3	Extra cost for labour & shuttering for making ornamental moulding and Design as per drawing roof, Enterance and window shade complete as shown in the drawing as approved by the Engineer Incharege	190	P-Sft	135.00	25,650		
4	Making 1" wide Groves in Concrete Finish on walls as per shown in Drawings	1	P-Job	1,000.00	1,000		
5	Envicrete Split Blocks Front side at Edge of Building (3 No' Corner) Horizantly as per shown in Drawings	1	P-Job	12,000.00	12,000		
	<u>Metal , Fabrications</u>						
	<u>Fabrication of mild steel reinforcement for</u> <u>cement concrete, incuding cutting, bending,</u> <u>laying in position, making joints and fastening,</u> <u>cost of binding wire and labour charges for</u> <u>binding of steel inforcement (also includes the</u> <u>removal of rust from bars). 60 Grade (Karachi</u> <u>Built)</u>						

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
1	In Columns	3,643	% Kg	11,650.45	424,426		
2	In Roof Slab	15,876	% Kg	11,650.45	1,849,625		
	<u>Waterproofing to Superstructure</u>						
	<u>1/2"thick cement plaster (1:3) with 14 Lbs % Sft bitumen and polythene sheet 500 gauge.</u>						
3	Top of Walls before Concrete Slab Protection board (assumed)	603	% Sft	2,980	17,971		
	<u>Doors and Windows</u>						
	<u>Doors and Frames</u>						
1	P/F, mild steel chowkat of doors, windows, C.window, etc. i/c holdfast, making and threading holes for hinges, etc. complete M.S. angle iron 1½"x 1½"x ¼" welded with M.S. flat 2"x ¼" "	207	P-Sft	155.30	32,147		
	<u>Door handles, ironmongery, fixings, accessories and the like, all as described in Specifications and shown on Drawings, fixing in position, complete</u>						
2	Providing and fixing 1½" (40 mm) thick deodar wood panelled or panelled and glazed, doors and windows,etc. complete in all respects	207	P-Sft	558.85	115,682		
3	Providing and fixing of 2" thick decorative deodar wood panelled door i/c deodar wood chowkat and brass fitting complete as per C.A drawing and as approved by the Engineer Incharge.	28	P-Sft	1,855.00	51,940		
4	P/F, handle door lock (Best quality) with face plate 2" Tee 2-1/2" wide 8" to 10" long C.P on both side complete in all respects and as approved by the Engineer Incharge.	10	No.	2,200.00	22,000		
5	P/F, brass sliding bolts 12" long.	14	No.	383.55	5,370		
6	P/F, brass sliding bolts 10" long.	6	No.	186.75	1,121		
A	P.F Kickplate Consisting Of Glaze Aluminum Suitable Size Fix With All Necessary Hardware's Complete In All Respect as per direction of Engineer Incharge.	18	Each	1,500.00	27,000		

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Doors and Windows</u> (Continued)						
	<u>Glazed Windows</u> <u>Window handles, ironmongery, fixings, accessories and the like, all as described in Specifications and shown on Drawings, fixing in position, complete</u>						
7	Providing and fixing all types of glazed aluminium windows of anodized bronze color partly fixed and partly sliding using deluxe section of M.S Al-cop of Pakistan cables having frame size 100mm x 30mm x 1.6mm using frame (DC26) at bottom (DC30) at top and side leaf frame size 60mmx23mmx1.6mm (M24) at top and bottom and size 45mmx25mmx1.6mm (M28) at centre and size 45mm x 25mmx1.6mm (M23) at sides jali leaf frame (D29) size 43mm x 13mm x 1.6mm all section of 1.6mm thick approved standard latches, wheel stopper, brush channel angle joint and hardware etc as per design and complete in all respect as approved by the Engineer Incharge. (all section 1.6 mm thick) Flash Openable	309	P-Sft	1,080.00	333,720		
	<u>Doors and Windows</u> (Continued)						
	<u>Window & Door Grill</u>						
8	Providing and fixing 3/8" M.S. square bar 'grill including 1-1/4"x3/16" M.S. Flat Frame 'of windows of approved design including painting 3 coat complete in all respect.	309	P-Sft	248.00	76,632		
9	Providing and fixing & Fixing Geometric Pattern MS Grill of pipe having box section 3/4"x3/4"including 'of windows of approved by Drawings including painting 3 coat complete in all respect. (Changing required by the Clint if Required)	60	P-Sft	327.00	19,620		
	<u>Wardrobe,Cabinet</u>						

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
10	Providing and fixing wooden box type laminated wardrobe 15" deep including ¾" thick boxing and shelves, hanger rods, hard board back drawers, brass fittings, locking arrangements, handles, internal bolts, shoe rods, etc. including three coats of enamel paint Deodar wood boxing, and laminated sheet shelves and leaves. etc.	465	P-Sft	933.90	434,264		
11	P/F Vin board cabinet ¾" thick with drawer 3" deep in kitchen i/c termite proofing and polishing with synthetic enamel as specified with hand hinges screw etc complete 2 ft deep with back. Al Noor Lamination Of Code 3044	62	P-Sft	667.85	41,407		
12	P/F curtain railing to door and window comprising of T.O. S.O - E.L.I.T.E Japan made supriour type of railing are equilant fixed over 4"x3/4" deodar wood strip i/c painting.	544	P-Sft	128.70	70,013		
13	Providing and fixing ornamental wooden architrave 3" x (1½" tapered to ¼") all along the door frame complete in all respect Deodar wood architrave <u>Stair & Terrace Railing</u> (Continued) <u>Stair</u>	385	P-Rft	39.70	15,285		
14	Providing and fixing at any floor 2'-9" high stair railing 2" dia stainless steel brushed (dull finish) pipe (No. 304) on top fixed with 1-1/2"x3'-8" S.S flat baluster, having 3 nos 3/8" dia S.S solid rods placed at equal distance fixed with the help of rowel bolts, including the cost of S.S studs, complete in all respect as approved by the consultant.	36	P-Rft	1,650.00	59,400		
15	Provide & Fix 2" dia stainless steel pipe (No. 304) 14 SWG (Non Magnetic) hand rail including stainless steel flange screwed with rawal plug as per Hand rail & Baluster Fixing detail (typical), complete in all respect as directed by engineer in charge.	16	P-Rft	475.00	7,600		
16	P/F Stainless steel Tubelor pipe 16-swg terrace / stair railing consisting of 2" dia top and newel post, 1-1/2" dia intermediate vertical sports, and 3/4" dia horizontal netting across the vertical member 3 rows i/c holdfast base plate carriage, welding, drilling, nailing, screws, rawal bolts etc: where necessary complete in all respect as approved by the Engineer Incharge.	77	P-Rft	596.90	45,961		

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
17	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, revitting, handling, assembling and fixing, but excluding erection in position <u>Doors and Windows</u> (Continued) <u>Door & Window Hardware</u> <u>Hardware set, fixing to Window , complete</u>	250	%Kg	12,766.85	31,917		
A	Hardware Set <u>Hardware set, fixing to timber doors, complete</u>	21	No.	400.00	8,400		
C	Hardware Set	12	No.	550.00	6,600		
	<u>Mirrors</u> <u>Frameless mirror , fixing in position, complete</u>						
D	Facial mirror 3'X4' Size (If required in Door) fixing in Kitchen <u>Doors and Windows</u> (Continued) <u>Door & Window Painting and Polishing</u>	4	No.	1,400.00	5,600		
18	Preparing surface and painting with emulsion paint on new surface 3 coats.	414	% Sft	1,289.35	5,338		
19	French polishing complete: on new work <u>Internal Finishes</u> <u>Floor Finishes</u>	414	% Sft	2,806.65	11,620		
1	Dry rammed brick or stone ballast 1-1/2" to 2" gauge under floor.	1,829	%Cft	3,932.30	71,922		
2	P/L, Plain cement concrete (1:2:4) complete in all respects.	611	%Cft	22,154.60	135,365		
A	Extra labour for laying concrete plain or reinforced above 20' upto 40' height <u>Floor tiles and accessories set on levelling screed (measured separately) as described in Specifications and shown on Drawings, including adhesive, grouting, and pointing up joints, fixing in position, complete</u>	611	%Cft	2,504.85	15,305		

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
3	Providing and laying Porcelain Tiles Flooring 16"x16"x3/8" light colour laid in white cement and matching pigment over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment complete in all respect. (Master DWV Series class SB or Equivalent)	2,310	P-Sft	196.00	452,760		
4	Providing and laying Porcelain Tiles Dado/Skirting 16"x16"x3/8" light colour laid in white cement and matching pigment over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment complete in all respect. (Master DWV Series class SB or Equivalent)	235	P-Sft	208.00	48,880		
	<u>Dimension Stone Tile</u> <u>Threshold set on and including bedding as described in Specifications and shown on Drawings, including adhesive, grouting, and pointing up joints, fixing in position, complete</u>						
5	Granite threshold, 11" wide	16	Each	1,000.00	16,000		
6	Providing and laying Ceramic Tiles for Floor size 8"x24"x3/8" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer Incharge. (MASTER BELLO or Equivalent)	801	P-Sft	148.00	118,548		
7	Providing and laying Glazed Ceramic Tiles Dado / Skirting size 8"x24"x3/8" laid over 1/2" thick cement sand mortar (1:2) i/c filling joints in white cement and matching pigment i/c cutting charges complete in all respect as approved & directed by the Engineer Incharge. (MASTER BELLO or Equivalent)	1,733	P-Sft	162.00	280,746		
8	P/L, Master Ceramic tile size 8"x24" shaded light colour / printed i/c border skirting over 3/4" thick and filling joints with White cement complete in all respect as approved by the Engineer Incharge. (Master Bello / Equivalent)	253	P-Sft	190.00	48,070		
9	P/F 3/4" thick Pre-Polished marble slab China Verona uniform texture full width area above 3 Sft laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges complete in all respect as approved / directed by the Engineer Incharge. (for Stairs Steps)	446	P-Sft	473.00	210,958		

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
10	<p>Providing and laying floor of Marble Plates of China Verona uniformed texture size 12" x 12"x3/4" laid over 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement i/c matching pigment and chemical polishing complete in all respect as approved & directed by the Engineer Incharge.</p> <p>Internal Finishes (Continued)</p> <p>Roof Finishes</p> <p><u>Cement sand plaster to concrete / Under Roof as described in Specifications, finished to receive paint finish, including corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction internally, all accessories and the like, fixing in position, complete</u></p>	688	P-Sft	208.00	143,104		
11	<p>3/8" thick cement plaster plaster 1:3 under soffits of R.C.C roof slab only.</p>	3,657	%Sft	2,076.50	75,938		
12	<p>Providing and fixing EnviStone from Envicrete Split Block Threshold size 390mmx190mmx90mm above Parapet wall laid over 1" edge out side wall joint with 3/4" thick cement sand mortar (1:2) i/c filling joints in white cement & matching pigment i/c beveling charges on exposed edges complete in all respect as approved / directed by the Engineer Incharge.</p> <p>Internal Finishes (Continued)</p> <p>Wall Finishes</p> <p><u>Cement sand plaster to concrete / Brickwork as described in Specifications, finished to receive paint finish, including corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction internally, all accessories and the like, fixing in position, complete</u> To internal walls</p>	302	P-Sft	190.00	57,380		
13	<p>1/2" thick cement sand plaster (1:4) upto 20' height.</p> <p>External Finishes</p> <p>Wall Finishes</p>	10,141	%Sft	1,835.60	186,148		

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
	<u>Cement sand plaster to concrete /Brickwork as described in Specifications, finished to receive paint finish, including groove, corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction externally, all accessories and the like, fixing in position, complete</u>						
14	To Parapet & external walls 1/2"thick cement sand plaster (1:4) upto 20' height.	4,366	%Sft	1,835.60	80,142		
15	Providing and fixing Envicrete Slate Stone Size 390mmx190mmx90mm fixing with dheseive Material on Wall,including groove, corner beads and plaster stops, plaster metal lath, mesh reinforcements at joints and junction externally, all accessories and the like, fixing in position, complete as Approved by Engineer Incharge. Internal & External Finishes (Continued) Wall & Roof Finishes (Continued) Distemper & Painting <u>Prepare, prime and apply paints and coatings to various internal wall surfaces as described in Specification including, accessories and the like, all as shown on Drawings, complete</u>	735	P-Sft	240.00	176,400		
16	Plastic Emulsion ICI/Nippon Three coats on new surface.	10,141	P-Sft	23.00	233,243		
17	Preparing surface and painting with emulsion paint on new surface 3 coats.	5,071	%Sft	1,289.35	65,376		
18	Providing & applying "Rock Wall" over smooth plaster for external walls finishes after proper preparing of surface as per approved sample complete in all respect.	3,473	%Sft	2,600.00	90,298		
19	Providing & applying seamless Water Resistant coating of (Seika/Ab-Pak/Pagel) admixtures over exterior finish to prevent it from weather resistant as per direction of engineer in charge.	3,473	%Sft	2,800.00	97,244		
20	Anti-fungal/protective paint on plastered wall above false ceiling Internal Finishes (Continued) Ceiling Finishes Gypsum Assemblies	1,014	%Sft	1,600.00	16,224		

40/70

WIRING / ROOFING

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
21	<p><u>Suspended ceiling system as described in Specifications and shown on Drawings, including accessories, suspension system, trims and the like, fixing in position, complete</u></p> <p>P/F, False ceiling made of plaster of Paris ornamental stepped design hanged with steel wire over lapped with jute mix material for strengthening / binding with nails fixed in ceiling i/c emulsion painting and polishing as approved by the Engineer Incharge.</p> <p>Only Rooms Kitchen,Living and Lobby</p> <p>Plaster Gola</p>	2,416	P-Sft	105.00	253,680		
22	<p>P/L of Plaster of Paris gola 6"wide size with nails, screws rawal plug, emulsion painting complete as approved by the Engineer Incharge.</p> <p>Painting of Anti-fungal</p> <p><u>Prepare, prime and apply paints and coatings to various internal soffits as described in Specifications and shown on Drawings, including skim coat, complete</u></p>	789	P-Rft	85.00	67,065		
23	<p>Anti-fungal/protective paint on bare concrete slab soffits above false ceiling</p>	2,416	%-Sft	1,600.00	38,656		
Internal Finishes (Continued)							
Roof Finishes							
1	<p><u>Cement sand Grouting on Roof as described in Specifications, including corner beads and plaster stops,joints and junction internally, all accessories and the like, fixing in position, complete</u></p> <p>Single layer of tile 9"x4-1/2"x1-1/2" laid over 4" earth and 1" mud plaster w/o bhoosa grouted with cement sand (1:3) on top RCC roof slab provided with 34 lbs per % Sft bitumen coating and sand blind over polythene sheet 500 quaae in 3rd floor.</p>	3,669	%Sft	6,760.80	248,054		

NTU FOREIGN FACULTY APARTMENTS
ABSTRACT OF COST

2nd FLOOR PART -C
(BUILDING PORTATION)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Unit	Rate PK Rs.	Amount PK Rs.	Rate PK Rs.	Amount PK Rs.
2	Making Khurra on roof 2'x2'x4" in 3rd floor	6	Each	496.65	2,980		
3	Providing and installing P.V.C. Pipe, of B.S.S. Class 'D' working pressure 3" dia 3rd floor	197	P-Rft	162.20	31,953		
4	Providing and installing P.V.C. bends, of B.S.S. Class 'D' working pressure 3" dia	6	Each	288.25	1,730		
5	Extra labour for each storey above ground, for mosaic conglomerate, tiles, Roof structure	3,669	%Sft	469.65	17,231		
<u>Kitchen Units</u>							
<u>Kitchen units with countertops as described in Specifications including decorations, splashback, ironmongery, accessories, fixings and the like, all as shown on Drawings, fixing in position, complete</u>							
1	Provision of kitchen Counter consisting of 3' height of counter with marble slab 3/4" thick china verona with fixed M.S angle iron holding around complete with Lacquer painting Burgandy colour complete in all respect as approved by Engineer Incharge.	21	P-Sft	444	9,324		
2nd Floor Total				PK Rs.	10,113,523		
To Summary							

Memar Associates

42/70

PLUMBING WORKS ENGINEER'S COST ESTIMATE		
NTU FOREIGN FACULTY APARTMENTS (PART-D)		
Sr. No.	Description	Rate (Rs.)
1	MRS items	374,482
2	Non MRS items	1,054,639
3	Tanks Quantity	963,208
	Total Plumbing Cost (Rs.) Carried to Grand Summary	2,392,329

Memar Associates

PLUMBING WORKS ENGINEER'S COST ESTIMATE (PART -D)

NTU FOREIGN FACULTY APARTMENTS

Sr. No.	1st Jan 2018 to 30th Jun 2018	Description	Engineer Estimate				Contractor Bid	
			Unit.	Quantity	Rate (Rs.)	Amount (Rs.)	Rate (Rs.)	Amount (Rs.)
		Schedule Items (A)						
		FIXTURE FOR SECOND FLOOR						
1	19-1-i	Providing and fitting glazed earthen ware water closet European type, excluding seat and cover:- white.	Each	8	2,187.85	17,503		
2	19-2-i	Providing and fixing, double seat and cover only.						
		i) bakelite	Each	8	334.65	2,677		
3	19-6	Providing and fitting glazed earthen ware wash hand basin of make Rocca, Master or approved equivalent in size 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc.						
		iii) white, with pedestal	Each	8	2,524.45	20,196		
4	19-7	Providing and fixing stainless steel sink with drain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.	Each	2	4,460.85	8,922		
5	19-17	Providing and fixing, chromium plated toilet paper holder.	Each	8	414.95	3,320		
6	19-15	Providing and fixing, chromium plated soap dish.	Each	16	194.35	3,110		
7	19-27	Providing and fixing, chromium plated Tee stop cock. (1/2") dia	Each	28	453.50	12,698		
8	19-18	Providing and fixing, chromium plated towel rail.						
		(3/4") dia	Each	8	359.75	2,878		
9	19-19	Providing and fixing looking glass (22"x16") size, and 5mm thick, first quality.	Each	8	387.80	3,102		
11	19-29	Providing and fixing, chromium plated mixing valve, for wash hand basin, Laundry, sink or shower.	Each	18	1,561.15	28,101		
		FIXTURE FOR 1ST & GROUND FLOOR						
1	19-1-i	Providing and fitting glazed earthen ware water closet European type, excluding seat and cover:- white.	Each	6	2,187.85	13,127		
2	19-2-i	Providing and fixing, double seat and cover only.						
		i) bakelite	Each	6	334.65	2,008		
3	19-6	Providing and fitting glazed earthen ware wash hand basin of make Rocca, Master or approved equivalent in size 56x40 cm (22"x16") including bracket set, waste pipe and waste						
		iii) white, with pedestal	Each	6	2,524.45	15,147		
4	19-7	Providing and fixing stainless steel sink with drain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.	Each	6	4,460.85	26,765		
5	19-17	Providing and fixing, chromium plated toilet paper holder.	Each	6	414.95	2,490		
6	19-15	Providing and fixing, chromium plated soap dish.	Each	12	194.35	2,332		
7	19-27	Providing and fixing, chromium plated Tee stop cock. (1/2") dia	Each	30	453.50	13,605		
8	19-18	Providing and fixing, chromium plated towel rail.						
		(3/4") dia	Each	6	359.75	2,159		

44/70

Memor Associates

PLUMBING WORKS ENGINEER'S COST ESTIMATE (PART -D)

NTU FOREIGN FACULTY APARTMENTS

Sr. No.	1st Jan 2018 to 30th Jun 2018	Description	Engineer Estimate				Contractor Bid	
9	19-19	Providing and fixing looking glass (22"x16") size, and 5mm thick, first quality.	Each	6	387.80	2,327		
11	19-29	Providing and fixing, chromium plated mixing valve, for wash hand basin, Laundry, sink or shower.	Each	18	1,561.15	28,101		
		G.I Piping						
12	23-22-iii	Providing, laying, cutting, jointing, testing and disinfecting G.I. pipeline in trenches, (Cost of sockets, tees, elbows, bends, valves, crosses, unions and plugs, etc. is included in the rates) with socket joints, using G.I pipes of B.S.S. 1387-1967 complete in all respects, with specials and valves. Heavy Duty						
		c) 1" i/d (25 mm) 4.05mm thick	Rft	217	197.70	42,842		
		b) 3/4" i/d (20 mm) 3.25mm thick	Rft	360	132.65	47,714		
		SEWERAGE						
13	21-1	Providing and laying RCC pipe, moulded with cement concrete 1:1.5:3, with spigot socket or collar joint, etc. including cost of reinforcement, confirming to B.S. 5911: Part I: 1981, class "L" including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing, etc. complete.						
		ii) 150 mm (6") i/d	Rft	23	133.90	3,093		
		iii) 225 mm (9") i/d	Rft	117	353.50	41,218		
14	21-17	Providing and fixing 6" thick RCC manhole cover with 3"x3"x1/4" angle iron frame, 22" i/d as per standard drawing STD/PD no. 7 of 1977, complete in all respects.	Per set	7	4,150.00	29,050		
		Sub-Total of MRS items "A" (Rs.)				374,482		
		To Summary						

Memar Associates

45/70

PLUMBING WORKS ENGINEER'S COST ESTIMATE (PART -D)

NTU FOREIGN FACULTY APARTMENTS

Sr. No.	1st Jan 2018 to 30th Jun 2018	Description	Engineer Estimate				Contractor Bid	
			Unit.	Quantity	Rate (Rs.)	Amount (Rs.)	(Rs.)	Amount (Rs.)
		Part-1: WATER SUPPLY						
1	N.S	Providing, fixing, jointing and testing Polypropylene Random (PPR) PN20 pressure pipe for cold, hot and hot water return water as per DIN 8077-8078 for pipes and DIN 16962, PN25 for fittings (polyfusion welded joints) inside building including fittings and specials (sockets, tees, elbows, bends, crosses, reducers, adaptor, plugs and union etc.) supported on walls or suspended from roof slab or run in chases including pipe hangers, supports, cutting and making good the chases and holes, complete in all respects.						
		1" i.d (25 mm)	Rft.	581	62.00	36,010		
		1¼" i.d (32 mm)	Rft.	222	78.00	17,332		
		1½" i.d (40 mm)	Rft.	319	109.00	34,771		
		2" i.d (50 mm)	Rft.	303	176.00	53,240		
		2½" i.d (63 mm)	Rft.	287	254.00	72,923		
		3" i.d (75 mm)	Rft.	272	394.00	107,050		
2	N.S	Providing and installing gate/ball valves of following nominal dia., of approved make, including jointing ,fitting, painting, testing, complete in all respects to match with following PPR pipe diameters.						
		1¼" i.d (32 mm)	Each	7	1,300	9,100		
		1½" i.d (40 mm)	Each	3	1,800	5,400		
		2" i.d (50 mm)	Each	6	2,100	12,600		
		2½" i.d (63 mm)	Each	3	2,400	7,200		
		3" i.d (75 mm)	Each	1	3,600	3,600		
	N.S	Providing and fixing heavy duty non return valve best quality of make "KITZ" (Japan) or "ITALY", complete in all respect as per specifications and drawings.						
		1¼" i.d (32 mm)	Each	7	2,100	14,700		
		2" i.d (50 mm)	Each	5	2,600	13,000		
3	N.S	Providing, fixing , cutting, jointing and testing uPVC piping conforming to ISO 3633:1991 including uPVC fittings with solvent cement jointing, rates include cost of clamping to walls and ceiling , hangers, supports, cutting through walls and providing sleeves through concrete slabs for pipelines and pipe fittings of the following diameter:						
		2" dia	Rft.	145	96.00	13,939		
		3" dia	Rft.	936	126.00	117,949		
		4" dia	Rft.	417	182.00	75,876		
4	N.S	Providing and fixing 4" dia Floor Drain including uPVC P - Trap, Stainless Steel grating including concrete chamber all around.	Each	55	1,350.00	74,250		
	N.S	Providing and fixing CP Muslim Shower including bib cok, CP, complete in all respects	Each	14	3,200.00	44,800		

46/70

Memar Associates

PLUMBING WORKS ENGINEER'S COST ESTIMATE (PART -D)

NTU FOREIGN FACULTY APARTMENTS

Sr. No.	1st Jan 2018 to 30th Jun 2018	Description	Engineer Estimate				Contractor Bid	
5	N.S	Providing and fixing Gully grating 1'-0"x1'-0" for drainage including 9" thick brick masonry chamber 6" dia RCC Pipe and connection with manhole.	Each	9	2,400.00	21,600		
6	N.S	Providing and making Manhole 2'x2' internal size including 9" thick brick masonry (1:4), 1/2" th. Plastering (1:3) i/side, benching with PCC 1:2:4 4" th. with cement finish, excluding manhole cover, complete in all respects.	Each	7	4,300.00	30,100		
22	N.S	Providing and fixing clean out with threads ferule fixed in pipe with the help of solvent, as shown on drawing, complete in all respects as per specifications and drawings.						
		3" i.d	Each	18	1,600.00	28,800		
		4" i.d	Each	3	1,800.00	5,400		
23	N.S	Providing and installing "Gas Geyser" including fitting & fitting accessories, complete in all respect as per specifications and drawings.						
		55 Gallons	Each	2	24000	48,000		
		25 Gallons	Each	3	18500	55,500		
	N.S	Providing and installing "Instant Gas Geyser" including fitting & fitting accessories, complete in all respect as per specifications and drawings.						
		10 liters	Each	7	8500	59,500		
	N.S	Providing, fixing and testing submersible sewage pumps installed in sump pits, having following parameter including all fitting, electrical connection, complete in al respects as per specifications and drawings.						
		a) Flow of 25 gpm and head of 50 ft	Each	2	46000	92,000		
		Sub-Total of Non-MRS items "B" (Rs.) To Summary				1,054,639		

Memar Associates

PLUMBING WORKS ENGINEER'S COST ESTIMATE
NTU APPARTMENTS, FAISALABAD. (PART-D)

Sr. No.	1st Jan 2018 to 30th Jun 2018	Description	Engineer Estimate				Contractor Bid	
			Unit.	Quantity	Rate (Rs.)	Amount (Rs.)	(Rs.)	Amount (Rs.)
		Spetic Tank						
	3/7-ii	Excavation						
		Earthwork excavation in open cutting upto 5'-0" (1.5 m) 17.1 to depth for storm water channels, drains, sullage drains in 17.5 open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
		ii) hard	Cft	600	6.57	3938.96		
	6/5-i	P.C.C						
		Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate)	Cft	24	176.83	4240.64		
		(i) Ratio 1: 4: 8						
	6/6-a-ii	RCC WORK						
		Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
		(a)(ii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and other structural members other than those mentioned in 5(a) (i) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
		Type B (nominal mix 1: 1½: 3)	Cft	130	283.35	36906.34		
	21/13	Providing and fixing 1-1/4" x 1-1/4" x 3/16" angle iron step in manhole chambers, including carriage and setting the same in work to correct lines and levels	Each	5	252.9	1264.50		
	6/8-b	Steel						
		Fabrication of mild steel reinforcement bar cage for R.C.C. bored piles, including cutting, bending, laying in position, welding and fastening, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from the bars)						
		(b) deformed bars	Kg	469	128.49	60248.961		

Memar Associates

48/70

PLUMBING WORKS ENGINEER'S COST ESTIMATE
NTU APPARTMENTS, FAISALABAD. (PART-D)

		UNDER GROUND WATER TANK						
	3/7-ii	Excavation						
		Earthwork excavation in open cutting upto 5'-0" (1.5 m) 17.1 to depth for storm water channels, drains, sullage drains in 17.5 open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
		ii) hard	Cft	1,061	6.57	6969.89		
	6/5-i	P.C.C						
		Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate)	Cft	49	176.83	8725.25		
		(i) Ratio 1: 4: 8						
	6/6-a-ii	RCC WORK						
		Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
		(a)(ii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and other structural members other than those mentioned in 5(a) (i) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
		Type B (nominal mix 1: 1½: 3)	Cft	436	283.35	123540.60		
	21/13	Providing and fixing 1-1/4" x 1-1/4" x 3/16" angle iron step in manhole chambers, including carriage and setting the same in work to correct lines and levels	Each	5	252.9	1264.50		
	6/8-b	Steel						
		Fabrication of mild steel reinforcement bar cage for R.C.C. bored piles, including cutting, bending, laying in position, welding and fastening, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from the bars)						
		(b) deformed bars	Kg	1,570	128.49	201677.9		

Memon Associates

PLUMBING WORKS ENGINEER'S COST ESTIMATE
NTU APPARTMENTS, FAISALABAD. (PART-D)

OVER HEAD WATER TANK							
6/6-a-ii	RCC WORK						
	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(ii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and other structural members other than those mentioned in 5(a) (i) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	Type B (nominal mix 1: 1½: 3)	Cft	688	283.35	194935.95		
21/13	Providing and fixing 1-1/4" x 1-1/4" x 3/16" angle iron step in manhole chambers, including carriage and setting the same in work to correct lines and levels	Each	5	252.9	1264.50		
6/8-b	Steel						
	Fabrication of mild steel reinforcement bar cage for R.C.C. bored piles, including cutting, bending, laying in position, welding and fastening, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from the bars)						
	(b) deformed bars	Kg	2,477	128.49	318229.58		
Total Amount (Rs.)					963,208		
To Summary							

8
Mentor Associates

50/70

NATIONAL TEXTILE UNIVERSITY FOREIGN FACULTY APARTMENTS (PART - E)

Summary of Cost

AMOUNT

Part-A	Internal Wiring	Rs.	522,060
Part-B	Fittings & Fixtures.	Rs.	612,040
Part-C	Power Cables and Pvc Conduits	Rs.	352,645
Part-D	L.T. Switchgear	Rs.	309,750
Part-E	Earthing System	Rs.	83,500
Part-f	Telephone & TV Networking System	Rs.	96,098
Part-G	Air conditioning System	Rs.	648,490
Total Carried to Grand Summary			2,624,583

Memor Associates

NATIONAL TEXTILE UNIVERSITY FOREIGN FACULTY APARTMENTS (PART - E)

Bill of Quantities

Electrical & HVAC Works

ITEM #	DESCRIPTION	Engineer Estimate				Contractor Bid	
		UNIT	QTY	RATE PKR	AMOUNT PKR	RATE PKR	AMOUNT PKR
	Part - A Internal Wiring						
A.01	Light Circuits						
i)	Supply, installation and commissioning of light circuit wiring, to be wired with 3x2.5mm sq. (P+N+PE) PVC insulated 300/500 V grade wire, in and including cost of 1" dia PVC conduit recessed in , walls, Roof slab, or on surface or above false ceiling or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires , complete in all respects. Each circuit shall have independent PE.	Nos.	34	1,995	67,830		
ii)	same as above light circuit wiring, to be wired with 3x1.5mm sq. (1P+1N) PVC insulated 300/500 V grade wire, in already installed conduit , complete in all respects.	Nos.	20	665	13,300		
A.02	1-Light Point Controlled By One Switch						
	Wiring of one light point controlled by one switch and wired with 3x1.5 mm sq. (P+N+PE) PVC insulated wires 300/500 V. grade, in and including cost of 3/4" dia. heavy duty PVC conduit installed on RCC slab, above false ceiling, recessed in wall, columns slabs or above light carrier all PVC conduit accessories, 3" high PVC junction boxes, pull boxes, steel pull wires, PVC flexible conduit from ceiling junction box to light fixture flush type plate switches, including cost of back boxes and switches of 10 Amps.	Nos.	179	595	106,505		
A.03	2-Light Points Controlled By One Switch						
	Same as per item No. A.02 but 2 light points controlled by 1 switch, complete in all respects.	Nos.	132	613	80,850		
A.04	Wiring of 1-Light Point Controlled by 2-2 Way Switches						
	Same as per item No. 2.02 but 1 light point controlled by 2-2 way switches, complete in all respects.	Nos.	6	1,120	6,720		
A.05	Exhaust Fan Point						
	Same as Item No. A.02 mentioned above but wiring of exhaust fan point including cost of 10 Amp switch with M.S box 16 SWG with earth terminal.	Nos.	18	665	11,970		
A.06	Ceiling Fan Point						

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
		Nos.					
	Same as per item No. A.02 but wiring of ceiling fan point including fan hook box to be installed in ceiling slab 10 Amp single way switch and fan dimmer.	Nos.	31	1,155	35,805		
A.07	1-5 Amps Switch Socket for Gernal Use						
	Same as Item No. A.02 mentioned above but wiring of 5 Amps switch socket from switchboard with 3 x 1.5mm.sq. + (P+N+PE) in 3/4" dia. PVC conduit including all PVC conduit accessories, including cost of back boxes concealed in wall and 1-5 Amps switch socket complete in all respects.	Nos.	153	665	101,745		
A.08	1-13 Amps Switch Socket for Gernal Use						
	Supply, installation , Wiring and fixing of 13 Amps Multi pin Switch Socket combined switch socket away from switch board and wired with 3 x 2.5mm.sq. + (P+N+PE) in 3/4" dia. PVC conduit, , including all PVC conduit accessories, including cost of back boxes concealed in wall and 1-13 Amp switch socket. Complete in all respects. Wiring shall be done directly from the MCB installed in the respective DB without any claim of circuit.	Nos.	27	1,645	44,415		
A.09	Wiring For Split Air-Conditioner Single Phase						
	Wiring of Split A/C's wired with 3x4mm sq. (1P+1N+1PE) wire 300/500 Volt grade in and including cost of 1" dia. heavy duty PVC conduit,buried in recessed in walls, roof, slab, column, above false ceiling or as required as per site conditions, all PVC conduit accessories pull boxes, steel pull wires. Wiring shall be done directly from the MCB installed in the respective DB without any claim of circuit.	Nos.	21	2,520	52,920		
	TOTAL AMOUNT - Part - A (PKR) (CARRIED FORWARD TO SUMMARY)				522,060		
	Part- B						
	Fitting and Fixtures.						
B.01	LED LIGHTS						
	LED stands for Light Emitting Diodes. Diodes(electronic components that let electricity pass in only one direction) that emit visible light when electricity is applied. SMD LEDs is latest form of LED. SMD LEDs are light-emitting diodes in which the elements of the diodes are mounted directly onto the surface of printed circuit boards.LED is also called solid state lights.Complete in all respects.						

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
i)	Led Sqaure Down Light. (1X12W)	Nos.	172	1,560	268,320		
ii)	Led Down Light. (1X6W)	Nos.	177	600	106,200		
iii)	Led Down Light. (1X9W)	Nos.	83	760	63,080		
iv)	Wall Light	Nos.	12	600	7,200		
v)	Weatherproof Wall bracket light	Nos.	12	1,720	20,640		
B.02	Exhaust Fans						
	Supply, installation and commissioning of Exhaust Fans of Matlic body, louvers, all necessary fixing accessories, make Asia, Climax, PAK , National complete in all respects.						
i)	12" Dia Plastic Body	Nos.	18	1,600	28,800		
B.04	Ceiling Fan						
	Supply at site, installation and commissioning of ceiling fans 56" sweep complete with capacitor, hanging rod, canopy, blades, dimmers nuts and bolts complete in all respect	No	31	3,800	117,800		
	TOTAL AMOUNT - Part - B (PKR) (CARRIED FORWARD TO SUMMARY)				612,040		
	Part - C						
	Power Cables and PVC Conduit						
C.01	L.T. Power Cables						
	Supply at site, installation, testing and commissioning of PVC insulated non armoured copper conductor cable 600 / 1000 Volt grade in prelaidd conduits / trenches to be installed as per routes shown on drawings including cost of all necessary materials, connections, identification tags, cables lugs properly crimped at both ends for the following sizes complete in all respects. <u>Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the employers Electrical engineer before placing the order with the manufacturer, however, approximate length of cables are shown herewith. Payments shall be made as per actual length installed.</u>						
a)	PVC/PVC Copper Conductor Cable						
i)	4 core 95mm sq. for MPB	Rft	250	780	195,000		
ii)	4 core 50mm sq. for SMPB.	Rft	25	620	15,500		
iii)	4 core 25mm sq. for DBs,	Rft	25	332	8,300		
iv)	4 core 10mm sq. for DBs,	Rft	210	188	39,480		
v)	2 core 10mm sq. for UPSs,	Rft	40	100	4,000		
vi)	2 core 4mm sq. for UPSs,	Rft	120	100	12,000		
b)	Circuit Protective Conductor (CPC)						
i)	1 core 70mm sq. PVC insulated colour Green/Yellow.	Rft	60	252	15,120		

54/70

Memar Associates

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
ii)	1 core 35mm sq. PVC insulated colour Green/Yellow.	Rft	25	116	2,900		
ii)	1 core 16mm sq. PVC insulated colour Green/Yellow.	Rft	25	76	1,900		
iii)	1 core 10mm sq. PVC insulated colour Green/Yellow.	Rft	350	52	18,200		
iii)	1 core 4mm sq. PVC insulated colour Green/Yellow.	Rft	60	32	1,920		
C.02	PVC Conduit						
	Supply at site of PVC conduit heavy duty to be concealed in RCC slabs, walls, floor, columns above false ceiling or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, complete in all respects.						
ii)	1-1/2" DIA PVC Conduit	Rft	200	28	5,600		
iii)	2" DIA PVC Conduit	Rft	100	77	7,700		
iv)	3" DIA PVC Conduit	Rft	150	158	23,625		
C.04	Junction Box JB)						
	Supply, installation of television junction box 16 SWG to be concealed in wall for pulling of cable, complete in all respects.	Nos.	4	350	1,400		
	TOTAL AMOUNT - Part - C (PKR) (CARRIED FORWARD TO SUMMARY)				352,645		
	Part- D						
	L.T. Switchgear						
D.01	Main Panel Board (MPB-G) Installed At Ground Floor						
	Supply, fabrication, installation, testing and commissioning of Main Switch floor/wall mounting type as per under mentioned capacity in water tight MS box of appropriate size to be installed as shown on drawing totally enclosed, weather proof floor mounting type dust tight vermin and water proof, protection classification IP54, suitable for system Voltage 415 V. 50 Hz. including all auxiliaries, internal wiring from Mccbs terminating on cable terminals blocks installed at the top of Main Switch , designation labels of all incoming and outgoing feeders as shown on the drawings, Brass Cable Glands according to the Cable sizes for incoming & outgoing Cables, earthing bar, neutral bar, suitable for system voltage 415 V, 50 Hz, 3 phase, neutral and earthing busbars made of 99.8% electrolytic copper of under mentioned capacities. Body of Main Switch shall be degreased and de-rusted having one coat of antirust paint with further 2 coats of powder paint of approved colour and shall be equipped as mentioned below,						

Memar Associates

55/70

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
	including cost of all necessary materials complete in all respects and accordance with the latest BS codes and conforming to single line diagram. Rated current of Main & Neutral Bus Bar rated at 50 degree centigrade All Breakers to be installed shall be of one make only and not mixture of two manufacturers. Make MG (Made in France), Mitsubishi and Terasakil (Made in Japan/Spain) ABB, Legrand, GE/AEG (Made in Italy). Rated Ics not less than 25 KA for incoming , outgoing Breakers and for busbar installed in the Panel. Front & Rear open able doors. Shop drawings shall be submitted by the manufacturer for Approval to consultant before starting Fabrication of all Main Panel Board , Sub Main Panel Board Motor Control Centre and Light, Power Distribution Boards. Main Panel Board shall be Manufactured by any one of the given Manufacturers JEI, i Power Switchgear, SA Electric, Electrech, Irenatech ,Bilal Switchgear Engineering.						
	Incoming						
	1- 200 Amps TP ics 10 KA, MCCB.						
	3-Phase indication lamps (LED Type).						
	1-Digital Voltmeter 0-415 V make Entes						
	3-200/5 Amps CTs. accuracy class 0.5.						
	1-Digital Ampere meter 0-100 make Entes.						
	Outgoing						
	1-125 Amps TP 18 KA, MCCB.						
	4-30 Amps TP 18 KA, MCCB.	No	1	94,500	94,500		
D.02	SUB Main Panel Board (SMPB-1F) Installed At First Floor						
	Incoming						
	1- 125 Amps TP ics 10 KA, MCCB.						
	3-Phase indication lamps (LED Type).						
	1-Digital Voltmeter 0-415 V make Entes						
	3-200/5 Amps CTs. accuracy class 0.5.						
	1-Digital Ampere meter 0-100 make Entes.						
	Outgoing						
	1-60 Amps TP 18 KA, MCCB.						
	4-30 Amps TP 18 KA, MCCB.	No	1	68,250	68,250		
D.03	Distribution Board						
	Supply, installation, connection of wires cables, and commissioning of distribution boards concealed type or to be installed on wall, made of 16 SWG M.S. sheet degreased and derusted, zinc phosphated,finished with electro ststic powder coating of 15 micron thickness sheet with hinged door, handle, catcher,						

Memar Associates

56/70

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
	earthing bar and neutral link with necessary holes, nuts, bolts, washers, earthing of DB door with braided copper internal wiring, PVC cable glands for incoming and outgoing wires/cables, 2 earthing terminals designation label engraved on plastic sheet of appropriate size to be pasted on the front side of DB, 3 phase indication lamps of color red, yellow, blue (LED Type) moulded case circuit breaker with overload and short circuit protection (MCCB) to be installed on the incoming side and for miniature circuit breakers having overload and short circuit protection, including cost of all necessary fixing accessories complete in all respects.						
A)	DB-1-GF, DB-2-GF, DB-3-GF, DB-1-1F, DB-2-1F & DB-3-GF						
	Providing, Installation, testing and commissioning of DB-LP, 1.5mm thick sheet steel fabricated suitable for 3 phase, 415V, 4 wire, 50 Hz, A/C system as per following configuration.						
	WAPDA SECTION						
	Incoming						
	1- 30 Amps TP 10 KA, MCCB						
	3-Phase indication lamps (LED Type) .						
	1-Digital Voltmeter 0-415 V make Entes.						
	Outgoing						
	1-16 Amps DP 6 KA, MCCB						
	12-10/16/20 Amps SP, 6 KA, MCBs						
	UPS SECTION						
	Incoming						
	1-16 Amps DP 6 KA, MCCB						
	1-Phase indication lamps (LED Type) .						
	Outgoing						
	04-6 Amps SP, 6 KA, MCBs	No	6	42,250	253,500		
B)	DB-2F						
	Providing, Installation, testing and commissioning of DB-LP, 1.5mm thick sheet steel fabricated suitable for 3 phase, 415V, 4 wire, 50 Hz, A/C system as per following configuration.						
	WAPDA SECTION						
	Incoming						
	1- 75 Amps TP 10 KA, MCCB						
	3-Phase indication lamps (LED Type) .						
	1-Digital Voltmeter 0-415 V make Entes.						
	Outgoing						
	1-40 Amps DP 6 KA, MCCB						
	30-10/16/20 Amps SP, 6 KA, MCBs						
	UPS SECTION						
	Incoming						
	1-40 Amps DP 6 KA, MCCB						
	1-Phase indication lamps (LED Type) .						
	Outgoing						

57/20

Mentaf Associates

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
		No	1	56,250	56,250		
	10-6 Amps SP, 6 KA, MCBs						
	TOTAL AMOUNT - Part - D (PKR) (CARRIED FORWARD TO SUMMARY)				309,750		
	Part- E						
	Earthing System						
E.01	Earthing System						
i)	Providing and Installation of ¾" dia & 10 ft long copper rod as earth electrode 100 ft / Earth Cavitee below ground level including cost of boring and lowering the rod, complete with clamp and 70mm2 stranded copper conductor from rod to ground surface in 1½" dia Pvc pipe (length 20' only) with watering cap, Man-hole with cover as per detail shown in drawings.	Each	2	35,750	71,500		
E.02	Earth Connecting Points (ECP)						
	Supply and Installation of earth connecting points comprising of 4"x9"x½" copper plate with brass nuts & bolts fitted on M.S. bracket installed on walls/columns.	Each	2	1,875	3,750		
E.03	Man Hole for Earthing						
	Construction of brick manhole with 9" thick walls 12"x12"x12" Deep internal size with cement mortar, internal plaster 1:4 RCC 4" thick manhole removable cover with lifting hooks, complete in all respects with all necessary materials.	Nos.	2	4,125	8,250		
	TOTAL AMOUNT - Part - E (PKR) (CARRIED FORWARD TO SUMMARY)				83,500		
	Part- F						
	Telephone & TV Networking System						
F.01	Telephone Points						
	Wiring for each telephone point on wall with 2 pair telephone cable from TDB to telephone point in and including cost of ¾" dia. PVC conduit heavy duty recessed in slabs, walls, columns or on slab above false ceiling or as required as per site conditions, including M.S back box made of 16 SWG and RJ-11 socket outlet.	Each	7	2,363	16,538		
F.02	PVC Conduit						

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
	Supply, installation of PVC conduit heavy duty make Shavyl, Beta, Delta Gold or as specified in Annexure, buried under ground or as required as per site conditions including cost of all PVC conduit accessories, steel pull wires, all necessary accessories and materials complete in all respect.						
a.	1-1/4" dia. PVC conduit to facilitate pulling of incoming cable.	Rft.	100	24	2,400		
F.03	Telephone Distribution Board 20 Pairs (TDB)						
	Supply, installation and commissioning of telephone junction box 250/5 make B234m, 3M or Krone of approved colour, designation label as per drawing, including disconnecting modules of 3 Nos. Type 2/10 LSA Plus Profile 3M or Krone for incoming and out going telephone cables, all necessary accessories complete in all respects.	Each	1	3,600	3,600		
F.04	Wiring for T.V Points						
	Wiring and fixing of wall mounted TV outlets wired with RG-6 cable or as directed by the Engineer from distribution to T.V point, including cost of 1" dia. heavy duty PVC conduit recessed in slab, column or as required as per site conditions, all PVC conduit accessories, pull boxes, steel pull wires, G.I box shall be made of 16 SWG 3"x3" sheet steel with earth terminal, including also the cost of TV outlet complete in all respects.	Each	21	3,200	67,200		
F.05	T.V Distributor						
	Supply, installation, testing and commissioning of the TV distributor suitable for 1 incoming and 9 outgoing television channel lines make as approved by Engineer, including cost of back box of suitable size, made of 16 SWG sheet steel and all necessary accessories and materials, complete in all respects.	Nos.	3	960	2,880		
F.06	TV Junction Box						
	Supply, installation of junction box 16 SWG to be concealed in wall with 2 coats of antirust paint, earthing terminal, complete in all respects.						
a)	TV Junction Box 4"x7"x4" deep.	Nos.	3	1,160	3,480		
	TOTAL AMOUNT - Part - F (PKR) (CARRIED FORWARD TO SUMMARY)				96,098		
	Part - G Air conditioning System						
G.01	Installation of Air conditioner						
	installation, testing and commissioning of <u>Owner Supplied</u> following Air Conditioning System. Complete with all mounting accessories.						
i)	1.0 Ton Split Type AC Unit	Each	8	1,500	12,000		
ii)	1.0 Ton Split Type AC Unit	Each	8	1,500	12,000		
iii)	2.0 Ton Split Type AC Unit	Each	5	1,800	9,000		

59/70

Memorandum

ITEM	DESCRIPTION	Engineer Estimate				Contractor Bid	
G.02	Refrigerant Piping and Control Wire of Air Conditioner						
	Supply and installation of refrigerant piping for following air-conditioning units with expanded rubber foam insulation protected with gray tape. Control wiring with the provision of inside or outside power supply PVC insulated copper cable in PVC conduit between internal and external units, complete in all respect both for all units.						
i)	1.0 Ton Split Type AC Unit	Rft	520	332	172,640		
ii)	1.5 Ton Split Type AC Unit	Each	520	380	197,600		
iii)	2.0 Ton Split Type AC Unit	Rft	275	380	104,500		
G.03	Drain Pie for Air Conditioner						
	Supply & installation of following UPVC hard pipe class-D-condensate drain with insulation from indoor unit to nearest drain point complete with traps, fittings, etc. and insulation as shown on drawings and approved by the consultant.						
i)	25 mm dia	Rft	1150	95	109,250		
G.04	M S angle iron frame for Air Conditioner						
	Supply and installation of 4'-6" wide platform with wall mounted angle iron frames 1/8" TH. With 1/2" dia M.S. bars welded to angle iron for placement and servicing platform on rear side of the building.(As per side)	Each	21	1,500	31,500		
	TOTAL AMOUNT - Part -G (PKR) (CARRIED FORWARD TO SUMMARY)				648,490		

Memorandum
8

Annexure "A" to B.O.Q.

List of Approved Manufacturers and Suppliers for Electrical Works

S.No	Equipment / Material	Make	Country of Origin	Manufacturer / Supplier	Telephone
1	LT-PANELS & DB's	ELETRECH IPA ECS B.S.G QS	- PAKISTAN - PAKISTAN - PAKISTAN - PAKISTAN - PAKISTAN	Electrech, Lahore I Power Switchgear ECS, Lahore Bilal Switch Gear, Lahore. SA Electric Lahore	5122884 0321-7854142 5162391
2	CIRCUIT BREAKERS ACBs/TP MCCBS	TERASAKI MITSUBISHI LEGRAND	- JAPAN - JAPAN - FRANCE	Jubilee Corp., Karachi Prince Electric Co., Lahore Mubashar Electric, Lahore,	2439070 5752323 7670980
3	CIRCUIT BREAKERS MCBS / ELCBS	TERASAKI HAGER LEGRAND	- JAPAN - FRANCE - FRANCE	Jubilee Corp., Karachi Jubilee Corp., Karachi Mubashar Electric, Lahore	2439070 2439070 7670980
4	CURRENT TRANSFORMER	FICO ELEMETEC	- PAKISTAN - PAKISTAN	Sh. Wilayat & Sons, Karachi Mubashar Electric, Lahore	2623081 7670980
5	AMPEREMETERS (Digital) VOLTMETER (Digital)	ENTES LEGRAND	- S. KOREA - FRANCE	Jubilee Corp., Karachi EMZED Eng., Karachi	2439070 5880856
6	AMPEREMETERS (Dial Type) VOLTMETER (Dial Type)	ENTES SACI DEIF	- FRANCE - SPAIN - DENMARK	Jubilee Corp., Karachi Sh. Wilayat & Sons, Karachi Shahid International, Lahore	2439070 2623081 7670980
7	INSTRUMENT PROTECTION FUSES	LEGRAND SOCOME	- FRANCE - FRANCE	Shahid International, Lahore Sh. Wilayat & Sons, Karachi	7670980 2623081
8	INDICATION LIGHTS	FUJI LEGRAND Maruyasu	- JAPAN - FRANCE - JAPAN	Sh. Wilayat & Sons, Karachi Mubashar Electric, Lahore, Jubilee Corp., Karachi	2623081 7670980 2439070
9	LOW TENSION CABLES, SINGLE CORE & MULTI CORE	PAKISTAN CABLES PIONEER CABLES NEWAGE CABLES FAST CABLES	- PAKISTAN - PAKISTAN - PAKISTAN - PAKISTAN	Pakistan Cables, Lahore Pioneer Cables, Lahore Newage Cables, Lahore Fast Cables Lahore	7120791 7235741 6312150 111-000-343
10	SWITCHES & SOCKETS	CLIPSAL, LEGRAND,	- IMPORTED - IMPORTED	Electrolite, Lahore Mubashar Electric, Lahore	7221618 7670980
11	PVC CONDUIT & ACCESSORIES	POLO BETA POPULAR	- PAKISTAN - PAKISTAN - PAKISTAN	Polo Pipe, Lahore Shafi Sons, Lahore Popular, Lahore	7900094 5880151 411139
12	FANS	MILLAT ROYAL LAHORE FAN	- PAKISTAN - PAKISTAN - PAKISTAN		
13	TELEPHONE AND COMPUTER SYSTEM	- KRONE - 3M - CLIPSAL - AMP			
14	FIRE ALARM SYSTEM	- HONEY WELL - GENT			
15	CCTV SYSTEM	dahua hikvision			

WEMAT Associates

6/70

Item	Summary	Amount PK.Rs.
	External Sewerage Line / Manhole.	255,300
	External Water Supply Line.	220,500
	External Electric Power	238,700
TOTAL Carried to Grand Summary		PK Rs. 714,500

Memar Associates

EXTERNAL SEWERAGE LINE / MANHOLE (PART-F)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Rate	Unit PK Rs	Amount PK Rs	Rate PK Rs	Amount PK Rs
1.	Earth work excavation in open cutting for sewer and manhole as shown in drawings i/c shuttering and timbering, dressing to correct section and dimensions according to templates and levels, and removing surface water, in all types of soil except shingle gravel and rock 0' to 7' depth.						
	1 x 150 x 2 1/2 x 2 1/2 = 938 Cft						
	1 x 210 x 2 1/2 x 3 = 1575 Cft						
	Total = 2513 Cft						
		@	3549.55	%0Cft	8920		
2.	RCC pipe moulded with cement concrete (1:1-1/2:3) with spigot socket & collar joint etc. i/c cost of reinforcement conforming to B.s 5911 part I 1981 class 'C' i/c carriage of pipe from factor to site of work complete in all respect 9" dia.						
	= 350 Rft						
	@	353.50	P Rft	123725			
3.	Construction of manhole size 4'x2-1/2'						
	= 9 No.						
	@	13020.00	Each	117180			
4.	Rehandling of earth with lead upto a single throw of Kassi, phoarah as shown lead upto 50ft.						
	= 2513 Cft						
	@	2191.75	%0Cft	5508			
EXTERNAL SEWERAGE LINE TOTAL			Total: - 255333				
To Summary			Say Rs: - 255300				

Memar Associates

ANALYSIS OF RATE FOR CONSTRUCTION OF MANHOLE SIZE 4'x2-1/2'.

1. Earth work excavation for manhole.

1x5-1/2x4x3	=	66 Cft			
		@	5492.90	%0Cft	363 /-

2. Cement concrete brick or stone ballast 1-1/2" to 2" guage. (1:6:12)

1x5-1/2x4x1/2	=	11 Cft			
		@	10795.85	% Cft	1188 /-

3. Pacca brick work in 1:4 other than building.

1x2x(5-1/2+2-1/2)x3/4x3	=	23 Cft			
		@	18998.75	% Cft	4370 /-

4. P/L Plain cement concrete (1:2:4) i/c comacting, finishing curing complete.

1x4x2-1/2x1/4	=	3 Cft			
		@	22154.60	% Cft	665 /-

5. Extra for making / finishing benching floor work in manhole chamber with 1/8" thick .

1x4x2-1/2	=	10 Sft			
		@	1623.55	% Sft	162 /-

6. 1/2"thick cement plaster (1:4) in cement sand mortar

Inside	1x2x(4+2-1/2)x2-1/2	=	33 Sft		
outside	1x2x(5-1/2+4)x1/2	=	10 Sft		
Top	1x2x(5-1/2+2-1/2)x3/4	=	12 Sft		
	Total	=	55 Sft		
			@	1835.60	% Sft
					1010 /-

7. Applying floating coat of neru 1/32"thick.

1x4x2-1/2	=	10 Sft			
		@	1003.60	% Sft	100 /-

8. RCC work in roof slab (1:2:4)

1x5-1/2x4x1/3	=	7 Cft			
		@	352.35	P Cft	2466 /-

9. Fabrication of mild steel reinforcement for Cement concrete etc. complete.

7x6.75x0.4536	=	21 Kg			
		@	12849.10	% Kg	2698 /-

64/70

Memar Associates

Total = 13021 /-

Say Rs = 13020 /-

8
KAPAT ASSOCIATES

EXTERNAL WATER SUPPLY (PART-F)

Item	Description	Engineer Estimate				Contractor Bid	
		Qty	Rate	Unit	Amount	Rate	Amount
				PK Rs	PK Rs	PK Rs	PK Rs
1.	Excavation of trenches in all kinds of soil, except cutting rock, for watersupply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides levelling the beds of trenches to correct grade and cutting pits for						
	1 x 210 x 2 x 2 = 840 Cft						
	Total = 840 Cft						
	@	4709.75	%oCft		3956		
2.	P/L Polypropylene Random Copolymer (PPRC) pipe with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all respect. 75mm dia						
	= 220 Rft						
	@	385.00	P Rft		84700		
3.	P/L Polypropylene Random Copolymer (PPRC) pipe with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all respect. 63mm dia						
	= 120 Rft						
	@	310.00	P Rft		37200		
4.	P/L Polypropylene Random Copolymer (PPRC) Specials with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all respect. Elbow 75mm dia						
	= 8 No.						
	@	1150.00	Each		9200		
5.	P/L Polypropylene Random Copolymer (PPRC) Specials with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all respect.						
	= 6 No.						
	@	890.00	Each		5340		
6.	P/L Polypropylene Random Copolymer (PPRC) Specials with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all						
	= 14 No.						
	@	780.00	Each		10920		
7.	P/L Polypropylene Random Copolymer (PPRC) Specials with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all						
	= 8 No.						
	@	390.00	Each		3120		
8.	Rehandling of earth with single through of kassi.						
	Qty as item No. 1 = 840 Cft						
	@	1565.50	% o Cft		1315		
9.	Construction of Sluice valve chamber.						

Memar Associates

66/70

	(Detail attached)	=	3 No. @	17250.00	Each	51750		
10.	P/L Polypropylene Random Copolymer (PPRC) Specials with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all	=	3 No. @	2800.00	Each	8400		
11.	P/L Polypropylene Random Copolymer (PPRC) Specials with fusion / threaded joints Made (Dadex / Beta / BBJ) complete in all	=	2 No. @	2300.00	Each	4600		
EXTERNAL WATER TOTAL To Summary					Total =	220501		
					Say Rs =	220500		

Memorandum
67/70

ANALYSIS OF SLUICE VALVE CHAMBER

1. Excavation of building and bridges and other structure etc. complete.

$$1 \times 5 - 1/2 \times 5 - 1/2 \times 1 - 1/2 = 45 \text{ Cft} @ 4709.75 \% 0 \text{ Cft} \quad 212 \text{ /-}$$

2. Cement concrete brick or stone ballast 1-1/2" to 2" guage. (1:6:12)

1x5-1/2x5-1/2x1/2 = 15 Cft @ 10795.85 % Cft 1619 /-

3. Pacca brick work in c/s mortar (1:6) in F & P.

2x4-1/2x3/4x3-3/4	=	25 Cft		
2x3x3/4x3-3/4	=	17 Cft		
Total	=	<u>42 Cft</u>		
	@	17549.30	% Cft	7371 /-

4. 1/2" thick cement plaster (1:3).

1x2x(3+3)x3-3/4	=	45 Sft		
1x2x(3+3)x2-1/2	=	30 Sft		
2x4-1/2x3/4	=	7 Sft		
2x3x3/4	=	5 Sft		
Total	=	<u>87</u> Sft		
		@	1924.90 % Sft	1675 /-

5. P/L, RCC in roof slab and other structure of building type C nominal mixture (1:2:4)

$$1 \times 4 - 1/2 \times 4 - 1/2 \times 3/8 = 8 \text{ Cft} @ 352.35 \text{ P Cft } 2819 \text{ /-}$$

6. Fabrication of mild steel reinforcement for cement concrete i/c cutting, bending, laying in position making joints and fastening i/c cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars), deformed bar.

Qty as item No.5 = 8 Cft
8 x 6.75 x 0.454 = 25 Kg
@ 12849.10 % Kg 3212 /-

7. 1-1/2" thick topping of cement concrete (1:2:4) i/c finishing complete.

1x3x3 = 9 Sft @ 3800.30 % Sft 342 /-

68/70

Memar Associates

Total: - 17250 /-

Say Rs: - 17250 /-

Memar Associates

EXTERNAL ELECTRIC POWER PART-F

Item		Engineer Estimate				Contractor Bid	
		Qty	Rate PK Rs	Unit	Amount PK Rs	Rate PK Rs	Amount PK Rs
1.	P/F, electric pole lights consisting of 4" dia G.I pipe 14' long, 3" dia G.I. pipe 7' long & 2" dia pipe 5' long (22' upto FF Level) with M.S base plate 1/2" thick & 1'x1' size i/c nut bolts PCC foundation i/c holdfast etc. complete in all respects as approved by the Engineer Incharge.						
		= 2 No					
2.	Excavation of trenches in all kinds of soil, except cutting rock, for watersupply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides levelling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects						
	1 x 200 x 2 x 2	= 800 Cft					
	Total	= 800 Cft					
		@	4709.75	%oCft	3768		
3.	Supply and erection of PVC pipe for surface wiring (main and sub-main) including clamps, inspection boxes, pull boxes bends etc., complete with all specials 80mm dia For Electrical Cable						
		= 220 Rft					
		@	92.70	P Rft	20394		
4.	P/L Cable 4C120sqmm XLPE/SWA/PVC+1C70sqmmPVC/ECC/CU						
		= 210 Rft					
		@	930.00	P Rft	195300		
5.	Rehandling of earth with single through of kassi.						
	Qty as item No.1	= 800 Cft					
		@	1565.50	% o Cft	1252		
6.	Supply and erection of 200A TPN Isolator with Enclosure fix at per site requirement as approved by Engineer Incharge. For Disconnect power from Main Building						
		= 1 No					
		@	18000.00	P Rft	18000		
EXTERNAL LIGHT TOTAL				Total =	238714		
To Summary				Say Rs =	238700		

Mehar Associates