



Islamia University of Bahawalpur – IUB

**CONSTRUCTION OF FACULTY HOSTEL
FOR THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB-CAMPUS AT AHMADPUR
EAST UNDER THE PROJECT TITLED
“STRENGTHENING OF ISLAMIA UNIVERSITY OF
BAHAWALPUR & ITS SUB CAMPUSES”**

Bill of Quantities

May, 2023

**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST
FACULTY HOSTEL**

BILL OF QUANTITIES

SUMMARY OF COST

Sr. No.	DESCRIPTION	AMOUNT
1.	CIVIL WORKS	
2.	PUBLIC HEALTH WORKS	
3.	ELECTRIC WORKS	
	(Main Building) TOTAL - A	
4.	EXTERNAL DEVELOPMENT	
	(External Civil Works) TOTAL - B	
	SUB-TOTAL (A + B)	
	ADD PST	
	GRAND TOTAL	



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
FACULTY HOSTEL**

BILL OF QUANTITIES

CIVIL WORKS

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-3/21(1)-(ii)	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m) a) By Manual: in ordinary soil.	%0Cft	28294.0		
2	C-26/43	Spraying anti termite proofing by using liquid FMC Biflex 2.5%EC Per Sft 1.20 10.00 Sq.m 13.00 107.50 Mixing Ratio 1:50=137-Sft or using liquid MIRAGE All Akbar /RANGERS Auriga 5% SC Mixing Ability-HEXTAR Ratio 1:110=205-Sft or any other equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect .as approved by the Engineer Incharge	P.Sft	34183.6		
3	C-6/5(i)	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):Ratio 1:4:8	%Cft	2035.7		
4	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	4955.9		
5	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	6335.5		
6	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for First Floor.	P.Cft	1825.1		
7	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Under Plinth Level	P.Cft	759.8		
8	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	1102.9		
9	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for First Floor.	P.Cft	29.5		
10	C-6/12(c)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- Deformed bars (Grade-60)	%Kg	54323.2		
11	C-7/4(i)	Pacca brick work in foundation and plinth in Cement,sand mortar. Ratio 1:6	%Cft	8291.9		
12	C-3/15(i)	Filling, watering, ramming earth under floors (with surplus earth foundation).	%0Cft	9431.3		
13	C-3/15(ii)	Filling, watering and ramming earth under floors:-ii) with new earth excavated from outside lead upto one chain (30 m).	%0Cft	32685.5		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
14	C-3/17	Transportation of earth all types when the total distance, this rate will be paid in addition to the including the lead covered in the item of work, is more than rate of earthwork, without deducting 1000 ft. (300 m) (Lead will be paid as per actual but not more than 7km)				
	a	upto ¼ mile (400 m).	%Cft	32685.5		
	b	for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	%Cft	32685.5		
	c	for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	%Cft	32685.5		
15	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:5	%Cft	9214.6		
16	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:4	%Cft	225		
17	C-11/11(b)	Cement plaster 1:5 upto 20' (6.00 m) height:- ½" (13 mm) thick. (Internal Ground Floor)	%Sft	16639.1		
18	C-11/11(c)	Cement plaster 1:5 upto 20' (6.00 m) height:- c) ¾" (20 mm) thick. (Internal Ground Floor)	%Sft	9768.0		
19	C-11/9(c)	Cement plaster 1:4 Ground Floor:- c) ¾" (20 mm) thick (External)	%Sft	14822.7		
20	C-7/38-(i)	Providing and laying fair face Gutka cladding laid in (1:2) cement / red posso mortar having 1/4" thick groove finish i/c cost of 8 SWG wire in shape of 8 placed horizontally and vertically at 36" and 18" c/c respectively i/c cutting charges as per approved drawing , complete in all respect as approved and directed by the Engineer Incharg i. 2-1/4" x 2-1/4" x 9"	P.Sft	6611.43		
21	C-11/10(b)	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only Ground Floor ratio 1:3.	%Sft	9745.0		
22	C-11/23-a-(iii)	Distempering:- a) new surface:- 3 coats	%Sft	36152.11		
23	C-13/46	Providing and applying wall putty of 2mm thickness over plastered surface (new surface) to prepare the surface even and smooth complete in all respect.	%Sft	72304.21		
24	C-13/33-a-(i+ii)	Providing and applying weather shield paint of approved quality on external surface of building including preparation of surface, application of primer complete in all respect: a) new surface: Two coats	%Sft	8211.30		
25	C-10/3	Providing, laying, watering and ramming brick ballast 1½" to 2"(40 mm to 50 mm) gauge mixed with 25% sand, for floor foundation, complete in all respects.	%Cft	5889.4		
26	C-6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):- (f) Ratio 1: 2: 4	%Cft	1967.1		
27	C-10/15(e)	Providing and laying topping of cement concrete 1:2:4, including surface finishing and dividing in panels:- (e) 2"(50 mm) thick	%Sft	2318.9		
28	C-9/35 (iii)	Providing and laying roof insulation, comprising of single layer of tiles 9"x4½"x1½" (225x113x40 mm) grouted with cement sand mortar 1:3 laid over 2" (50 mm) thick earth (including mud plaster) over thermopore sheet, over polythene sheet 300 gauge over a layer of bitumen, complete in all respects:- iii) Thermopore sheet 1" (25 mm) thick	%Sft	9745.0		
29	C-9/15	Khuras on roof 2"x2"x6" (600 x 600 x 150 mm)	Each	14.0		
30	C-10/22(b)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (b) using white cement. Ground Floor	%Sft	7533.68		
31	C-10/40(a)	Providing and fixing marble strip of any shade for dividing the mosaic flooring into panels. Size 1½" x 3/8" (40 x 10 mm)	P.Rft	4896.89		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
32	C-10/37 (b-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (b) using white cement : ii) ½"(13 mm) thick	%Sft	593.22		
33	C-10/22(a)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (a) using Grey cement. Ground Floor	%Sft	288.56		
34	C-10/37 (a-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (a) using Grey cement : ii) ½"(13 mm) thick	%Sft	626.24		
35	C-10/24(i)	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over ¾" thick (1:2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24"/8"x24"/12"x36"	P.Sft	1034.24		
36	C-10/25(i)	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting/dado of approved Color and Shade with adhesive bond over 1/2"thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24"/8"x24"/12"x36"	P.Sft	3133.02		
37	C-10/45 (ii)	Providing and laying flooring with China Verona Marble having uniform texture (Spotless) of required size and specified thickness, with adhesive bond over ¾" thick bedding of (1:2) cement sand mortar i/c the cost of matching sealer, cutting, grinding and chemical polishing complete in all respect as approved and directed by the Engineer Incharge.ii) ¾" thick (12"x24"/12"x36")	P.Sft	567.01		
38	C-10/48	Extra for Beveling charges of marble edge in approved design complete in all respects i/c the cost of Carborandum disc as approved and directed by the Engineer Incharge.	P.Rft	88.88		
39	C-10/49	Extra cost for making hole in Marble slab for fixtures, Sink, burners, basin Vanities i/c cost of beveling of internal edge as approved and directed by the Engineer Incharge.	Each	1.00		
40	C-12/8 - (i)	P/F 1½" (40mm) thick semi solid panelled or panelled and glazed doors comprising of solid wood styles and rails of specified width and panels of 2.5 mm thick veneer ply matching with wood used with grooves , pasted on both sides of 1" thick Lasani wood panel with tapered edges i/c the cost of tower bolt ,handles complete in all respect (Excluding the cost of chowkat frame,sliding bolt and lock) as approved and directed by Engineer Incharge (i) Deodar Wood	P.Sft	80.80		
41	C-12/51	P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Commercial ply compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt , handles, glue, sawing charges, Painting charges, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.	P.Sft	554.49		
42	C-12/61 (b) - (ii)	P/F ¾" dia heavy duty sliding bolt of specified material i/c the cost of hardware complete in all respect as approved and directed by the Engineer Incharge. (ii) 12" (300 mm) long	Each	23.00		
43	C-12/22	Providing and fixing, approved quality mortice lock	Each	23.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
44	C-12/17 - (ii)	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.(ii) 10.50 " wide	P.Sft	554.49		
45	C-13/5 c(i+ii)	Painting new surface:- c) Preparing surface and painting of doors and windows any type (including edges):- 3 coats (Chowkats)	%Sft	1008.54		
46	C-25/51	Providing and fixing all types of partly fixed and partly openable glazed anodised bronze colour aluminium doors, using deluxe section of M/s Al-Cop or Pakistan Cables, having chowkat frame of size 40 x 100 mm (1 1/2" x 4") and leaf frame of 60x40mm (2 1/2"x1 1/2") wide sections including the cost of 1/4" (5 mm) thick imported tinted glass with aluminium triangular gola and rubber gasket to support the glass and leaf edging, using approved standard fittings, locks, 3" (75 mm) wide long handles etc., and hardware any required as approved by the engineer in-charge.	P.Sft	24.2		
47	C-25/52	Providing and fitting all types of glazed aluminium windows of anodised bronze colour partly fixed and partly sliding using deluxe sections of approved manufacturer having frame size of 100 x 20 mm (4"x3/4") and leaf frame sections of 50 x 20 mm (2"x3/4"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge.	P.Sft	1116.1		
48	C-25/53	Providing and fixing Aluminum Fly screen comprising of Fiber / Aluminum wire gauze (Malasian) fixed in aluminum frame of approved manufacturer brownze colour / powder coated of size 1- 1/2" x 1/2" and 1.6mm thick with rubber gasket i/c cost of hardwares as approved and directed by the engineer incharge complete in all respect.	P.Sft	1116.1		
49	C-25/59-(ii)	Providing and fixing M.S. grill fabricated with MS Square polished Vertical/ horizontal Bars of specified size @ 4" c/c ' passed through punched holes in MS Patti of 1-1/4"x1/8" i/c the cost of 1-1/4"x1/8" MS patti for Frame of windows and painting 3 coat complete in all respect as approved and directed by the Engineer Incharge. (ii) 1/2" Squar Bars	P.Sft	1116.05		
50	C-25/64	roviding and fixing 2'-9" high stair railing comprising of non magnetic (304) Stain less steel 2" dia pipe railing of 18 SWG welded with vertical posts of 2" dia stainless steel round/ Squar pipe/ Tong (chimta) @ 2-ft c/c fixed on alternate steps with 3" long steel screws and brass rawal plugs , 3-Nos diagonal stainless steel pipes of 1/2" dia passes through goties fixed on vertical post, i/c stainless steel welding, fixing & polishing complete in all respects as approved and directed by the Engineer Incharge.	P.Rft	50.50		
51	C-10/44	Providing and laying 3/8 inch thick superb class Multani tiles of specified size and design of approved Color and Shade with adhesive bond, over 1/2" thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.	P.Sft	358.67		
52	C-13/9(i)	Bitumen coating to plastered or cement concrete surface:-i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	%Sft	1169.0		
53	C-26/37(ii)	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.ii)500 gauge (.005" thick)	P.Sft	10914.0		
54	C-19/40 (iii)	Supply and fitting of cast iron manhole cover with frame, etc. complete. iii) 60 cm (24") dia	Each	2.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
55	C-21/13	Providing and fixing 1½"x1½"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	12.00		
56	C-6/31	Providing embedding 10" (250 mm) wide ½" (6 mm) thick rubber water stopper in expansion joints of R.C.C. roof slab complete in all respects.	P.Rft	101.00		
57	C-6/55	Providing and mixing super plasticizer (water reducing admixture) as defined in ASTM C-94 in order to achieve the required consistency / workability measured by the slump, used in the ratio of (0.05% to 1.00%) by weight of cement as proposed by the designer etc complete in all respect.	P.Ltr	1912.64		
58	C-26/44(ii)	Supply and Erection of Car Parking Shed consisting of 3 mm thick fiber glass sheet roof (3-layers) fixed / riveted on moulded curved frame of M.S box pipe 1-1/2"x1-1/2"16-SWG supported on trusses of MS angle iron 1-1/2"x1-1/2"x3/16" all around duly supported on M.S sheet 6"x6"x1/4" welded on GI pipe post (Medium Quality) of specified diameter embeded in P:C:C (1:2:4) i/c the cost of excavation, cutting straightening assembling, bending as per design, welding / grinding of joints and painting three coats complete in all respect as approved and directed by the Engineer Incharge. (ii) 3" dia GI pipe Supports (Open to Sky Area Cover with Fiber Glass Sheet 1 feet Cantelever Beyond Wall)	P.Sft	300.00		
59	C-1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Sargodha to Ahmadpur East 399 KM) (Lead will be paid as per actual but not more than 399km)	%Cft	18819.74		
Total of MRS ITEMS						
1	NSI	Excavation in foundation of building, bridges and other structures, including dag belling, dressing refilling around structure with excavated earth, watering and ramming, lead upto one chain (30 metre) and lift 5 ft. to 10 ft:- In ordinary soil.	%0Cft	10817.81		
2	NSI	Providing and laying structural pad for foundation made of selected granular fill material (Mixture of 70% gravel and 30% sand of approved quality and grade) including placing, mixing, spreading and compaction of sub-base material to required depth, grade to achieve 95% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as approved by the Engineer incharge.	P.Cft	9615.83		
3	NSI	Providing and fixing UPVC Doors 38mm thickness i/c delux matching color UPVC frame matt or glossy finish having color (white-Gray-Marble Gray-Oak Wood- Dard Oak Wood, Coffee Wood Honey Pine Wood-Mahagony-Marry Gold-Chocolate Brown-Honey Dew) i/c all accessories i/c mortice locks complete in all respect as approval by the Engineer incharge.	P.Sft	282.80		
4	NSI	Providing and fixing steel Fire Rated Emergency Exit Door ,Door manufactured as per NFPA 252 & UL 10C standards Steel Door (MS) Size: 60" x 98" Double Leaf door, Filled with fire-rated material With Inner Steel Stiffeners for reinforcement. Door Leaf 1.2-1.5mm, Door Frame 1.5- 2.0mm, Accessories: Hinges, Panic Bar On single Leaf, SS Handle, Glass 12x24 ft, and Door closer including carriage complete in all respect as approved & directed by the Engineer/ Incharge. (TECHNO (PVT) LTD or Equivalent)	Each	2.00		
5	NSI	Providing and fixing Stainless Steel (24 SWG) Letters 18" height with CNC laser cutting i/c all hardware required complete in all respect as per drawings and direction of Engineer In-charge.	Each	15.00		
6	NSI	Providing and fixing Stainless Steel Logo 7"x7" with colour print including the cost of fitting accessories complete in all respect as per drawings and approval of Engineer Incharge.	Each	1.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
7	NSI	Providing and fixing stainless steel mesh of 16 guage fixed with nails for concrete and bricks joint complete in all respect and as approved and directed by the Engineer Incharge.	P.Sft	3322.00		
Total of Non MRS ITEMS						
GRAND TOTAL OF CIVIL WORKS						



ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST FACULTY HOSTEL						
BILL OF QUANTITIES						
PUBLIC HEALTH WORKS						
SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		SANITARY FIXTURES AND FITTINGS				
1	Ch 19/3	Providing and fitting European Coupled set of Water Closet (WC) and flushing Cistern of PORTA brand (full size) i/c the cost of CP /rubber connection,thimble,seat cover and rawal bolts complete in all respects as approved and directed by the Engineer Incharge.	Each	8.00		
2	Ch 19/4	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest. i) white	Each	8.00		
3	Ch 19/13 (i)	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white	Each	8.00		
4	Ch 19/8	Providing and fixing stainless steel sink with drain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.	Each	1.00		
5	19/16	Providing and fixing, chromium plated soap dish.	Each	16.00		
6	19/18	Providing and fixing, chromium plated toilet paper holder.	Each	16.00		
7	19/19 (i)	Providing and fixing, chromium plated towel rail:- i) 60 cm (24") long, and 2 cm (¾") dia.	Each	16.00		
8	19/49 a (i)	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 ncluding the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (a) P-Trap (i) 4" dia	Each	16.00		
9	19/36	Providing and fitting 10 cm (4") gully trap, including cement concrete, cost of PVC grating 15x15 cm (6"x6") and masonry chamber 30x30 cm (12"x12").	Each	8.00		
10	19/55 (5) ii	Providing and fixing chromium plated bottle trap with waste pipe, etc. complete ii) 4 cm (1½")	Each	1.00		
11	21/3 (i)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-79, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc., complete i) 310 mm (12") i/d	P.Rft	250.00		
12	3/42 (i)	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including 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: - i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000 Cft	2,250.00		
13	3/24 (c)	Compaction of earthwork (soft, ordinary or hard soil) :- c) Ramming earthwork (all types of soil).	1000 Cft	2,250.00		
14	3/13 (a)	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel	1000 Cft	2,250.00		
15	19/31 (i)	Providing and fixing gun metal peet/gate valve (screwed):- i) 30 mm (1¼") dia	Each	6.00		
16	19/31 (ii)	Providing and fixing gun metal peet/gate valve (screwed):-ii) 40 mm(1½") dia	Each	6.00		



SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
17	Ch 19/49 b (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (b) Multi-Trap (i) 4" dia	Each	8.00		
18	Ch 19/49 d (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (d) Clean Out (i) 4" dia	Each	4.00		
19	19/52 (v)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (v) Muslim shower	Each	16.00		
20	19/52 (iii)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (iii) Double Bib Cock	Each	16.00		
21	19/52 (iv)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (iv) Open Type Wall Shower	Each	16.00		
22	19/25 (ii)	Providing and fixing chromium plated stop cock, heavy:- ii) 1.5 cm ($\frac{1}{2}$ ")	Each	26.00		
23	19/27 (ii)	Providing and fixing chromium plated bib cock:- ii) 1.5 cm ($\frac{1}{2}$ ")	Each	4.00		
24	19/7 (v)	Providing and fitting glazed earthen ware wash hand basin /vanity 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc. v) Under Counter Vanity Basin	Each	16.00		
25	19/30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	16.00		
26	Ch 23/47	<u>WATER SUPPLY PIPES AND FITTINGS</u>				
		Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex /Popular/ Beta / BBJ) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN 8077-8078 code i/c cost of solvent, specials, making jharies complete in all respect as approved and directed by Engineer Incharge. (Internal/External Diameters mentioned) b) PN-20 pipe				
	ii	3/4" (25 mm) dia.	Rft	470.00		
	iii	1" (32 mm) dia.	Rft	350.00		
	v	1 1/2" (50 mm) dia	Rft	160.00		



SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
	vi	2" (63 mm) dia.	Rft	180.00		
27	Ch 19/47	SOIL, WASTE, VENTILATING PIPES & FITTINGS				
		Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe make of dadex /Popular/Beta/BBJ plain /socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. Type (SDR 32.5/SN-8)				
	iii	60 mm (2") dia.	Rft	170.00		
	iv	85 mm (3") dia.	Rft	300.00		
	v	110 mm (4") dia.	Rft	350.00		
28		VALVES				
	Ch 23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified diameter made of Faisal/Sonex / Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
	ii	3/4 inch	Each	8.00		
	i	1/2 inch	Each	4.00		
		GEYSER				
29	Ch 19/53 (iii)	Providing /fixing Gas water heater (Geyser) of specified capacity, comprising of water tank made of 14 SWG steel sheet and cover with 20 SWG MS sheet, best quality of approved make of Corona / Ambassador /Super Asia/ Canon i/c the cost of non return valve, imported thermostat, G.I. accessories, safety valve and making connection with existing water supply pipe line complete in all respects as approved and directed by the Engineer Incharge. (iii) 55 Gallons	Each	2.00		
TOTAL OF MRS ITEMS						
1	NSI	Providing and fixing, floor trap of PVC, including concrete chamber all round, and C.I. grating:- (Master, sonex or Equivalent).	Each	34.00		
2	NSI	Providing and fixing looking glass 5 mm thick size as per requirement/ drawings and direction of engineer incharge complete in all respect. (Ghani Glass or Equivalent)	Sft	144.00		
3	NSI	Providing and fitting Chromium plated floor Trap Jali 6"x6" double filter National and as approved by the Engineer incharge complete in all respect.	Each	34.00		
		MANHOLE				
4	NSI	Making of manhole size 3'x2-1/2'x3' brick work, plaster complete as requirement including RCC manhole cover 22" dia with Tee shape C.I. frame complete in all respect as per engineer Incharge.	Job	9.00		
		WATER COOLER				
5	NSI	Providing and fixing Domestic type electric water cooler of 85 ltrs cap body SS Pressure type Canon (DWC-85) or equivalent complete in all respects as approved by the Engineer incharge.	Each	1.00		
TOTAL OF NON-MRS ITEMS						
GRAND TOTAL OF PUBLIC HEALTH WORKS						



ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB						
BILL OF QUANTITIES						
ELECTRICAL WORKS						
Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
1		WIRING IN CONCEALED CONDUITS				
i)		Distribution board to Switch				
		Wiring of light circuit from Distribution Board to switch, with Three nos. single core 2.5 Sqmm PVC insulated 450/750 volts grade stranded copper conductor cables in concealed PVC conduits (conduits partly shared) including PVC conduit, and conduit accessories etc. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1575+1350+1575+1896)	RMtr	6396		
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (525 +450+525+632)	Rmtr	2132		
ii)		Switch to light point & point to point wiring				
		Wiring from switch to light or fan point with 3 nos. single core 1.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(ii))	Supply and erection of single core PVC insulated copper conductor cables in prelaidd PVC pipe/M.S conduit G.I pipe/wooden strip batten/wooden casing and capping/G.I wire/trenches (rate for cables only) i) Cost of 1x 1.5 mm (3/0.029")	RMtr	1188		
b	ch/24/3 (ii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. ii) 20 mm i/d	Rmtr	396		
iii)		Switch to Switch				
		Wiring from switch to switch with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				



a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper 38.1 conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1350)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (450 m)	Rmtr			
iv)		Distribution board to General Purpose (5A/13A) socket				
		Wiring of circuit from Distribution Board to 5A/13A ,230Volts with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts graded , 2&3 pin switched socket, stranded copper conductor cables in concealed PVC conduit, including conduit accessories, etc(conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo,popular,easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1575)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (525 m)	Rmtr			
v)		Socket to Socket				
		Wiring from 5 Amps, 2&3 pin socket to socket with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade solid or stanerd copper conductor cables in concealed PVC conduit including PVC conduit,Conduit accessories, etc complete. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo,popular,easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1896)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (632 m)	Rmtr			
vi)		Distribution board to AC 20Amps DP socket				



		Wiring of circuit from distribution board to 15A, 230Volts, DP switch with 3 nos. single core 4Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc (conduit partly shared for A/Cs). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iv))	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I. pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iv) 7/0.91 mm (7/0.036")	RMtr	1500		
b	ch/24/3 (iv)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iv) 32 mm i/d	Rmtr	500		
2		LT CABLES				
		Supply at site, installation, testing and commissioning of PVC insulated armoured copper conductor cable 600 / 1000 Volt grade (or otherwise mentioned in cable description) in prelaid 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
i)	ch/24/13 (c v)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- v) 6 mm sq (7/0.044")	R.Mtr	100		
ii)	ch/24/13 (c viii)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- viii) 25 mm sq (19/0.052")	R.Mtr	120		
iii)	ch/24/13 (c xiii)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- xiii) 120 mm sq (37/0.83")	R.Mtr	50		
3		GROUNDING SYSTEM				
i)		Grounding Cables				



		Supply at site, installation, testing and commissioning of PVC insulated non armoured copper conductor cable 450/750 Volt grade (or otherwise mentioned in cable description) 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/12 (ii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- ii) 6 mm sq (7/0.044")	R.Mtr	100		
b	ch/24/12 (iv)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- iv) 16 mm sq (7/0.064")	R.Mtr	120		
c	ch/24/12 (vii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- vii) 50 mm sq (19/0.072")	R.Mtr	50		
4		<u>CONDUITS, PIPES, DUCT, CABLE TRAYS, FIXING CLAMPS AND FIXING ARRANGEMENTS</u>				
		Supply, installation, testing and commissioning of following conduits laid under floor for telephone/ data cables , optical fiber cables, Sub main power cables & earth cables including all conduit accessories. The PVC conduits shall be laid under floor including chiseling and cutting of floor for required dimensions, laying of conduit, backfilling of remaining cavity with CC as specified for floor in that area, making good, complete in all respect. conduit made of solo, popular, easyfit or equivalent as approved by engineer incharge.				
i)		<u>PVC Conduit</u>				
a	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d	Rmtr	100		
b	ch/24/6 (i)	Supply and erection of PVC pipe for wiring recessed in wall including inspection boxes pull boxes, hooks, cutting jharries, and repairing surface, etc, complete with all specials ii) Cost of 50mm	Rmtr	120		



c	ch/24/6 (ii)	Supply and erection of PVC pipe for wiring recessed in wall including inspection boxes pull boxes, hooks, cutting jharries, and repairing surface, etc, complete with all specials ii) Cost of 80mm	Rmtr	50		
d	ch/24/6 (iii)	Supply and erection of PVC pipe for wiring recessed in wall including inspection boxes pull boxes, hooks, cutting jharries, and repairing surface, etc, complete with all specials iii) Cost of 100mm	Rmtr	50		
5		DISTRIBUTION BOARDS				
		Supply at site, fabrication, installation, testing and commissioning of Distribution Board (DB) , made of sheet steel 16 SWG, degreased and derusted, with 2 coats of antirust paint, 2 coats of powder coated paint of approved colour, protection classification IP-44, totally enclosed indoor floor mounting cubicle type in free standing design, with hinged door, handle including cost of all auxiliaries, internal wiring, designation lables on MCCBS, grounding bar suitable for system Voltage 415 V, 50 Hz, 3 Phase and neutral bus bars of 99.9% electrolytic copper, including cost of cable terminal blocks wiring from breakers, brass cable glands, all accessories complete in all respects. All incoming and outgoing breakers shall be accessible only by opening the front door having further M.S. sheet cover gaskets shall also be provided where necessary. Panel should be compeltely made in certified factory. ie PEL, Green T & D, Mazcorp engineering or equivalent approved by engineer incharge.				



		All MCCBs shall be suitable to operate without any derating at 40°C ambient temperature and shall be of one make only. The sides of MDB shall also have louvers at bottom and top on sides of panel for hot air exhaust, wire mesh etc. The back of the panel shall be lockable door instead of bolted and shall conform to single line diagram. item should be of Schneider, Terasaki or equivalent approved by engineer incharge				
i)		MAIN-DB				
	ch24-91(a-i)	P/F floor mounted Electric Panel board of required depth and size, fabricated with 14SWG M.S sheet (Indoor/Outdoor Type), derusting, zinc Phosphated, finish with electro static powder coating in approved colour i/c the cost of Lock, Indication lights, thimbles, Copper Comb, Wiring, Neutral & Earth Bar, glands, Current Transformers of specified capacity, Door Earthing, Brass glands, bus bars, controls complete in all respects as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). i) LT Switchboards (a) 2.50 Ft deep (i) 300-600A	CFT	9		
		INCOMING				
	ch24-87/(a-vi)	Supplying, installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (vi) 125-250 Amp (25 KA)	Each	1		
		OUTGOING				
		Supplying, installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge				
	ch24-87/(a-ii)	a) Triple Pole (ii) 15-100 Amp (10 KA, 15 KA)	Each	6		
ii)		DB-LIGHTING				
	ch24-90(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights, Thimble, Copper Comb, Wiring, Neutral & Earth Bar, Door Earthing, Digital Voltmeter, Digital Ammeter, Volt Selector Switch, Ammeter selector switch, Current Transformers and Controls Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75-100A	CFT	9		



		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	21		
iii)		DB-POWER-LS				
	ch24-90/(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75~100A	CFT	9		
		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	18		



iv)		DB-POWER-RS				
	ch24-90/(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75~100A	CFT	9		
		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaid DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	18		
v)		DB-POWER-US				
	ch24-90/(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75~100A	CFT	9		
		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		



		OUTGOING				
		Supplying, Installation and commissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMANY/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	10		
6		MISCELLANEOUS FITTINGS				
		Providing and fixing Copper winded Exhaust fan with louver and shutter made of Pak/Younas/G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
	ch24-102/(a-i)	(a) Plastic body (i) 10" dia	Each	17		
7		WIRING ACCESSORIES				
		P/F PVC double layer Switch kit Faceplate with specified switch holes i/c the cost of switches / sockets / dimmer made of Hi-Life / Bush / Schenider, screws complete as approved and directed by the Engineer Incharge				
		(a) One way Gange Switch				
	ch24-103 (a-vi)	(vi) Fan Dimmer	No.	23		
	ch24-103 (a-i)	Small (i) 01 Gange	No.	3		
	ch24-103 (a-ii)	Small (ii) 02 Gange	No.	4		
	ch24-103 (a-iii)	Small (iii) 03 Gange	No.	33		
	ch24-103 (a-iv)	(iv) Three pin Light Plug 10/13 Amp	No.	59		
	ch24-103 (a-i)	Large (i) 04 Gange	No.	1		
	ch24-103 (a-iii)	Large (iii) 06 Gange	No.	2		
	ch24-103 (a-viii)	(viii) Three Pin Power Plug 15-32 Amp	No.	20		
		P/F PVC concealed Switch kit Box i/c the cost of screws complete as approved and directed by the Engineer Incharge				
	ch24-104 (i)	(i) Small	No.	96		
	ch24-104 (ii)	(ii) Large	No.	23		



8		CCTV System				
i		Camera Cable				
		Supply, Installation and commissioning of wiring with 4-pair data Cable, 23 AWG UL/EN listed cable * Conforming to following standards: TIA/EIA 568 / ISO/IEC 11801, in prelaidd conduit / cable tray from including all accessories, Manufacturer/OEM Authorization, Make: Schneider / i-connect UK/3M Corning USA/ D-Link/ Pollo Australian or equivalent complete in all respect as approved and directed by Engineer Incharge.				
	ch24-106 (a-ii)	a) UTP (Unshielded Twisted pair) (ii)CAT-6A (Min.1G/ 10G @ 500MHz or higher)	MTR	120		
9		AC PIPING INSULATION				
		Supply & installation closed cell type Aluminium foil faced XLPE (Cross linked polyethelene) polyolefin pipe insulation tube of density 25 Kg/m ³ of specified thickness & thermal conductivity 0.035 w/m °C and fire retardent of Class "o" rating as specified for refrigerant copper piping as approved by the Engineer Incharge. a) 20 mm thick				
	ch27-21(a-i)	(i) 1/4" dia	ft	190		
	ch27-21(a-ii)	(ii) 3/8" dia	ft	100		
10		Control Wire				
	ch24-13(b-iii)	Supply and erection of copper conductor cables for serviceconnection, in prelaidd pipe/G.I. wire/trenches, etc. (rate for cable only):- b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable: iii) 7/0.74 mm (7/0.029")	Rmtr	120		
11		Drain Pipe				
	ch23/47(a-i)	Providing,laying,testingandcommissioning of POLY PROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex/Popular/Beta/BBJ) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directed by Engineer Incharge.(Internal/External Diameters mentioned). a)PN-16 pipe (i)(1/2") 20 mm	MTR	120.00		
Total of MRS Items						
1		LIGHT FIXTURES				
		Supply, installation, testing and commissioning of following light fittings, ceiling, recessed,wall mounted as per specified fixture. Complete with internal wiring, Grounding terminal , driver complete in all respects. Lights should be of ledvance, Osaka or equivalent approved by engineer incharge				
i)	NSI	20 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	89		
ii)	NSI	15 Watt (White) LED Light Fixture surface/recessed mounted, IP-22 rated	No.	41		
iii)	NSI	10 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	32		



2		MISCELLANEOUS FITTINGS				
		Supply, installation, testing & commissioning of Ceiling/ Exhaust fan. The ceiling/exhaust fan shall comprise circular fan metallic/ plastic body, metallic fan blades, down rod (if necessary) of suitable dia & length, AC capacitor, internal wiring, terminals all installation & operational accessories as per tender specifications, as per site requirements and as directed by the Engineer. make Bilal Switchgear Engineering, GFC, Pak Fan or approved equivalent by engineer incharge				
i)	NSI	56" dia ceiling fan suitable to give an air displacement of minimum 8000 Cu. ft./ min. Fan shall be made with 99% purity Copper windings.	No.	23		
3		WIRING ACCESSORIES				
		Supply at site, installation, testing and commissioning of the following wiring accessories, complete in all respects. Made of TJ, HiLife or equivalent approved by engineer incharge				
i)	NSI	Appropriate size of plastic body fan box and ceiling fan rod 24" in length	Nos	23		
4		Fire Alarm System				
		(General Description) Supply, installation, testing and commissioning of following items as per drawings, specifications, & instructions of the Engineer, complete in all respect, all item should be of Gent by honeywell, ETON uk or approved equivalent as per instructions by the Engineer as required.				
i)		Manual Call Point				
	NSI	Supply, install testing and commsiong of manual call point RESET type with allied components with full functionality as per specification of manufacturer / drawing with proper staff and tools and plants etc.Input Source Zone signal Address Coding dip switch Operating Voltage 26V DC Alarm Current 6mA Quiescent Current 850µA Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	2		
ii)		Smoke Detector				
	NSI	Supply, install testing and commsiong of Addressable Optical Smoke Detectors incorporating a with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds.Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850µA Sensitivity Setting Comply to EN54 Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	32		
iii)		Heat Detector				



		Supply, install testing and commisioning of Low profile intelligent analogue addressable multi sensor with combined optical thermal sensors in a single housing with dual LED for 360 deg. viewing and mounting base. Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850μA Sensitivity Setting Comply to EN54 Thermal Setting 58°C Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	1		
iv)		Sounder				



	NSI	Supply, install testing and commisiong of Intelligent analogue addressable Loop powered sounder with flasher and red body and wall mounting base.Input Source Zone signal Address Coding Binary dip switch Operating Voltage 26.5V DC Standby Current Under 850µA Alarm Current Under 8mA Sound Output 90 ±4dB at 1 meter Sunder Output 2.3~3.4KHz Ingress Protection IP65 Ambient Temperature -20°C ~ +50°C Ambient Humidity 10% ~ 95% Material Fire-proof plastic	Each	2		
v)		FACP				
	NSI	Supply, install, testing and commisiong of Addressable FACP. Each loop can connect up to 250 addressable devices. Maximum networking are 32 loops and total addressable points are 8000. Large LCD screen (40 x 15 lines) allows more events to be displayed on the same screen. Power 220V AC 50/60Hz *Others also available Battery Capacity 24V DC 4Ah Charging Voltage, Current 26V DC 100~400mA *With auto adjustment function Zone Voltage, Current 26.5V DC 340mA System Capacity 250 devices/1 loop *Expandable for site requirement Exterior Resistance Round-trip under 40Ω Transmitting Method Digital series transmitting Accumulation Time 0~40 seconds Main Sound 85dB @1M Material 1.6mm steel plate	Each	1		
vi)		Cable				
	NSI	Supply, install testing and commisiong of 2 x 2.5 mmsq shielded drain wire, 30 minutes fire resistance,red, LPCB approved, BS 7629-1/2008, BS 5839-1 standard in 25 mm dia pvc conduit complete in all respects including cost of conduit and its accesories installing arrangment, making juries in wall and repairment of wall .(Newage, Pakistan Cable, Fast or approved equivalent). conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.	Rmtr	150		
vii)		Programming, Testing and Commissioning				
	NSI	Programming, Testing and Commissioning of Complete system by authorized certified company complete in all respects as per instructions of the Engineer.	Job	1		
viii)		Fire Extinguishers				
	NSI	Supply & installation of 1 x 6kg DCP CO2 Fire Extinguishers installed as per instructions of Cleint, complete with wall hanging and mounting arrangement complete in all respects. Complete in all respect as per instructions by site engineer	Nos.	2		



5		GROUNDING SYSTEM				
i)		Earthing system with road				
	NSI	Supply and install pair of earth electrode comprising 13ft (4m) long 2" (50mm) dia G.I. pipe having 3/8" (10mm) dia holes at 20" (500mm) c/c all along the length of pipe buried 40ft (6.09m) underground in upright position including all accessories for complete installation such as nuts bolts, washers 2x3/0 SWG copper conductor earthing lead complete in all respect	No.	1		
ii)		Grounding Connection Point				
	NSI	Supply of Grounding connecting points consisting of copper plate 300mm long x50mm wide x 6mm thick to be installed, complete with fixing arrangement, brass nuts bolts, washers, lugs, 12.5mm dia. holes to facilitate connections of Incoming copper strips / copper conductors.	Nos.	1		
iii)		Testing and commissioning				
	NSI	Testing and commissioning of the earthing system in the presence of site engineer with electronic devices such as megger etc, making so report with after approximating 3 time testing and the grounding ohm must be less than or upto 3 ohms	Nos.	1		
6		Air Conditioning				
		Providing, shifting, fixing, testing, commissioning, adjusting and balancing of standard (Cool only) DC inverter technology air conditioning units, including indoor evaporating and out door condensing unit, the indoor units wall mounted of capacities as specified below, complete with factory charged refrigerant, piping insulation including condensate copper piping connection, between indoor/outdoor units conduiting and any additional charge of refrigerant accessories, and Drain piping upto nearest drain water line included in these rates making the job complete in all respect. AC should be of Haier, dawance, gree or equivalent, copper piping should be of muller, trox and insulation of Durkflex or equivalent, Drain pipe should be 3/4" dia pvc pipe of master, turkplast or equivalent as approved by engineer incharge				
		1/4 and 1/2 copper piping should be used till 1.5 ton AC and 5/8 and 3/8 piping should be used for 2 ton AC and 3/8 and 1/2 for 4 ton AC between indoor and outdoor unit.				
		The AC Unit should maintain approx 11 BTU per cubic feet plus addition of 3000BTU in the total amount for persons and devices				
i)		Copper pipe				
a	NSI	Supply, installation testing and commissioning of Copper piping 1/2 & 1/4 insulation and control wire including making jharies and repairing of surface with all necessary item job must be complete in all respect	RFT	200		
b	NSI	Supply, installation testing and commissioning of Copper piping 5/8 & 3/8 with insulation and control wire including making jharies and repairing of surface with all necessary item job must be complete in all respect	RFT	80		
7		Duct Panel				
		Supply at site and installation of dura duct on wall where necessary on per instruction of engineer incharge				
i)	NSI	16 x 16 mm	Rmtr	200		



ii)	NSI	16 x 25 mm	Rmtr	100		
Total of Non-MRS Items						
Grand Total						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
FACULTY HOSTEL**

BILL OF QUANTITIES

EXTERNAL CIVIL WORKS

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-10/3	Providing, laying, watering and ramming brick ballast 1½" to 2"(40 mm to 50 mm) gauge mixed with 25% sand, for floor foundation, complete in all respects.	%Cft	1669.7		
2	C-10/41-c	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope Complete in all respect. (50% Grey / 50% Coloured) c) 80-mm thick	P.Sft	3339.36		
3	C-6/53-(ii)	Providing & fixing precast Edge Kerb Stone (4" to 6" thick) and 14" high of Compressive Strength of 3500 PSI laid in cement sand mortar (1:3) over pre-laid brick masonry for drain cum footpath etc complete in all respect.	P.Rft	358.30		
4	C-6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4	%Cft	557.7		
Total of MRS ITEMS						
GRAND TOTAL OF CIVIL WORKS						





Islamia University of Bahawalpur – IUB

**CONSTRUCTION OF FACULTY HOSTEL
FOR THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB-CAMPUS AT AHMADPUR
EAST UNDER THE PROJECT TITLED
“STRENGTHENING OF ISLAMIA UNIVERSITY OF
BAHAWALPUR & ITS SUB CAMPUSES”**

Bill of Quantities

May, 2023

**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST
FACULTY HOSTEL**

BILL OF QUANTITIES

SUMMARY OF COST

Sr. No.	DESCRIPTION	AMOUNT
1.	CIVIL WORKS	
2.	PUBLIC HEALTH WORKS	
3.	ELECTRIC WORKS	
	(Main Building) TOTAL - A	
4.	EXTERNAL DEVELOPMENT	
	(External Civil Works) TOTAL - B	
	SUB-TOTAL (A + B)	
	ADD PST	
	GRAND TOTAL	



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
FACULTY HOSTEL**

BILL OF QUANTITIES

CIVIL WORKS

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-3/21(i)-(ii)	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m) a) By Manual: in ordinary soil.	%0Cft	28294.0		
2	C-26/43	Spraying anti termite proofing by using liquid FMC Biflex 2.5%EC Per Sft 1.20 10.00 Sq.m 13.00 107.50 Mixing Ratio 1:50=137-Sft or using liquid MIRAGE All Akbar /RANGERS Auriga 5% SC Mixing Ability-HEXTAR Ratio 1:110=205-Sft or any other equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect .as approved by the Engineer Incharge	P.Sft	34183.6		
3	C-6/5(i)	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):Ratio 1:4:8	%Cft	2035.7		
4	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	4955.9		
5	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	6335.5		
6	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for First Floor.	P.Cft	1825.1		
7	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Under Plinth Level	P.Cft	759.8		
8	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	1102.9		
9	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for First Floor.	P.Cft	29.5		
10	C-6/12(c)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- Deformed bars (Grade-60)	%Kg	54323.2		
11	C-7/4(i)	Pacca brick work in foundation and plinth in Cement,sand mortar. Ratio 1:6	%Cft	8291.9		
12	C-3/15(i)	Filling, watering, ramming earth under floors (with surplus earth foundation).	%0Cft	9431.3		
13	C-3/15(ii)	Filling, watering and ramming earth under floors:-ii) with new earth excavated from outside lead upto one chain (30 m).	%0Cft	32685.5		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
14	C-3/17	Transportation of earth all types when the total distance, this rate will be paid in addition to the including the lead covered in the item of work, is more than rate of earthwork, without deducting 1000 ft. (300 m) (Lead will be paid as per actual but not more than 7km)				
	a	upto ¼ mile (400 m).	%Cft	32685.5		
	b	for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	%Cft	32685.5		
	c	for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	%Cft	32685.5		
15	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:5	%Cft	9214.6		
16	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:4	%Cft	225		
17	C-11/11(b)	Cement plaster 1:5 upto 20' (6.00 m) height:- ½" (13 mm) thick. (Internal Ground Floor)	%Sft	16639.1		
18	C-11/11(c)	Cement plaster 1:5 upto 20' (6.00 m) height:- c) ¾" (20 mm) thick. (Internal Ground Floor)	%Sft	9768.0		
19	C-11/9(c)	Cement plaster 1:4 Ground Floor:- c) ¾" (20 mm) thick (External)	%Sft	14822.7		
20	C-7/38-(i)	Providing and laying fair face Gutka cladding laid in (1:2) cement / red posso mortar having 1/4" thick groove finish i/c cost of 8 SWG wire in shape of 8 placed horizontally and vertically at 36" and 18" c/c respectively i/c cutting charges as per approved drawing , complete in all respect as approved and directed by the Engineer Incharg i. 2-1/4" x 2-1/4" x 9"	P.Sft	6611.43		
21	C-11/10(b)	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only Ground Floor ratio 1:3.	%Sft	9745.0		
22	C-11/23-a-(iii)	Distempering:- a) new surface:- 3 coats	%Sft	36152.11		
23	C-13/46	Providing and applying wall putty of 2mm thickness over plastered surface (new surface) to prepare the surface even and smooth complete in all respect.	%Sft	72304.21		
24	C-13/33-a-(i+ii)	Providing and applying weather shield paint of approved quality on external surface of building including preparation of surface, application of primer complete in all respect: a) new surface: Two coats	%Sft	8211.30		
25	C-10/3	Providing, laying, watering and ramming brick ballast 1½" to 2"(40 mm to 50 mm) gauge mixed with 25% sand, for floor foundation, complete in all respects.	%Cft	5889.4		
26	C-6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):- (f) Ratio 1: 2: 4	%Cft	1967.1		
27	C-10/15(e)	Providing and laying topping of cement concrete 1:2:4, including surface finishing and dividing in panels:- (e) 2"(50 mm) thick	%Sft	2318.9		
28	C-9/35 (iii)	Providing and laying roof insulation, comprising of single layer of tiles 9"x4½"x1½" (225x113x40 mm) grouted with cement sand mortar 1:3 laid over 2" (50 mm) thick earth (including mud plaster) over thermopore sheet, over polythene sheet 300 gauge over a layer of bitumen, complete in all respects:- iii) Thermopore sheet 1" (25 mm) thick	%Sft	9745.0		
29	C-9/15	Khuras on roof 2"x2"x6" (600 x 600 x 150 mm)	Each	14.0		
30	C-10/22(b)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (b) using white cement. Ground Floor	%Sft	7533.68		
31	C-10/40(a)	Providing and fixing marble strip of any shade for dividing the mosaic flooring into panels. Size 1½" x 3/8" (40 x 10 mm)	P.Rft	4896.89		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
32	C-10/37 (b-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (b) using white cement : ii) ½"(13 mm) thick	%Sft	593.22		
33	C-10/22(a)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (a) using Grey cement. Ground Floor	%Sft	288.56		
34	C-10/37 (a-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (a) using Grey cement : ii) ½"(13 mm) thick	%Sft	626.24		
35	C-10/24(i)	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over ¾" thick (1:2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24"/8"x24"/12"x36"	P.Sft	1034.24		
36	C-10/25(i)	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting/dado of approved Color and Shade with adhesive bond over 1/2"thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24"/8"x24"/12"x36"	P.Sft	3133.02		
37	C-10/45 (ii)	Providing and laying flooring with China Verona Marble having uniform texture (Spotless) of required size and specified thickness, with adhesive bond over ¾" thick bedding of (1:2) cement sand mortar i/c the cost of matching sealer, cutting, grinding and chemical polishing complete in all respect as approved and directed by the Engineer Incharge.ii) ¾" thick (12"x24"/12"x36")	P.Sft	567.01		
38	C-10/48	Extra for Beveling charges of marble edge in approved design complete in all respects i/c the cost of Carborandum disc as approved and directed by the Engineer Incharge.	P.Rft	88.88		
39	C-10/49	Extra cost for making hole in Marble slab for fixtures, Sink, burners, basin Vanities i/c cost of beveling of internal edge as approved and directed by the Engineer Incharge.	Each	1.00		
40	C-12/8 - (i)	P/F 1½" (40mm) thick semi solid panelled or panelled and glazed doors comprising of solid wood styles and rails of specified width and panels of 2.5 mm thick veneer ply matching with wood used with grooves , pasted on both sides of 1" thick Lasani wood panel with tapered edges i/c the cost of tower bolt ,handles complete in all respect (Excluding the cost of chowkat frame,sliding bolt and lock) as approved and directed by Engineer Incharge (i) Deodar Wood	P.Sft	80.80		
41	C-12/51	P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Commercial ply compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt , handles, glue, sawing charges, Painting charges, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.	P.Sft	554.49		
42	C-12/61 (b) - (ii)	P/F ¾" dia heavy duty sliding bolt of specified material i/c the cost of hardware complete in all respect as approved and directed by the Engineer Incharge. (ii) 12" (300 mm) long	Each	23.00		
43	C-12/22	Providing and fixing, approved quality mortice lock	Each	23.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
44	C-12/17 - (ii)	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.(ii) 10.50 " wide	P.Sft	554.49		
45	C-13/5 c(i+ii)	Painting new surface:- c) Preparing surface and painting of doors and windows any type (including edges):- 3 coats (Chowkats)	%Sft	1008.54		
46	C-25/51	Providing and fixing all types of partly fixed and partly openable glazed anodised bronze colour aluminium doors, using deluxe section of M/s Al-Cop or Pakistan Cables, having chowkat frame of size 40 x 100 mm (1 1/2" x 4") and leaf frame of 60x40mm (2 1/2"x1 1/2") wide sections including the cost of 1/4" (5 mm) thick imported tinted glass with aluminium triangular gola and rubber gasket to support the glass and leaf edging, using approved standard fittings, locks, 3" (75 mm) wide long handles etc., and hardware any required as approved by the engineer in-charge.	P.Sft	24.2		
47	C-25/52	Providing and fitting all types of glazed aluminium windows of anodised bronze colour partly fixed and partly sliding using deluxe sections of approved manufacturer having frame size of 100 x 20 mm (4"x3/4") and leaf frame sections of 50 x 20 mm (2"x3/4"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge.	P.Sft	1116.1		
48	C-25/53	Providing and fixing Aluminum Fly screen comprising of Fiber / Aluminum wire gauze (Malasian) fixed in aluminum frame of approved manufacturer brownze colour / powder coated of size 1- 1/2" x 1/2" and 1.6mm thick with rubber gasket i/c cost of hardwares as approved and directed by the engineer incharge complete in all respect.	P.Sft	1116.1		
49	C-25/59-(ii)	Providing and fixing M.S. grill fabricated with MS Square polished Vertical/ horizontal Bars of specified size @ 4" c/c ' passed through punched holes in MS Patti of 1-1/4"x1/8" i/c the cost of 1-1/4"x1/8" MS patti for Frame of windows and painting 3 coat complete in all respect as approved and directed by the Engineer Incharge. (ii) 1/2" Squar Bars	P.Sft	1116.05		
50	C-25/64	roviding and fixing 2'-9" high stair railing comprising of non magnetic (304) Stain less steel 2" dia pipe railing of 18 SWG welded with vertical posts of 2" dia stainless steel round/ Squar pipe/ Tong (chimta) @ 2-ft c/c fixed on alternate steps with 3" long steel screws and brass rawal plugs , 3-Nos diagonal stainless steel pipes of 1/2" dia passes through goties fixed on vertical post, i/c stainless steel welding, fixing & polishing complete in all respects as approved and directed by the Engineer Incharge.	P.Rft	50.50		
51	C-10/44	Providing and laying 3/8 inch thick superb class Multani tiles of specified size and design of approved Color and Shade with adhesive bond, over 1/2" thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.	P.Sft	358.67		
52	C-13/9(i)	Bitumen coating to plastered or cement concrete surface:-i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	%Sft	1169.0		
53	C-26/37(ii)	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.ii)500 gauge (.005" thick)	P.Sft	10914.0		
54	C-19/40 (iii)	Supply and fitting of cast iron manhole cover with frame, etc. complete. iii) 60 cm (24") dia	Each	2.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
55	C-21/13	Providing and fixing 1½"x1½"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	12.00		
56	C-6/31	Providing embedding 10" (250 mm) wide ½" (6 mm) thick rubber water stopper in expansion joints of R.C.C. roof slab complete in all respects.	P.Rft	101.00		
57	C-6/55	Providing and mixing super plasticizer (water reducing admixture) as defined in ASTM C-94 in order to achieve the required consistency / workability measured by the slump, used in the ratio of (0.05% to 1.00%) by weight of cement as proposed by the designer etc complete in all respect.	P.Ltr	1912.64		
58	C-26/44(ii)	Supply and Erection of Car Parking Shed consisting of 3 mm thick fiber glass sheet roof (3-layers) fixed / riveted on moulded curved frame of M.S box pipe 1-1/2"x1-1/2"16-SWG supported on trusses of MS angle iron 1-1/2"x1-1/2"x3/16" all around duly supported on M.S sheet 6"x6"x1/4" welded on GI pipe post (Medium Quality) of specified diameter embeded in P:C:C (1:2:4) i/c the cost of excavation, cutting straightening assembling, bending as per design, welding / grinding of joints and painting three coats complete in all respect as approved and directed by the Engineer Incharge. (ii) 3" dia GI pipe Supports (Open to Sky Area Cover with Fiber Glass Sheet 1 feet Cantelever Beyond Wall)	P.Sft	300.00		
59	C-1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Sargodha to Ahmadpur East 399 KM) (Lead will be paid as per actual but not more than 399km)	%Cft	18819.74		
Total of MRS ITEMS						
1	NSI	Excavation in foundation of building, bridges and other structures, including dag belling, dressing refilling around structure with excavated earth, watering and ramming, lead upto one chain (30 metre) and lift 5 ft. to 10 ft:- In ordinary soil.	%0Cft	10817.81		
2	NSI	Providing and laying structural pad for foundation made of selected granular fill material (Mixture of 70% gravel and 30% sand of approved quality and grade) including placing, mixing, spreading and compaction of sub-base material to required depth, grade to achieve 95% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as approved by the Engineer incharge.	P.Cft	9615.83		
3	NSI	Providing and fixing UPVC Doors 38mm thickness i/c delux matching color UPVC frame matt or glossy finish having color (white-Gray-Marble Gray-Oak Wood- Dard Oak Wood, Coffee Wood Honey Pine Wood-Mahagony-Marry Gold-Chocolate Brown-Honey Dew) i/c all accessories i/c mortice locks complete in all respect as approval by the Engineer incharge.	P.Sft	282.80		
4	NSI	Providing and fixing steel Fire Rated Emergency Exit Door ,Door manufactured as per NFPA 252 & UL 10C standards Steel Door (MS) Size: 60" x 98" Double Leaf door, Filled with fire-rated material With Inner Steel Stiffeners for reinforcement. Door Leaf 1.2-1.5mm, Door Frame 1.5- 2.0mm, Accessories: Hinges, Panic Bar On single Leaf, SS Handle, Glass 12x24 ft, and Door closer including carriage complete in all respect as approved & directed by the Engineer/ Incharge. (TECHNO (PVT) LTD or Equivalent)	Each	2.00		
5	NSI	Providing and fixing Stainless Steel (24 SWG) Letters 18" height with CNC laser cutting i/c all hardware required complete in all respect as per drawings and direction of Engineer In-charge.	Each	15.00		
6	NSI	Providing and fixing Stainless Steel Logo 7"x7" with colour print including the cost of fitting accessories complete in all respect as per drawings and approval of Engineer Incharge.	Each	1.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
7	NSI	Providing and fixing stainless steel mesh of 16 guage fixed with nails for concrete and bricks joint complete in all respect and as approved and directed by the Engineer Incharge.	P.Sft	3322.00		
Total of Non MRS ITEMS						
GRAND TOTAL OF CIVIL WORKS						



ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST FACULTY HOSTEL						
BILL OF QUANTITIES						
PUBLIC HEALTH WORKS						
SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		SANITARY FIXTURES AND FITTINGS				
1	Ch 19/3	Providing and fitting European Coupled set of Water Closet (WC) and flushing Cistern of PORTA brand (full size) i/c the cost of CP /rubber connection, thimble, seat cover and rawal bolts complete in all respects as approved and directed by the Engineer Incharge.	Each	8.00		
2	Ch 19/4	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest. i) white	Each	8.00		
3	Ch 19/13 (i)	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white	Each	8.00		
4	Ch 19/8	Providing and fixing stainless steel sink with drain board, size 120x60 cm (48"x24") including bracket set, waste pipe and waste coupling.	Each	1.00		
5	19/16	Providing and fixing, chromium plated soap dish.	Each	16.00		
6	19/18	Providing and fixing, chromium plated toilet paper holder.	Each	16.00		
7	19/19 (i)	Providing and fixing, chromium plated towel rail:- i) 60 cm (24") long, and 2 cm (¾") dia.	Each	16.00		
8	19/49 a (i)	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 ncluding the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (a) P-Trap (i) 4" dia	Each	16.00		
9	19/36	Providing and fitting 10 cm (4") gully trap, including cement concrete, cost of PVC grating 15x15 cm (6"x6") and masonry chamber 30x30 cm (12"x12").	Each	8.00		
10	19/55 (5) ii	Providing and fixing chromium plated bottle trap with waste pipe, etc. complete ii) 4 cm (1½")	Each	1.00		
11	21/3 (i)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-79, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc., complete i) 310 mm (12") i/d	P.Rft	250.00		
12	3/42 (i)	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including 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: - i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000 Cft	2,250.00		
13	3/24 (c)	Compaction of earthwork (soft, ordinary or hard soil) :- c) Ramming earthwork (all types of soil).	1000 Cft	2,250.00		
14	3/13 (a)	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel	1000 Cft	2,250.00		
15	19/31 (i)	Providing and fixing gun metal peet/gate valve (screwed):- i) 30 mm (1¼") dia	Each	6.00		
16	19/31 (ii)	Providing and fixing gun metal peet/gate valve (screwed):-ii) 40 mm(1½") dia	Each	6.00		



SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
17	Ch 19/49 b (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (b) Multi-Trap (i) 4" dia	Each	8.00		
18	Ch 19/49 d (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (d) Clean Out (i) 4" dia	Each	4.00		
19	19/52 (v)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (v) Muslim shower	Each	16.00		
20	19/52 (iii)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (iii) Double Bib Cock	Each	16.00		
21	19/52 (iv)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (iv) Open Type Wall Shower	Each	16.00		
22	19/25 (ii)	Providing and fixing chromium plated stop cock, heavy:- ii) 1.5 cm ($\frac{1}{2}$ ")	Each	26.00		
23	19/27 (ii)	Providing and fixing chromium plated bib cock:- ii) 1.5 cm ($\frac{1}{2}$ ")	Each	4.00		
24	19/7 (v)	Providing and fitting glazed earthen ware wash hand basin /vanity 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc. v) Under Counter Vanity Basin	Each	16.00		
25	19/30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	16.00		
26	Ch 23/47	<u>WATER SUPPLY PIPES AND FITTINGS</u>				
		Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex /Popular/ Beta / BBJ) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN 8077-8078 code i/c cost of solvent, specials, making jharies complete in all respect as approved and directed by Engineer Incharge. (Internal/External Diameters mentioned) b) PN-20 pipe				
	ii	3/4" (25 mm) dia.	Rft	470.00		
	iii	1" (32 mm) dia.	Rft	350.00		
	v	1 1/2" (50 mm) dia	Rft	160.00		



SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
	vi	2" (63 mm) dia.	Rft	180.00		
27	Ch 19/47	SOIL, WASTE, VENTILATING PIPES & FITTINGS				
		Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe make of dadex /Popular/Beta/BBJ plain /socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. Type (SDR 32.5/SN-8)				
	iii	60 mm (2") dia.	Rft	170.00		
	iv	85 mm (3") dia.	Rft	300.00		
	v	110 mm (4") dia.	Rft	350.00		
28		VALVES				
	Ch 23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified diameter made of Faisal/Sonex / Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
	ii	3/4 inch	Each	8.00		
	i	1/2 inch	Each	4.00		
		GEYSER				
29	Ch 19/53 (iii)	Providing /fixing Gas water heater (Geyser) of specified capacity, comprising of water tank made of 14 SWG steel sheet and cover with 20 SWG MS sheet, best quality of approved make of Corona / Ambassador /Super Asia/ Canon i/c the cost of non return valve, imported thermostat, G.I. accessories, safety valve and making connection with existing water supply pipe line complete in all respects as approved and directed by the Engineer Incharge. (iii) 55 Gallons	Each	2.00		
TOTAL OF MRS ITEMS						
1	NSI	Providing and fixing, floor trap of PVC, including concrete chamber all round, and C.I. grating:- (Master, sonex or Equivalent).	Each	34.00		
2	NSI	Providing and fixing looking glass 5 mm thick size as per requirement/ drawings and direction of engineer incharge complete in all respect. (Ghani Glass or Equivalent)	Sft	144.00		
3	NSI	Providing and fitting Chromium plated floor Trap Jali 6"x6" double filter National and as approved by the Engineer incharge complete in all respect.	Each	34.00		
		MANHOLE				
4	NSI	Making of manhole size 3'x2-1/2'x3' brick work, plaster complete as requirement including RCC manhole cover 22" dia with Tee shape C.I. frame complete in all respect as per engineer Incharge.	Job	9.00		
		WATER COOLER				
5	NSI	Providing and fixing Domestic type electric water cooler of 85 ltrs cap body SS Pressure type Canon (DWC-85) or equivalent complete in all respects as approved by the Engineer incharge.	Each	1.00		
TOTAL OF NON-MRS ITEMS						
GRAND TOTAL OF PUBLIC HEALTH WORKS						



ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB						
BILL OF QUANTITIES						
ELECTRICAL WORKS						
Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
1		WIRING IN CONCEALED CONDUITS				
i)		Distribution board to Switch				
		Wiring of light circuit from Distribution Board to switch, with Three nos. single core 2.5 Sqmm PVC insulated 450/750 volts grade stranded copper conductor cables in concealed PVC conduits (conduits partly shared) including PVC conduit, and conduit accessories etc. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1575+1350+1575+1896)	RMtr	6396		
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (525 +450+525+632)	Rmtr	2132		
ii)		Switch to light point & point to point wiring				
		Wiring from switch to light or fan point with 3 nos. single core 1.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(ii))	Supply and erection of single core PVC insulated copper conductor cables in prelaidd PVC pipe/M.S conduit G.I pipe/wooden strip batten/wooden casing and capping/G.I wire/trenches (rate for cables only) i) Cost of 1x 1.5 mm (3/0.029")	RMtr	1188		
b	ch/24/3 (ii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. ii) 20 mm i/d	Rmtr	396		
iii)		Switch to Switch				
		Wiring from switch to switch with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				



a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper 38.1 conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1350)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (450 m)	Rmtr			
iv)		Distribution board to General Purpose (5A/13A) socket				
		Wiring of circuit from Distribution Board to 5A/13A ,230Volts with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts graded , 2&3 pin switched socket, stranded copper conductor cables in concealed PVC conduit, including conduit accessories, etc(conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo,popular,easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1575)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (525 m)	Rmtr			
v)		Socket to Socket				
		Wiring from 5 Amps, 2&3 pin socket to socket with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade solid or stanerd copper conductor cables in concealed PVC conduit including PVC conduit,Conduit accessories, etc complete. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo,popular,easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (1896)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (632 m)	Rmtr			
vi)		Distribution board to AC 20Amps DP socket				



		Wiring of circuit from distribution board to 15A, 230Volts, DP switch with 3 nos. single core 4Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc (conduit partly shared for A/Cs). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iv))	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I. pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iv) 7/0.91 mm (7/0.036")	RMtr	1500		
b	ch/24/3 (iv)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iv) 32 mm i/d	Rmtr	500		
2		LT CABLES				
		Supply at site, installation, testing and commissioning of PVC insulated armoured copper conductor cable 600 / 1000 Volt grade (or otherwise mentioned in cable description) in prelaid 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
i)	ch/24/13 (c v)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- v) 6 mm sq (7/0.044")	R.Mtr	100		
ii)	ch/24/13 (c viii)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- viii) 25 mm sq (19/0.052")	R.Mtr	120		
iii)	ch/24/13 (c xiii)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- xiii) 120 mm sq (37/0.83")	R.Mtr	50		
3		GROUNDING SYSTEM				
i)		Grounding Cables				



		Supply at site, installation, testing and commissioning of PVC insulated non armoured copper conductor cable 450/750 Volt grade (or otherwise mentioned in cable description) 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/12 (ii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- ii) 6 mm sq (7/0.044")	R.Mtr	100		
b	ch/24/12 (iv)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- iv) 16 mm sq (7/0.064")	R.Mtr	120		
c	ch/24/12 (vii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaidd G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- vii) 50 mm sq (19/0.072")	R.Mtr	50		
4		<u>CONDUITS, PIPES, DUCT, CABLE TRAYS, FIXING CLAMPS AND FIXING ARRANGEMENTS</u>				
		Supply, installation, testing and commissioning of following conduits laid under floor for telephone/ data cables , optical fiber cables, Sub main power cables & earth cables including all conduit accessories. The PVC conduits shall be laid under floor including chiseling and cutting of floor for required dimensions, laying of conduit, backfilling of remaining cavity with CC as specified for floor in that area, making good, complete in all respect. conduit made of solo, popular, easyfit or equivalent as approved by engineer incharge.				
i)		<u>PVC Conduit</u>				
a	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d	Rmtr	100		
b	ch/24/6 (i)	Supply and erection of PVC pipe for wiring recessed in wall including inspection boxes pull boxes, hooks, cutting jharries, and repairing surface, etc, complete with all specials ii) Cost of 50mm	Rmtr	120		



c	ch/24/6 (ii)	Supply and erection of PVC pipe for wiring recessed in wall including inspection boxes pull boxes, hooks, cutting jharries, and repairing surface, etc, complete with all specials ii) Cost of 80mm	Rmtr	50		
d	ch/24/6 (iii)	Supply and erection of PVC pipe for wiring recessed in wall including inspection boxes pull boxes, hooks, cutting jharries, and repairing surface, etc, complete with all specials iii) Cost of 100mm	Rmtr	50		
5		DISTRIBUTION BOARDS				
		Supply at site, fabrication, installation, testing and commissioning of Distribution Board (DB) , made of sheet steel 16 SWG, degreased and derusted, with 2 coats of antirust paint, 2 coats of powder coated paint of approved colour, protection classification IP-44, totally enclosed indoor floor mounting cubicle type in free standing design, with hinged door, handle including cost of all auxiliaries, internal wiring, designation lables on MCCBS, grounding bar suitable for system Voltage 415 V, 50 Hz, 3 Phase and neutral bus bars of 99.9% electrolytic copper, including cost of cable terminal blocks wiring from breakers, brass cable glands, all accessories complete in all respects. All incoming and outgoing breakers shall be accessible only by opening the front door having further M.S. sheet cover gaskets shall also be provided where necessary. Panel should be compeltely made in certified factory. ie PEL, Green T & D, Mazcorp engineering or equivalent approved by engineer incharge.				



		All MCCBs shall be suitable to operate without any derating at 40°C ambient temperature and shall be of one make only. The sides of MDB shall also have louvers at bottom and top on sides of panel for hot air exhaust, wire mesh etc. The back of the panel shall be lockable door instead of bolted and shall conform to single line diagram. item should be of Schneider, Terasaki or equivalent approved by engineer incharge				
i)		MAIN-DB				
	ch24-91(a-i)	P/F floor mounted Electric Panel board of required depth and size, fabricated with 14SWG M.S sheet (Indoor/Outdoor Type), derusting, zinc Phosphated, finish with electro static powder coating in approved colour i/c the cost of Lock, Indication lights, thimbles, Copper Comb, Wiring, Neutral & Earth Bar, glands, Current Transformers of specified capacity, Door Earthing, Brass glands, bus bars, controls complete in all respects as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). i) LT Switchboards (a) 2.50 Ft deep (i) 300-600A	CFT	9		
		INCOMING				
	ch24-87/(a-vi)	Supplying, installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (vi) 125-250 Amp (25 KA)	Each	1		
		OUTGOING				
		Supplying, installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge				
	ch24-87/(a-ii)	a) Triple Pole (ii) 15-100 Amp (10 KA, 15 KA)	Each	6		
ii)		DB-LIGHTING				
	ch24-90(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights, Thimble, Copper Comb, Wiring, Neutral & Earth Bar, Door Earthing, Digital Voltmeter, Digital Ammeter, Volt Selector Switch, Ammeter selector switch, Current Transformers and Controls Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75-100A	CFT	9		



		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	21		
iii)		DB-POWER-LS				
	ch24-90/(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75~100A	CFT	9		
		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	18		



iv)		DB-POWER-RS				
	ch24-90/(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75~100A	CFT	9		
		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaid DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	18		
v)		DB-POWER-US				
	ch24-90/(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75~100A	CFT	9		
		INCOMING				
	ch24-87/(a-ii)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1		



		OUTGOING				
		Supplying, Installation and commissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMANY/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	10		
6		MISCELLANEOUS FITTINGS				
		Providing and fixing Copper winded Exhaust fan with louver and shutter made of Pak/Younas/G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
	ch24-102/(a-i)	(a) Plastic body (i) 10" dia	Each	17		
7		WIRING ACCESSORIES				
		P/F PVC double layer Switch kit Faceplate with specified switch holes i/c the cost of switches / sockets / dimmer made of Hi-Life / Bush / Schenider, screws complete as approved and directed by the Engineer Incharge				
		(a) One way Gange Switch				
	ch24-103 (a-vi)	(vi) Fan Dimmer	No.	23		
	ch24-103 (a-i)	Small (i) 01 Gange	No.	3		
	ch24-103 (a-ii)	Small (ii) 02 Gange	No.	4		
	ch24-103 (a-iii)	Small (iii) 03 Gange	No.	33		
	ch24-103 (a-iv)	(iv) Three pin Light Plug 10/13 Amp	No.	59		
	ch24-103 (a-i)	Large (i) 04 Gange	No.	1		
	ch24-103 (a-iii)	Large (iii) 06 Gange	No.	2		
	ch24-103 (a-viii)	(viii) Three Pin Power Plug 15-32 Amp	No.	20		
		P/F PVC concealed Switch kit Box i/c the cost of screws complete as approved and directed by the Engineer Incharge				
	ch24-104 (i)	(i) Small	No.	96		
	ch24-104 (ii)	(ii) Large	No.	23		



8		CCTV System				
i		Camera Cable				
		Supply, Installation and commissioning of wiring with 4-pair data Cable, 23 AWG UL/EN listed cable * Conforming to following standards: TIA/EIA 568 / ISO/IEC 11801, in prelaidd conduit / cable tray from including all accessories, Manufacturer/OEM Authorization, Make: Schneider / i-connect UK/3M Corning USA/ D-Link/ Pollo Australian or equivalent complete in all respect as approved and directed by Engineer Incharge.				
	ch24-106 (a-ii)	a) UTP (Unshielded Twisted pair) (ii)CAT-6A (Min.1G/ 10G @ 500MHz or higher)	MTR	120		
9		AC PIPING INSULATION				
		Supply & installation closed cell type Aluminium foil faced XLPE (Cross linked polyethelene) polyolefin pipe insulation tube of density 25 Kg/m ³ of specified thickness & thermal conductivity 0.035 w/m °C and fire retardent of Class "o" rating as specified for refrigerant copper piping as approved by the Engineer Incharge. a) 20 mm thick				
	ch27-21(a-i)	(i) 1/4" dia	ft	190		
	ch27-21(a-ii)	(ii) 3/8" dia	ft	100		
10		Control Wire				
	ch24-13(b-iii)	Supply and erection of copper conductor cables for serviceconnection, in prelaidd pipe/G.I. wire/trenches, etc. (rate for cable only):- b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable: iii) 7/0.74 mm (7/0.029")	Rmtr	120		
11		Drain Pipe				
	ch23/47(a-i)	Providing,laying,testingandcommissioning of POLY PROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex/Popular/Beta/BBJ) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directed by Engineer Incharge.(Internal/External Diameters mentioned). a)PN-16 pipe (i)(1/2") 20 mm	MTR	120.00		
Total of MRS Items						
1		LIGHT FIXTURES				
		Supply, installation, testing and commissioning of following light fittings, ceiling, recessed,wall mounted as per specified fixture. Complete with internal wiring, Grounding terminal , driver complete in all respects. Lights should be of ledvance, Osaka or equivalent approved by engineer incharge				
i)	NSI	20 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	89		
ii)	NSI	15 Watt (White) LED Light Fixture surface/recessed mounted, IP-22 rated	No.	41		
iii)	NSI	10 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	32		



2		MISCELLANEOUS FITTINGS				
		Supply, installation, testing & commissioning of Ceiling/ Exhaust fan. The ceiling/exhaust fan shall comprise circular fan metallic/ plastic body, metallic fan blades, down rod (if necessary) of suitable dia & length, AC capacitor, internal wiring, terminals all installation & operational accessories as per tender specifications, as per site requirements and as directed by the Engineer. make Bilal Switchgear Engineering, GFC, Pak Fan or approved equivalent by engineer incharge				
i)	NSI	56" dia ceiling fan suitable to give an air displacement of minimum 8000 Cu. ft./ min. Fan shall be made with 99% purity Copper windings.	No.	23		
3		WIRING ACCESSORIES				
		Supply at site, installation, testing and commissioning of the following wiring accessories, complete in all respects. Made of TJ, HiLife or equivalent approved by engineer incharge				
i)	NSI	Appropriate size of plastic body fan box and ceiling fan rod 24" in length	Nos	23		
4		Fire Alarm System				
		(General Description) Supply, installation, testing and commissioning of following items as per drawings, specifications, & instructions of the Engineer, complete in all respect, all item should be of Gent by honeywell, ETON uk or approved equivalent as per instructions by the Engineer as required.				
i)		Manual Call Point				
	NSI	Supply, install testing and commsiong of manual call point RESET type with allied components with full functionality as per specification of manufacturer / drawing with proper staff and tools and plants etc.Input Source Zone signal Address Coding dip switch Operating Voltage 26V DC Alarm Current 6mA Quiescent Current 850µA Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	2		
ii)		Smoke Detector				
	NSI	Supply, install testing and commsiong of Addressable Optical Smoke Detectors incorporating a with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds.Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850µA Sensitivity Setting Comply to EN54 Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	32		
iii)		Heat Detector				



		Supply, install testing and commisioning of Low profile intelligent analogue addressable multi sensor with combined optical thermal sensors in a single housing with dual LED for 360 deg. viewing and mounting base. Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850μA Sensitivity Setting Comply to EN54 Thermal Setting 58°C Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	1		
iv)		Sounder				



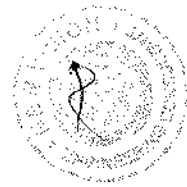
	NSI	Supply, install testing and commisiong of Intelligent analogue addressable Loop powered sounder with flasher and red body and wall mounting base.Input Source Zone signal Address Coding Binary dip switch Operating Voltage 26.5V DC Standby Current Under 850µA Alarm Current Under 8mA Sound Output 90 ±4dB at 1 meter Sunder Output 2.3~3.4KHz Ingress Protection IP65 Ambient Temperature -20°C ~ +50°C Ambient Humidity 10% ~ 95% Material Fire-proof plastic	Each	2		
v)		FACP				
	NSI	Supply, install, testing and commisiong of Addressable FACP. Each loop can connect up to 250 addressable devices. Maximum networking are 32 loops and total addressable points are 8000. Large LCD screen (40 x 15 lines) allows more events to be displayed on the same screen. Power 220V AC 50/60Hz *Others also available Battery Capacity 24V DC 4Ah Charging Voltage, Current 26V DC 100~400mA *With auto adjustment function Zone Voltage, Current 26.5V DC 340mA System Capacity 250 devices/1 loop *Expandable for site requirement Exterior Resistance Round-trip under 40Ω Transmitting Method Digital series transmitting Accumulation Time 0~40 seconds Main Sound 85dB @1M Material 1.6mm steel plate	Each	1		
vi)		Cable				
	NSI	Supply, install testing and commisiong of 2 x 2.5 mmsq shielded drain wire, 30 minutes fire resistance,red, LPCB approved, BS 7629-1/2008, BS 5839-1 standard in 25 mm dia pvc conduit complete in all respects including cost of conduit and its accesories installing arrangment, making juries in wall and repairment of wall .(Newage, Pakistan Cable, Fast or approved equivalent). conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.	Rmtr	150		
vii)		Programming, Testing and Commissioning				
	NSI	Programming, Testing and Commissioning of Complete system by authorized certified company complete in all respects as per instructions of the Engineer.	Job	1		
viii)		Fire Extinguishers				
	NSI	Supply & installation of 1 x 6kg DCP CO2 Fire Extinguishers installed as per instructions of Cleint, complete with wall hanging and mounting arrangement complete in all respects. Complete in all respect as per instructions by site engineer	Nos.	2		



5		GROUNDING SYSTEM				
i)		Earthing system with road				
	NSI	Supply and install pair of earth electrode comprising 13ft (4m) long 2" (50mm) dia G.I. pipe having 3/8" (10mm) dia holes at 20" (500mm) c/c all along the length of pipe buried 40ft (6.09m) underground in upright position including all accessories for complete installation such as nuts bolts, washers 2x3/0 SWG copper conductor earthing lead complete in all respect	No.	1		
ii)		Grounding Connection Point				
	NSI	Supply of Grounding connecting points consisting of copper plate 300mm long x50mm wide x 6mm thick to be installed, complete with fixing arrangement, brass nuts bolts, washers, lugs, 12.5mm dia. holes to facilitate connections of Incoming copper strips / copper conductors.	Nos.	1		
iii)		Testing and commissioning				
	NSI	Testing and commissioning of the earthing system in the presence of site engineer with electronic devices such as megger etc, making so report with after approximating 3 time testing and the grounding ohm must be less than or upto 3 ohms	Nos.	1		
6		Air Conditioning				
		Providing, shifting, fixing, testing, commissioning, adjusting and balancing of standard (Cool only) DC inverter technology air conditioning units, including indoor evaporating and out door condensing unit, the indoor units wall mounted of capacities as specified below, complete with factory charged refrigerant, piping insulation including condensate copper piping connection, between indoor/outdoor units conduiting and any additional charge of refrigerant accessories, and Drain piping upto nearest drain water line included in these rates making the job complete in all respect. AC should be of Haier, dawance, gree or equivalent, copper piping should be of muller, trox and insulation of Durkflex or equivalent, Drain pipe should be 3/4" dia pvc pipe of master, turkplast or equivalent as approved by engineer incharge				
		1/4 and 1/2 copper piping should be used till 1.5 ton AC and 5/8 and 3/8 piping should be used for 2 ton AC and 3/8 and 1/2 for 4 ton AC between indoor and outdoor unit.				
		The AC Unit should maintain approx 11 BTU per cubic feet plus addition of 3000BTU in the total amount for persons and devices				
i)		Copper pipe				
a	NSI	Supply, installation testing and commissioning of Copper piping 1/2 & 1/4 insulation and control wire including making jharies and repairing of surface with all necessary item job must be complete in all respect	RFT	200		
b	NSI	Supply, installation testing and commissioning of Copper piping 5/8 & 3/8 with insulation and control wire including making jharies and repairing of surface with all necessary item job must be complete in all respect	RFT	80		
7		Duct Panel				
		Supply at site and installation of dura duct on wall where necessary on per instruction of engineer incharge				
i)	NSI	16 x 16 mm	Rmtr	200		



ii)	NSI	16 x 25 mm	Rmtr	100		
Total of Non-MRS Items						
Grand Total						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
FACULTY HOSTEL**

BILL OF QUANTITIES

EXTERNAL CIVIL WORKS

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-10/3	Providing, laying, watering and ramming brick ballast 1½" to 2"(40 mm to 50 mm) gauge mixed with 25% sand, for floor foundation, complete in all respects.	%Cft	1669.7		
2	C-10/41-c	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope Complete in all respect. (50% Grey / 50% Coloured) c) 80-mm thick	P.Sft	3339.36		
3	C-6/53-(ii)	Providing & fixing precast Edge Kerb Stone (4" to 6" thick) and 14" high of Compressive Strength of 3500 PSI laid in cement sand mortar (1:3) over pre-laid brick masonry for drain cum footpath etc complete in all respect.	P.Rft	358.30		
4	C-6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4	%Cft	557.7		
Total of MRS ITEMS						
GRAND TOTAL OF CIVIL WORKS						





Islamia University of Bahawalpur – IUB

**CONSTRUCTION OF MAIN GATE AND
BOUNDARY WALL**

**FOR THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB-CAMPUS AT AHMADPUR
EAST UNDER THE PROJECT TITLED
“STRENGTHENING OF ISLAMIA UNIVERSITY OF
BAHAWALPUR & ITS SUB CAMPUSES”**

Bill of Quantities

May, 2023

**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST
MAIN GATE AND BOUNDARY WALL**

BILL OF QUANTITIES

SUMMARY OF COST

Sr. No.	DESCRIPTION	AMOUNT
1.	CIVIL WORKS	
2.	PUBLIC HEALTH WORKS	
3.	ELECTRIC WORKS	
	MAIN GATE SUB TOTAL - A	
4.	CIVIL WORKS	
	BOUNDARY WALL SUB TOTAL - B	
	SUB-TOTAL (A+B)	
	TOTAL	
	ADD PST	
	GRAND TOTAL	



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
MAIN GATE**

BILL OF QUANTITIES

CIVIL WORKS

Sr. No.	Item No.	Description of item	Unit	Qty	Rate	Amount
1	C-3/21(a)-(ii)	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m) a) By Manual: in ordinary soil.	%Cft	10634.52		
2	C-26/43	Spraying anti termite proofing by using liquid FMC Biflex 2.5%EC Per Sft 1.20 10.00 Sq.m 13.00 107.50 Mixing Ratio 1:50=137-Sft or using liquid MIRAGE All Akbar /RANGERS Auriga 5% SC Mixing Ability-HEXTAR Ratio 1:110=205-Sft or any other equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect .as approved by the Engineer Incharge	P.Sft	5442.75		
3	C-6/5(i)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):Ratio 1:4:8	%Cft	307.12		
4	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Ground Floor	P.Cft	1336.53		
5	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Ground Floor	P.Cft	554.37		
6	C-6/6 a-i (2) + d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) First Floor	P.Cft	86.23		
7	C-6/6 a-i (2) + d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Second Floor	P.Cft	1718.83		
8	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Ground Floor	P.Cft	538.16		
9	C-6/6 a-i (2) + d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) First Floor	P.Cft	136.50		
10	C-6/6 a-i (2) + d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Second Floor	P.Cft	136.50		
11	C-6/12(c)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- Deformed bars (Grade-60)	%Kg	20705.55		
12	C-7/4(i)	Pacca brick work in foundation and plinth in Cement,sand mortar. Ratio 1:6	%Cft	1265.35		
13	C-3/15(i)	Filling, watering, ramming earth under floors (with surplus earth foundation).	%Cft	3544.84		
14	C-7/5(i)	Pacca brick work in Ground Floor cement, sand mortar Ratio 1:5	%Cft	1348.94		
15	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:4	%Cft	22.15		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
16	C-7/5(i) + 6(i)	Pacca brick work in First floor cement, sand mortar Ratio 1:5	%Cft	349.48		
17	C-7/5(i) + 6(i) + 9	Pacca brick work in First floor cement, sand mortar Ratio 1:4 i/c extra labour for arch work in brick masonry, including labour for centring and decentring.	%Cft	345.36		
18	C-7/5(i) + 6(ii)	Pacca brick work in Second floor cement, sand mortar Ratio 1:5	%Cft	616.46		
19	C-7/5(i) + 6(ii) + 9	Pacca brick work in Second floor cement, sand mortar Ratio 1:4 i/c extra labour for arch work in brick masonry, including labour for centring and decentring.	%Cft	225.66		
20	C-11/11(b)	Cement plaster 1:5 upto 20' (6.00 m) height:- b) ½" (13 mm) thick. (Ground Floor Internal)	%Sft	2288.37		
21	C-11/11(b) + 28	Cement plaster 1:5 upto 20' (6.00 m) height:- b) ½" (13 mm) thick. (First Floor Internal)	%Sft	283.50		
22	C-11/11(c)	Cement plaster 1:5 upto 20' (6.00 m) height:- c) ¾" (20 mm) thick. (Ground Floor Internal)	%Sft	283.42		
23	C-11/9(c)	Cement plaster 1:4 Ground Floor:- c) ¾" (20 mm) thick. (External)	%Sft	2779.36		
24	C-11/9(c) + 28	Cement plaster 1:4 First Floor:- c) ¾" (20 mm) thick. (External)	%Sft	1447.72		
25	C-11/9(c) + 28	Cement plaster 1:4 Second Floor:- c) ¾" (20 mm) thick. (External)	%Sft	3719.63		
26	C-11/10(b)	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only upto 20' height ratio 1:3.	%Sft	700.64		
27	C-11/23 a(iii)	Distempering:- a) new surface:- 3 coats	%Sft	3555.93		
28	C-13/33 a(i+ii)	Providing and applying weather shield paint of approved quality on external surface of building including preparation of surface, application of primer complete in all respect: a) new surface: Two coats	%Sft	7946.71		
29	C-10/3	Providing, laying, watering and ramming brick ballast 1½" to 2"(40 mm to 50 mm) gauge mixed with 25% sand, for floor foundation, complete in all respects.	%Cft	323.38		
30	C-6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4	%Cft	108.01		
31	C-10/22(b)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (b) using white cement	%Sft	329.18		
32	C-10/40(b)	Providing and fixing marble strip of any shade for dividing the mosaic flooring into panels. Size 1½" x ½" (40 x 6 mm)	P.Rft	197.51		
33	C-10/37 (b-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (b) using white cement : ii) ½"(13 mm) thick	%Sft	42.62		
34	C-9/35 (iii)	Providing and laying roof insulation, comprising of single layer of tiles 9"x4½"x1½" (225x113x40 mm) grouted with cement sand mortar 1:3 laid over 2" (50 mm) thick earth (including mud plaster) over thermopore sheet, over polythene sheet 300 gauge over a layer of bitumen, complete in all respects:- ii) Thermopore sheet 1" (25 mm) thick	%Sft	1242.77		
35	C-25/51	Providing and fixing all types of partly fixed and partly openable glazed anodised bronze colour aluminium doors, using deluxe section of M/s Al-Cop or Pakistan Cables, having chowkat frame of size 40 x 100 mm (1½" x 4") and leaf frame of 60x40mm (2½"x1½") wide sections including the cost of ¼" (5 mm) thick imported tinted glass with aluminium triangular gola and rubber gasket to support the glass and leaf edging, using approved standard fittings, locks, 3" (75 mm) wide long handles etc., and hardware any required as approved by the engineer in-charge.	P.Sft	102.90		
36	C-25/52	Providing and fitting all types of glazed aluminium windows of anodised bronze colour partly fixed and partly sliding using deluxe sections of approved manufacturer having frame size of 100 x 20 mm (4"x¾") and leaf frame sections of 50 x 20 mm (2"x¾"), all of 1.6mm thickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge.	P.Sft	92.40		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
37	C-25/53	Providing and fixing Aluminum Fly screen comprising of Fiber / Aluminum wire guaze (Malasian) fixed in aluminum frame of approved manufacturer brownze Colour / powder coated of size 1- 1/2"x1/2" and 1.6mm thick with rubber gasket i/c cost of Hardwares as approved and directed by the engineer incharge. complete in all respect	P.Sft	46.20		
38	C-25/59 (i)	Providing and fixing M.S. grill fabricated with MS Square polished Vertical/horizontal Bars of specified size @ 4" c/c ' passed through punched holes in MS Patti of 1-1/4"x1/8" i/c the cost of 1-1/4"x1/8" MS patti for Frame of windows and painting 3 coat complete in all respect as approved and directed by the Engineer Incharge. (i) 3/8" Squar Bars	P.Sft	92.40		
39	C-6/36(a-ii)	Providing and laying damp proof course of cement concrete 1:2: 4(using cement, sand and shingle), including bitumen coating :- (a) with one coat bitumen and one coat polythene sheet 500gauge ii) 2" thick (50 mm)	%Sft	3.94		
40	C-13/9(i)	Bitumen coating to plastered or cement concrete surface:-i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	%Sft	138.56		
41	C-26/37(ii)	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc. ii) 500 gauge (.005" thick)	P.Sft	138.56		
42	C-9/15	Khuras on roof 2"x2"x6" (600 x 600 x 150 mm)	Each	3.00		
43	C-10/44	Providing and laying 3/8 inch thick superb class Multani tiles of specified size and design of approved Color and Shade with adhesive bond, over 1/2" thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.	P.Sft	403.95		
44	C-10/42-a(ii)	Providing and laying superb quality Porcelain glazed tiles flooring of MASTER brand of specified size in approved design,Color and Shade with adhesive/bond over 3/4"thick (1:3) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respect as approved and directed by the Engineer Incharge a) Full body Glazed tiles (ii) 600mmx 600 mm	P.Sft	235.20		
45	C-10/43-a(ii)	Providing and laying superb quality Porcelain glazed tiles of Master brand, skirting/dado of specified size, Color and Shade with adhesive/ bond over 1/2"thick (1:2) cement plaster i/c the cost of and sealer for finishing the joints, cutting grinding complete in all respect as approved and directed by the Engineer Incharge a) Full body Glazed tiles (ii) 600mmx 600 mm.	P.Sft	20.79		
46	C-10/24(i)	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over 3/4" thick (1:2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	P.Sft	63.00		
47	C-10/25(i)	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting/dado of approved Color and Shade with adhesive bond over 1/2"thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	P.Sft	278.25		
48	C-25/10+11	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, rivetting, handling, assembling and fixing, including erection and fitting in position iron trusses, staging of water tanks, etc. (Main Gate)	%Kg	8914.50		
49	C-13/5 d(i+ii)	Painting new surface:- Preparing surface and painting guard bars, gates of iron bars, gratings, railing (including standards, braces, etc.) and in similar open work:- 3 coats (Main Gate)	%Sft	1423.80		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
50	C-10/45 (ii)	Providing and laying flooring with China Verona Marble having uniform texture (Spotless) of required size and specified thickness, with adhesive bond over 3/4" thick bedding of (1:2) cement sand mortar i/c the cost of matching sealer, cutting, grinding and chemical polishing complete in all respect as approved and directed by the Engineer Incharge.ii) 3/4" thick (12"x24"/12"x36") (Step)	P.Sft	12.60		
51	C-10/48	Extra for Beveling charges of marble edge in approved design complete in all respects i/c the cost of Carborandum disc as approved and directed by the Engineer Incharge.	P.Rft	8.40		
Total of MRS ITEMS						
1	NSI	Providing and laying structural pad for foundation made of selected granular fill material (Mixture of 70% gravel and 30% sand of approved quality and grade) including placing, mixing, spreading and compaction of sub-base material to required depth, grade to achieve 95% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as approved by the Engineer Incharge.	P.Cft	1195.77		
2	NSI	Providing and fixing UPVC Doors 38mm thickness i/c delux matching color UPVC frame matt or glossy finish having color (white-Gray-Marble Gray-Oak Wood- Dard Oak Wood, Coffee Wood Honey Pine Wood-Mahogany-Marry Gold-Chocolate Brown-Honey Dew) i/c all accessories i/c mortice locks complete in all respect as approval by the Engineer Incharge.	P.Sft	36.75		
3	NSI	Providing & Fixing M.S Dome 9' dia 4'-6" height with 3 layers fiber glass sheet including welding, riveting, bolts for fixing, painting 3 coats on frame etc. complete in all respect as per drawing/ design and direction of engineer incharge.	Each	2.00		
4	NSI	Providing & fixing precast cement concrete jharoka with steel wires embeded in concrete with fixing arrangement i/e bolts, steel mesh and reinforcement etc. making good after fixing complete in all respect as per drawing / design and direction of engineer incharge.	Each	2.00		
5	NSI	Providing and fixing Stainless Steel (24 SWG) Letters 12" to 15" height with CNC laser cutting i/c all hardware required complete in all respect as per drawings and direction of Engineer Incharge.	Each	35.00		
6	NSI	Providing and fixing Stainless Steel Logo with colour print including the cost of fitting accessories complete in all respect as per drawings and approval of Engineer Incharge.	Each	1.00		
Total of Non MRS ITEMS						
GRAND TOTAL OF CIVIL WORKS						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
MAIN GATE**

BILL OF QUANTITIES

PUBLIC HEALTH WORKS

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		SANITARY FIXTURES AND FITTINGS				
1	Ch 19/1	Providing and fitting glazed earthen ware water closet European type, excluding seat and cover:- i) white	Each	1.00		
2	Ch 19/4	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest. i) white	Each	1.00		
3	Ch 19/13	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white	Each	1.00		
4	19/16	Providing and fixing, chromium plated soap dish.	Each	2.00		
5	19/20	Providing and fixing looking glass 55x40 cm (22"x16") size, and 5 mm thick, first quality.	Each	2.00		
6	19/28	Providing and fixing chromium plated tee stop cock 15mm (½").	Each	6.00		
7	19/49 a (i)	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (a) P-Trap (i) 4" dia	Each	2.00		
8	19/36	Providing and fitting 10 cm (4") gully trap, including cement concrete, cost of PVC grating 15x15 cm (6"x6") and masonry chamber 30x30 cm (12"x12").	Each	2.00		
9	21/3 (i)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-79, Class II. Wall B, including carriage of pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc., complete i) 310 mm (12") i/d	P.Rft	100.00		
10	3/42 (i)	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including 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: - i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000 Cft	900.00		
11	3/24 (c)	Compaction of earthwork (soft, ordinary or hard soil) :- c) Ramming earthwork (all types of soil).	1000 Cft	900.00		
12	3/13 (a)	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel	1000 Cft	900.00		
13	19/52 (v)	Providing and fixing 1/2" dia Muslim Shower of Fasial /Master comprising of 1/2" dia one-meter long rubber /CP flexible pipe and hand shower set complete in all respects as approved and directed by the Engineer Incharge.	Each	2.00		
14	19/52 (iii)	Providing and fixing CP bath Room Set made of Sonex/Master/Faisal comprising of Double Bib Cock complete in all respect as approved and directed by the Engineer incharge.	Each	2.00		
15	19/7	Providing and fitting glazed earthen ware wash hand basin/ vanity 56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc. i) white, with pedestal	Each	2.00		
16	Ch 23/47	WATER SUPPLY PIPES AND FITTINGS				



SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex /Popular/ Beta / BBJ) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN 8077-8078 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directed by Engineer Incharge. (Internal/External Diameters mentioned) b) PN-20 pipe				
	ii	3/4" (25 mm) dia.	Rft	80.00		
	iv	1 1/4" (40 mm) dia	Rft	65.00		
	v	1 1/2" (50 mm) dia.	Rft	75.00		
17	Ch 19/47	SOIL, WASTE, VENTILATING PIPES & FITTINGS				
		Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe make of dadex /Popular/Beta/BBJ plain /socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. Type (SDR 32.5/SN-8)				
	iii	60 mm (2") dia.	Rft	30.00		
	iv	85 mm (3") dia.	Rft	45.00		
	v	110 mm (4") dia.	Rft	70.00		
18		VALVES				
	Ch 23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified diameter made of Faisal/Sonex / Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
	ii	3/4 inch	Each	2.00		
		WATER TANK				
19	.19/51	Providing and hoisting vertical/horizontal type storage tank of required capacity made of rotationally molded from (HDPE), double ply polyethelene of approved manufacturer i/c cost of making connection for inlet/outlet pipe, float valve i/c all cost of specials & labour complete in all respect as approved and directed by the Engineer Incharge.	Per Gallon	250.00		
TOTAL OF MRS ITEMS						
1	NSI	Providing and fixing, floor trap of PVC, including concrete chamber all round, and C.I. grating:- (Master, sonex or Equivalent).	Each	2.00		
		MANHOLE				
2	NSI	Making of manhole size 3'x2-1/2'x3' brick work, plaster complete as requirement including RCC manhole cover 22" dia with Tee shape C.I frame complete in all respect as per engineer Incharge.	Job	2.00		
TOTAL OF NSI ITEMS						
GRAND TOTAL OF PUBLIC HEALTH WORKS						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB
CAMPUS AT AHMADPUR EAST
MAIN GATE**

BILL OF QUANTITIES

ELECTRICAL WORKS

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
1		WIRING IN CONCEALED CONDUITS				
i)		Distribution board to Switch				
		Wiring of light circuit from Distribution Board to switch, with Three nos. single core 2.5 Sqmm PVC insulated 450/750 volts grade stranded copper conductor cables in concealed PVC conduits (conduits partly shared) including PVC conduit, and conduit accessories etc. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (360+60+360+168)	RMtr	948		
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (120+20+120+56)	Rmtr	316		
ii)		Switch to light point & point to point wiring				
		Wiring from switch to light or fan point with 3 nos. single core 1.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(i))	Supply and erection of single core PVC insulated copper conductor cables in prelaid PVC pipe/M.S conduit G.I pipe/wooden strip batten/wooden casing and capping/G.I wire/trenches (rate for cables only) i) Cost of 1x 1.5 mm (3/0.029")	RMtr	288		
b	ch/24/3 (ii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. ii) 20 mm i/d	Rmtr	96		
iii)		Switch to Switch				
		Wiring from switch to switch with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				



a	ch/24/10 (a(ii))	Supply and erection of single core PVC insulated copper 38.1 conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (60)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (20)	Rmtr			
iv)		<u>Distribution board to General Purpose (5A/13A) socket</u>				
		Wiring of circuit from Distribution Board to 5A/13A ,230Volts with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts graded , 2&3 pin switched socket, stranded copper conductor cables in concealed PVC conduit, including conduit accessories, etc.(conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo,popular,easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(ii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (360)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (120)	Rmtr			
v)		<u>Socket to Socket</u>				
		Wiring from 5 Amps, 2&3 pin socket to socket with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade solid or stanerd copper conductor cables in concealed PVC conduit including PVC conduit,Conduit accessories, etc complete. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo,popular,easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (168)	RMtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (56)	Rmtr			



2		LT CABLES				
		Supply at site, installation, testing and commissioning of PVC insulated armoured copper conductor cable 600 / 1000 Volt grade (or otherwise mentioned in cable description) in prelaid 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
i)	ch/24/13 (b-vi)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:- vi) 7/1.63 mm (7/0.064")	R.Mtr	100		
3		GROUNDING SYSTEM				
i)		Grounding Cables				
		Supply at site, installation, testing and commissioning of PVC insulated non armoured copper conductor cable 450/ 750 Volt grade (or otherwise mentioned in cable description) in prelaid 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/12 (ii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- ii) 6 mm sq (7/0.044")	R.Mtr	40		
4		CONDUITS, PIPES, DUCT, CABLE TRAYS, FIXING CLAMPS AND FIXING ARRANGEMENTS				
		Supply, installation, testing and commissioning of following conduits laid under floor for telephone/ data cables , optical fiber cables, Sub main power cables & earth cables including all conduit accessories. The PVC conduits shall be laid under floor including chiseling and cutting of floor for required dimensions, laying of conduit, backfilling of remaining cavity with CC as specified for floor in that area, making good, complete in all respect. conduit made of solo, popular, easyfit or equivalent as approved by engineer incharge.				



i)		PVC Conduit				
	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d	Rmtr	50		
a						
5		DISTRIBUTION BOARDS				
		Supply at site, fabrication, installation, testing and commissioning of Distribution Board (DB) , made of sheet steel 16 SWG, degreased and derusted, with 2 coats of antirust paint, 2 coats of powder coated paint of approved colour, protection classification IP-44, totally enclosed indoor floor mounting cubicle type in free standing design, with hinged door, handle including cost of all auxiliaries, internal wiring, designation lables on MCCBS, grounding bar suitable for system Voltage 415 V, 50 Hz, 3 Phase and neutral bus bars of 99.9% electrolytic copper, including cost of cable terminal blocks wiring from breakers, brass cable glands, all accessories complete in all respects. All incoming and outgoing breakers shall be accessible only by opening the front door having further M.S. sheet cover gaskets shall also be provided where necessary. Panel should be compeltely made in certified factory, ie PEL, Green T & D, Mazcorp engineering or equivalent approved by engineer incharge.				
		All MCCBs shall be suitable to operate without any derating at 40°C ambient temperature and shall be of one make only. The sides of MDB shall also have louvers at bottom and top on sides of panel for hot air exhaust, wire mesh etc. The back of the panel shall be lockable door instead of bolted and shall conform to single line diagram. item should be of Schneider, Terasaki or equivalent approved by engineer incharge				
i)		DB MAIN GATE & WAITING AREA				
	ch24-90(a-i)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (i) 20-60A	P.CFT	9		
		INCOMING				
	ch24-86/(b-iii)	Suppling,installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaid DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge. b) Double Pole (iii) 6-63 Amp (10 KA)	Each	1		



		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMANY/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	8		
6		MISCELLANEOUS FITTINGS				
		Providing and fixing Copper winded Exhaust fan with louver and shutter made of Pak/Younas/G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
	ch24-102/(a)	Plastic body (i) 10" dia	Each	2		
7		WIRING ACCESSORIES				
		P/F PVC double layer Switch kit Faceplate with specified switch holes i/c the cost of switches / sockets / dimmer made of Hi-Life / Bush / Schenider, screws complete as approved and directed by the Engineer Incharge				
		(a) One way Gange Switch				
	ch24-103 (a-vi)	(vi) Fan Dimmer	No.	3		
	ch24-103 (a-ii)	Small (ii) 02 Gange	No.	2		
	ch24-103 (a-iv)	(iv) Three pin Light Plug 10/13 Amp	No.	7		
	ch24-103 (a-ii)	Large (ii) 05 Gange	No.	3		
	ch24-103 (a-iii)	Large (iii) 06 Gange	No.	1		
		P/F PVC concealed Switch kit Box i/c the cost of screws complete as approved and directed by the Engineer Incharge				
	ch24-104 (i)	(i) Small	No.	9		
	ch24-104 (ii)	(ii) Large	No.	4		
Total of MRS Items						
1		LIGHT FIXTURES				
		Supply, installation, testing and commissioning of following light fittings, ceiling, recessed,wall mounted as per specified fixture. Complete with internal wiring, Grounding terminal , driver complete in all respects. Lights should be of ledvance, Osaka or equivalent approved by engineer incharge				
i)	NSI	14 watt batten type LED light fixture with batten complete in all respect	No.	1		
ii)	NSI	20 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	16		
iii)	NSI	10 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	2		



2		MISCELLANEOUS FITTINGS				
		Supply, installation, testing & commissioning of Ceiling/ Exhaust fan. The ceiling/exhaust fan shall comprise circular fan metallic/ plastic body, metallic fan blades, down rod (if necessary) of suitable dia & length, AC capacitor, internal wiring, terminals all installation & operational accessories as per tender specifications, as per site requirements and as directed by the Engineer. make Bilal Switchgear Engineering, GFC, Pak Fan or approved equivalent by engineer incharge				
i)	NSI	56" dia ceiling fan suitable to give an air displacement of minimum 8000 Cu. ft./ min. Fan shall be made with 99% purity Copper windings.	No.	3		
ii)	NSI	Providing and Fixing of brass bracket fan 18" (good quality)	No.	1		
3		WIRING ACCESSORIES				
		Supply at site, installation, testing and commissioning of the following wiring accessories, complete in all respects. Made of T.J, HiLife or equivalent approved by engineer incharge				
i)	NSI	Appropriate size of plastic body fan box and ceiling fan rod 24" in length	Nos	3		
4		GROUNDING SYSTEM				
i)		Earthing system with road				
	NSI	Supply and install pair of earth electrode comprising 13ft (4m) long 2" (50mm) dia G.I. pipe having 3/8" (10mm) dia holes at 20" (500mm) c/c all along the length of pipe buried 40ft (6.09m) underground in upright position including all accessories for complete installation such as nuts bolts, washers 2x3/0 SWG copper conductor earthing lead complete in all respect	No.	1		
ii)		Grounding Connection Point				
	NSI	Supply of Grounding connecting points consisting of copper plate 300mm long x50mm wide x 6mm thick to be installed, complete with fixing arrangement, brass nuts bolts, washers, lugs, 12.5mm dia. holes to facilitate connections of Incoming copper strips / copper conductors.	Nos.	1		
iii)		Testing and commissioning				
	NSI	Testing and commissioning of the earthing system in the presence of site engineer with electronic devices such as megger etc, making so report with after approximating 3 time testing and the grounding ohm must be less than or upto 3 ohms	Nos.	1		
Total of Non-MRS Items						
Grand Total						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
BOUNDARY WALL**

BILL OF QUANTITIES

CIVIL WORKS

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-3/21(a)-(ii)	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m) a) By Manual: in ordinary soil.	%0Cft	99137.45		
2	C-26/43	Spraying anti termite proofing by using liquid FMC Biflex 2.5%EC Per Sft 1.20 10.00 Sq.m 13.00 107.50 Mixing Ratio 1:50=137-Sft or using liquid MIRAGE Ali Akbar /RANGERS Auriga 5% SC Mixing Ability-HEXTAR Ratio 1:110=205-Sft or any other equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect .as approved by the Engineer Incharge	P.Sft	99563.76		
3	C-6/5(i)	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):Ratio 1:4:8	%Cft	4720.83		
4	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Ground Floor	P.Cft	11886.12		
5	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3) Ground Floor	P.Cft	7845.69		
6	C-6/12(c)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- Deformed bars (Grade-60)	%Kg	74754.45		
7	C-7/4(i)	Pacca brick work in foundation and plinth in Cement,sand mortar. Ratio 1:6	%Cft	32429.66		
8	C-7/7(i)	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:5	%Cft	30291.93		
9	C-7/7(i) + 9	Pacca brick work other than building upto 10ft. (3 m) height. i) cement, sand mortar:- Ratio 1:5 with extra labour for arch work in brick masonry, including labour for centring and decentring.	%Cft	318.29		
10	C-11/9(c)	Cement plaster 1:4 Ground Floor:- c) 3/4" (20 mm) thick. (External)	%Sft	100870.47		
11	C-6/5(f)	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):(f) Ratio 1: 2: 4	%Cft	1879.26		
12	C-7/38 i	Providing and laying fair face Gutka cladding laid in (1:2) cement / red posso mortar having 1/4" thick groove finish i/c cost of 8 SWG wire in shape of 8 placed horizontally and vertically at 36" and 18" c/c respectively i/c cutting charges as per approved drawing , complete in all respect as approved and directed by the Engineer Incharge. 2-1/4" x 2-1/4" x 9"	P.Sft	5910.87		
13	C-13/33 a(i+ii)	Providing and applying weather shield paint of approved quality on external surface of building including preparation of surface, application of primer complete in all respect: a) new surface: Two coats	%Sft	94959.60		
14	C-10/44	Providing and laying 3/8 inch thick superb class Multani tiles of specified size and design of approved Color and Shade with adhesive bond, over 1/2"thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.	P.Sft	946.45		
15	C-6/13	Precast cement concrete solid or face blocks (1:2:4), including cost of templates.	P.Cft	77.23		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
16	C-6/35 (b)	Providing and fixing thermopore (foamed polythene) sheet in horizontal and vertical expansion joints: b) 1½" (40 mm) thick thermopore sheet	P.Sft	286.10		
17	C-26/46 (i)	Providing and fixing anti climb high security galvanized razor cut wire having double sharp four U-shaped pointed 0.5 mm thick (22mmx15 mm barbs) spaced @ 33 mm c/c clad over 2.5 mm dia high tensile Core wire making coil fencing of specified diameter @ 4" c/c fixed on 2'-3" high M/S angle iron post 1½"x1½"x3/16" embedded in base of PCC (1:2:4) (4"x4"x9") @ 4' apart i/c the cost of 2 No. bars 3/8" dia welded horizontally with angle iron posts, binding wire, painting of posts, etc. complete in all respects as pproved and directed by the Engineer incharge. (i) 24 " diameter	P.Rft	5667.76		
18	C-6/55	Providing and mixing super plasticizer (water reducing admixture) as defined in ASTM C-94 in order to achieve the required consistancy / workability measured by the slump, used in the ratio of (0.05% to 1.00%) by weight of cement as proposed by the designer etc complete in all respect.	P.Ltr	2694.57		
19	C-1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Sargodha to Ahmadpur East 399 KM)	%Cft	27357.00		
GRAND TOTAL OF CIVIL WORKS						





Islamia University of Bahawalpur – IUB

**CONSTRUCTION OF MASJID
FOR THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB-CAMPUS AT AHMADPUR
EAST UNDER THE PROJECT TITLED
“STRENGTHENING OF ISLAMIA UNIVERSITY OF
BAHAWALPUR & ITS SUB CAMPUSES”**

Bill of Quantities

May, 2023

**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST
MASJID**

BILL OF QUANTITIES

SUMMARY OF COST

Sr. No.	DESCRIPTION	AMOUNT
1.	CIVIL WORKS	
2.	PUBLIC HEALTH WORKS	
3.	ELECTRIC WORKS	
	SUB-TOTAL	
	ADD PST	
	GRAND TOTAL	



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
MASJID**

BILL OF QUANTITIES

CIVIL WORKS

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-3/21(1)-(ii)	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead 'upto one chain (30 m) and lift upto 5 ft. (1.5 m) a) By Manual: in ordinary soil.	%Cft	21426.6		
2	C-26/43	Spraying anti termite proofing by using liquid FMC Biflex 2.5%EC Per Sft 1.20 10.00 Sq.m 13.00 107.50 Mixing Ratio 1:50=137-Sft or using liquid MIRAGE Ali Akbar /RANGERS Auriga 5% SC Mixing Ability-HEXTAR Ratio 1:110=205-Sft or any other equivalent approved liquid applying with shower and certificate will be provided by the contractor for 10- years complete in all respect .as approved by the Engineer Incharge	P.Sft	23187.3		
3	C-6/5(i)	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate):Ratio 1:4:8	%Cft	1623.6		
4	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	4217.0		
5	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	4803.4		
6	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for First Floor.	P.Cft	3237.0		
7	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for Second Floor.	P.Cft	7.4		
8	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Under Plinth Level	P.Cft	590.6		
9	C-6/6 a-i (2)	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), Ground Floor	P.Cft	885.9		
10	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for First Floor.	P.Cft	267.2		
11	C-6/6 a-i (2)+d	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- Type B (nominal mix 1: 1.5: 3), add extra for Second Floor.	P.Cft	26.6		
12	C-6/12(c)	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- Deformed bars (Grade-60)	%Kg	58462.7		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
13	C-7/4(i)	Pacca brick work in foundation and plinth in Cement,sand mortar. Ratio 1:6	%Cft	6228.6		
14	C-3/15(i)	Filling, watering, ramming earth under floors (with surplus earth foundation).	%0Cft	7142.2		
15	C-3/15(ii)	Filling, watering and ramming earth under floors:-ii) with new earth excavated from outside lead upto one chain (30 m).	%0Cft	18985.5		
16	C-3/17	Transportation of earth all types when the total distance, this rate will be paid in addition to the including the lead covered in the item of work, is more than rate of earthwork, without deducting 1000 ft. (300 m) (Lead will be paid as per actual but not more than 7km)				
	a	upto ¼ mile (400 m).	%0Cft	18985.5		
	b	for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	%0Cft	18985.5		
	c	for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	%0Cft	18985.5		
17	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:5	%Cft	4544.4		
18	C-7/5(i)	Pacca brick work in ground floor cement, sand mortar Ratio 1:4	%Cft	337		
19	C-7/5(i) + 6(i)	Pacca brick work in First floor cement, sand mortar Ratio 1:5	%Cft	173.6		
20	C-7/5(i) + 6(ii)	Pacca brick work in Second floor cement, sand mortar Ratio 1:5	%Cft	173.6		
21	C-11/11(b)	Cement plaster 1:5 upto 20' (6.00 m) height:- ½" (13 mm) thick. (Internal Ground Floor)	%Sft	4698.7		
22	C-11/11(c)	Cement plaster 1:5 upto 20' (6.00 m) height:- c) ¾" (20 mm) thick. (Internal Ground Floor)	%Sft	7910.2		
23	C-11/9-c	Cement plaster 1:4 Ground Floor:- c) ¾" (20 mm) thick (External)	%Sft	8364.4		
24	C-11/9-c + 28	Cement plaster 1:4 First Floor:- c) ¾" (20 mm) thick (External)	%Sft	8777.1		
25	C-11/9-c + 28	Cement plaster 1:4 Second Floor:- c) ¾" (20 mm) thick (External)	%Sft	529.2		
26	C-7/38-(i)	Providing and laying fair face Gutka cladding laid in (1:2) cement / red posso mortar having 1/4" thick groove finish i/c cost of 8 SWG wire in shape of 8 placed horizontally and vertically at 36" and 18" c/c respectively i/c cutting charges as per approved drawing , complete in all respect as approved and directed by the Engineer Incharg i. 2-1/4" x 2-1/4" x 9"	P.Sft	4433.75		
27	C-11/10(b)	Cement plaster 3/8" thick under soffit or R.C.C. roof slab only Ground Floor ratio 1:3.	%Sft	6250.2		
28	C-11/23-a-(ii)	Distempering:- a) new surface:- 3 coats	%Sft	18859.07		
29	C-13/46	Providing and applying wall putty of 2mm thickness over plastered surface (new surface) to prepare the surface even and smooth complete in all respect.	%Sft	37718.13		
30	C-13/33-a-(i+ii)	Providing and applying weather shield paint of approved quality on external surface of building including preparation of surface, application of primer complete in all respect: a) new surface: Two coats	%Sft	13236.96		
31	C-10/3	Providing, laying, watering and ramming brick ballast 1½" to 2"(40 mm to 50 mm) gauge mixed with 25% sand, for floor foundation, complete in all respects.	%Cft	10823.9		
32	C-10/41-c	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope Complete in all respect. (50% Grey / 50% Coloured) c) 80-mm thick	P.Sft	12915.00		
33	C-6/53-(ii)	Providing & fixing precast Edge Kerb Stone (4" to 6" thick) and 14" high of Compressive Strength of 3500 PSI laid in cement sand mortar (1:3) over pre-laid brick masonry for drain cum footpath etc complete in all respect.	P.Rft	1491.00		

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
34	C-6/5(f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate); (f) Ratio 1: 2: 4	%Cft	3615.2		
35	C-10/15(e)	Providing and laying topping of cement concrete 1:2:4, including surface finishing and dividing in panels:-(e) 2" (50 mm) thick	%Sft	1321.7		
36	C-9/35 (iii)	Providing and laying roof insulation, comprising of single layer of tiles 9"x4½"x1½" (225x113x40 mm) grouted with cement sand mortar 1:3 laid over 2" (50 mm) thick earth (including mud plaster) over thermopore sheet, over polythene sheet 300 gauge over a layer of bitumen, complete in all respects:- iii) Thermopore sheet 1" (25 mm) thick	%Sft	6250.2		
37	C-9/15	Khuras on roof 2"x2"x6" (600 x 600 x 150 mm)	Each	20.0		
38	C-10/45(i)	Providing and laying flooring with China Verona Marble having uniform texture (Spotless) of required size and specified thickness, with adhesive bond over ¾" thick bedding of (1:2) cement sand mortar i/c the cost of matching sealer, cutting, grinding and chemical polishing complete in all respect as approved and directed by the Engineer Incharge i) 1/2" thick (12"x12"/12"x24")	P.Sft	4809.45		
39	C-10/46	Providing and laying 3/8" thick Prepolished Marble skirting/risers having uniform texture (spot less) of size 24"x6" of approved quality and shade with adhesive bond over ¾" thick (1:2) cement sand mortar complete in all respect i/c the cost of matching sealer to finish the joints as approved and directed by the Engineer Incharge. i) China Verona	P.Sft	304.85		
40	C-10/22(a)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (a) using Grey cement. Ground Floor	%Sft	309.78		
41	C-10/37 (a-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (a) using Grey cement : ii) ½"(13 mm) thick	%Sft	651.04		
42	C-10/24(i)	Providing and laying superb quality Ceramic tile floors of Master brand of specified size, Glossy/Matt/Texture of approved Color and Shade as per approved design with adhesive bond, over ¾" thick (1:2) cement sand plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	P.Sft	1017.98		
43	C-10/25(i)	Providing and laying superb quality Ceramic tiles dado of Master brand of specified size, Glossy/Matt/Texture skirting/dado of approved Color and Shade with adhesive bond over 1/2" thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects as approved and directed by the Engineer Incharge. i) 12"x18"/12"x24"/10"x24" /8"x24"/12"x36"	P.Sft	4023.60		
44	C-10/50 (i)	Providing and laying Prepolished Granite of specified thickness and shade of full width of approved quality laid with adhesive bond over ¾" thick (1:2) cement sand mortar bed, complete in all respect as approved and directed by the Engineer Incharge. (i) ¾" thick	P.Sft	1012.69		
45	C-10/48	Extra for Beveling charges of marble edge in approved design complete in all respects i/c the cost of Carborandum disc as approved and directed by the Engineer Incharge.	P.Rft	128.10		
46	C-10/49	Extra cost for making hole in Marble slab for fixtures, Sink, burners, basin Vanities i/c cost of beveling of internal edge as approved and directed by the Engineer Incharge.	Each	2.00		



Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
47	C-12/51	P/F 1-1/2" thick solid flush door comprising of 2.5 mm thick Commercial ply compressed over 2.5 mm thick commercial ply over 1" thick packing wood in style and rails under proper pressure i/c the cost of nails, tower bolt, handles, glue, sawing charges, Painting charges, sand papering and 3/8" thick matching wooden lipping as approved and directed by the Engineer Incharge.	P.Sft	25.20		
48	C-12/61 (b) - (ii)	P/F 3/4" dia heavy duty sliding bolt of specified material i/c the cost of hardware complete in all respect as approved and directed by the Engineer Incharge. (ii) 12" (300 mm) long	Each	1.00		
49	C-12/22	Providing and fixing, approved quality mortice lock	Each	1.00		
50	C- 12/17 - (ii)	Providing and fixing 2" wide MS/ GI Chowkat singel/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1-1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.(ii) 10.50 " wide	P.Sft	25.20		
51	C-13/5 c(i+ii)	Painting new surface:- c) Preparing surface and painting of doors and windows any type (including edges):- 3 coats (Chowkats)	%Sft	61.79		
52	C-25/51	Providing and fixing all types of partly fixed and partly openable glazed anodised bronze colour aluminium doors, using delux section of M/s Al-Cop or Pakistan Cables, having chowkat frame of size 40 x 100 mm (1 1/2" x 4") and leaf frame of 60x40mm (2 1/2"x1 1/4") wide sections including the cost of 1/4" (5 mm) thick imported tinted glass with aluminium triangular gola and rubber gasket to support the glass and leaf edging, using approved standard fittings, locks, 3" (75 mm) wide long handles etc., and hardware any required as approved by the engineer in-charge.	P.Sft	351.8		
53	C-25/52	Providing and fitting all types of glazed aluminium windows of anodised bronze colour partly fixed and partly sliding using delux sections of approved manufacturer having frame size of 100 x 20 mm (4"x3/4") and leaf frame sections of 50 x 20 mm (2"x3/4"), all of 1.6mm hickness including 5 mm thick imported tinted glass with rubber gasket using approved standard latches, hardware etc., as approved by the Engineer in-charge.	P.Sft	798.0		
54	C-25/53	Providing and fixing Aluminum Fly screen comprising of Fiber / Aluminum wire gauze (Malasian) fixed in aluminum frame of approved manufacturer brownze colour / powder coated of size 1-1/2" x 1/2" and 1.6mm thick with rubber gasket i/c cost of hardwares as approved and directed by the engineer incharge complete in all respect.	P.Sft	798.0		
55	Ch-25/64	Providing and fixing 2'-9" high stair railing comprising of non magnetic (304) Stain less steel 2" dia pipe railing of 18 SWG welded with vertical posts of 2" dia stainless steel round/ Squar pipe/ Tong (chimta) @ 2-ft c/c fixed on alternate steps with 3" long steel screws and brass rawal plugs, 3-Nos diagonal stainless steel pipes of 1/2" dia passes through gotes fixed on vertical post, i/c stainles steel welding, fixing & polishing complete in all respects as approved and directed by the Engineer Incharge.	P.Rft	99.75		
56	C-10/44	Providing and laying 3/8 inch thick superb class Multani tiles of specified size and design of approved Color and Shade with adhesive bond, over 1/2" thick (1:2) cement plaster i/c the cost of sealer for finishing the joints i/c cutting grinding complete in all respects and as approved and directed by the Engineer Incharge.	P.Sft	614.85		
57	C-6/15	Providing and fixing ornamental cement jali 2" (50 mm) thick (1: 2: 4), without steel.	P.Sft	1416.45		
58	C-13/9(i)	Bitumen coating to plastered or cement concrete surface:-i) 20 lbs. per 100 Sft. (9.07 Kg per Sq.m)	%Sft	545.5		

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
59	C-26/37(ii)	Supplying and laying polythene sheet over D.P.C. under floors and on roofs, etc.ii)500 gauge (.005" thick)	P.Sft	6795.6		
60	C-19/40 (iii)	Supply and fitting of cast iron manhole cover with frame, etc. complete. iii) 60 cm (24") dia	Each	2.00		
61	C-21/13	Providing and fixing 1½"x1½"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	Each	12.00		
62	C-6/31	Providing embedding 10" (250 mm) wide ½" (6 mm) thick rubber water stopper in expansion joints of R.C.C. roof slab complete in all respects.	P.Rft	107.10		
63	C-6/55	Providing and mixing super plasticizer (water reducing admixture) as defined in ASTM C-94 in order to achieve the required consistency / workability measured by the slump, used in the ratio of (0.05% to 1.00%) by weight of cement as proposed by the designer etc complete in all respect.	P.Ltr	1788.60		
64	C-1/1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawt, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Sargodha to Ahmadpur East 399 KM) (Lead will be paid as per actual but not more than 399km)	%Cft	18150.59		
Total of MRS ITEMS						
1	NSI	Excavation in foundation of building, bridges and other structures, including dag belling, dressing refilling around structure with excavated earth, watering and ramming, lead upto one chain (30 metre) and lift 5 ft. to 10 ft- In ordinary soil.	%0Cft	9315.97		
2	NSI	Providing and laying structural pad for foundation made of selected granular fill material (Mixture of 70% gravel and 30% sand of approved quality and grade) including placing, mixing, spreading and compaction of sub-base material to required depth, grade to achieve 95% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as approved by the Engineer incharge.	P.Cft	8280.86		
3	NSI	Providing and fixing UPVC Doors 38mm thickness i/c delux matching color UPVC frame matt or glossy finish having color (white-Gray-Marble Gray-Oak Wood- Dard Oak Wood, Coffee Wood Honey Pine Wood- Mahagony-Marry Gold-Chocolate Brown-Honey Dew) i/c all accessories i/c mortice locks complete in all respect as approval by the Engineer Incharge.	P.Sft	194.78		
4	NSI	Providing and fixing Stainless Steel (24 SWG) Letters 18" height with CNC laser cutting i/c all hardware required complete in all respect as per drawings and direction of Engineer In-charge.	Each	15.00		
5	NSI	Providing and fixing (Hollow) ALLAH HU AKBAR Name b/w the Outer Plaster, size as per Drawing of 5" including the cost of Mould fitting and Removal, Carriage and all Accessories complete in all respect as per drawings and approval of Engineer Incharge.	Each	2.00		
6	NSI	Providing and fixing stainless steel mesh of 16 guage fixed with nails for concrete and bricks joint complete in all respect and as approved and directed by the Engineer Incharge.	P.Sft	3322.00		
Total of Non MRS ITEMS						
GRAND TOTAL OF CIVIL WORKS						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT
AHMADPUR EAST
MASJID**

BILL OF QUANTITIES

PUBLIC HEALTH WORKS

SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		SANITARY FIXTURES AND FITTINGS				
1	Ch 19/3	Providing and fitting European Coupled set of Water Closet (WC) and flushing Cistern of PORTA brand (full size) i/c the cost of CP /rubber connection,thimble,seat cover and rawal bolts complete in all respects as approved and directed by the Engineer Incharge.	Each	6.00		
2	Ch 19/4	Providing and fitting glazed earthen ware water closet, squatter type (Orisa pattern), combined with foot rest. i) white	Each	4.00		
3	Ch 19/13 (i)	Providing and fitting plastic made low down flushing cistern 13.63 litre (3 gallons) capacity, including bracket set, copper connection, etc. complete. i) white	Each	4.00		
4	19/16	Providing and fixing, chromium plated soap dish.	Each	4.00		
5	19/18	Providing and fixing, chromium plated toilet paper holder.	Each	10.00		
6	19/19 (i)	Providing and fixing, chromium plated towel rail:- i) 60 cm (24") long, and 2 cm (3/4") dia.	Each	4.00		
7	19/49 a (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 ncluding the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (a) P-Trap (i) 4" dia	Each	10.00		
8	19/36	Providing and fitting 10 cm (4") gully trap, including cement concrete, cost of PVC grating 15x15 cm (6"x6") and masonry chamber 30x30 cm (12"x12").	Each	4.00		
9	21/3 (i)	Providing and laying R.C.C. pipe sewers, moulded with cement concrete 1:1½:3 conforming to ASTM Specification C-76-79, Class II. Wall B, including carriageof pipe from factory to site of work, lowering in trenches to correct alignment and grade, jointing with rubber ring, cutting pipes where necessary, testing, etc., complete i) 310 mm (12") i/d	P.Rft	330.00		
10	3/42 (i)	Earthwork excavation in open cutting for sewers and manholes as shown in drawings including 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: - i) 0 ft. to 7.0 ft. (0 to 2.10 m) depth	1000 Cft	2,970.00		
11	3/24 (c)	Compaction of earthwork (soft, ordinary or hard soil) :- c) Ramming earthwork (all types of soil).	1000 Cft	2,970.00		
12	3/13 (a)	Rehandling of earthwork: a) Lead upto a single throw of Kassi, phaorah or shovel	1000 Cft	2,970.00		
13	19/31 (i)	Providing and fixing gun metal peet/gate valve (screwed):- i) 30 mm (1¼") dia	Each	2.00		
14	19/31 (ii)	Providing and fixing gun metal peet/gate valve (screwed):-ii) 40 mm(1½") dia	Each	2.00		
15	Ch 19/49 b (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 ncluding the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (b) Multi-Trap (i) 4" dia	Each	6.00		

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SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
16	Ch 19/49 d (i)	Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe Fittings make of dadex /Popular/Beta/BBJ conforming to code EN-1401 including the cost of Solvents complete in all respect as approved and directed by the Engineer Incharge. (d) Clean Out (i) 4" dia	Each	4.00		
17	19/52 (v)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (v) Muslim shower	Each	10.00		
18	19/52 (iii)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (iii) Double Bib Cock	Each	10.00		
19	19/52 (iv)	Providing and fixing CP bath Room Set made of Sonex/ Master/ Faisal comprising of 3-No Tee stop cocks, lever type Basin Mixer, double Bib Cock, open wall shower, Muslim shower, waste coupling and bottle trap etc. complete in all respect as approved and directed by the Engineer in charge. (iv) Open Type Wall Shower	Each	2.00		
20	19/25 (ii)	Providing and fixing chromium plated stop cock, heavy:- ii) 1.5 cm ($\frac{1}{2}$ ")	Each	18.00		
21	19/27 (ii)	Providing and fixing chromium plated bib cock:- ii) 1.5 cm ($\frac{1}{2}$ ")	Each	48.00		
22	19/7 (v)	Providing and fitting glazed earthen ware wash hand basin /vanity56x40 cm (22"x16") including bracket set, waste pipe and waste coupling, etc. v) Under Counter Vanity Basin	Each	4.00		
23	19/30	Providing and fixing, chromium plated mixing valve, for wash hand basin, sink or shower.	Each	4.00		
24	Ch 23/47	<u>WATER SUPPLY PIPES AND FITTINGS</u>				
		Providing, laying, testing and commissioning of POLYPROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex /Popular/ Beta / BBJ) with specified pressure rating PN (PRESSURE NOMINAL)and conforming to DIN 8077-8078 code i/c cost of solvent, specials,making jharries complete in all respect as approved and directed by Engineer Incharge.(Internal/External Diameters mentioned) b) PN-20 pipe				
	ii	3/4" (25 mm) dia.	Rft	400.00		
	iii	1" (32 mm) dia.	Rft	240.00		
	v	1 1/2" (50 mm) dia	Rft	110.00		
	vi	2" (63 mm) dia.	Rft	130.00		
25	Ch 19/47	<u>SOIL, WASTE, VENTILATING PIPES & FITTINGS</u>				



SR. NO.	ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (RS)	AMOUNT (RS)
		Providing, fixing, testing and commissioning of μ -PVC (Unplasticized polyvinyl Chloride) Nikasi/ waste pipe make of dadex /Popular/Beta/BBJ plain /socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge. Type (SDR 32.5/SN-8)				
	iii	60 mm (2") dia.	Rft	130.00		
	iv	85 mm (3") dia.	Rft	210.00		
	v	110 mm (4") dia.	Rft	240.00		
26		VALVES				
	Ch 23/46	Providing and fixing CP heavy duty brass Ball valve with CP handle of specified diameter made of Faisal/Sonex / Master best quality or equivalent complete in all respect as approved and directed by the Engineer Incharge.				
	ii	3/4 inch	Each	4.00		
	i	1/2 inch	Each	4.00		
		GEYSER				
27	Ch 19/53 (i)	Providing /fixing Gas water heater (Geyser) of specified capacity, comprising of water tank made of 14 SWG steel sheet and cover with 20 SWG MS sheet, best quality of approved make of Corona / Ambassador /Super Asia/ Canon i/c the cost of non return valve, imported thermostate, G.I. accessories, safety valve and making connection with existing water supply pipe line complete in all respects as approved and directed by the Engineer Incharge. (i) 35 Gallons	Each	2.00		
TOTAL OF MRS ITEMS						
1	NSI	Providing and fixing, floor trap of PVC, including concrete chamber all round, and C.I. grating:- (Master, sonex or Equivalent).	Each	34.00		
2	NSI	Providing and fixing looking glass 5 mm thick size as per requirement/ drawings and direction of engineer incharge complete in all respect. (Ghani Glass or Equivalent)	Sft	36.00		
3	NSI	Providing and fitting Chromium plated floor Trap Jali 6"x6" double filter National and as approved by the Engineer incharge complete in all respect.	Each	34.00		
		MANHOLE				
4	NSI	Making of manhole size 3'x2-1/2'x3' brick work, plaster complete as requirement including RCC manhole cover 22" dia with Tee shape C.I frame complete in all respect as per engineer Incharge.	Job	7.00		
		WATER COOLER				
5	NSI	Providing and fixing Domestic type electric water cooler of 85 ltrs cap body SS Pressure type Canon (DWC-85) or equivalent complete in all respects as approved by the Engineer incharge.	Each	2.00		
TOTAL OF NSI ITEMS						
GRAND TOTAL OF PUBLIC HEALTH WORKS						



ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST MASJID

BILL OF QUANTITIES

ELECTRICAL WORKS

Sr. No.	Item No.	Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
1		WIRING IN CONCEALED CONDUITS				
i)		Distribution board to Switch				
		Wiring of light circuit from Distribution Board to switch, with Three nos. single core 2.5 Sqmm PVC insulated 450/750 volts grade stranded copper conductor cables in concealed PVC conduits (conduits partly shared) including PVC conduit, and conduit accessories etc. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I. pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (396+660+396+384)	Rmtr	1836.00		
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (132+220+132+128)	Rmtr	612.00		
ii)		Switch to light point & point to point wiring				
		Wiring from switch to light or fan point with 3 nos. single core 1.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(i))	Supply and erection of single core PVC insulated copper conductor cables in prelaid PVC pipe/M.S. conduit G.I. pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only) i) Cost of 1x 1.5 mm (3/0.029")	Rmtr	1026.00		
b	ch/24/3 (ii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. ii) 20 mm i/d	Rmtr	342.00		
iii)		Switch to Switch				
		Wiring from switch to switch with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in prelaid PVC pipe/M.S. conduit/G.I. pipe/wooden strip batten/wooden casing and capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: ii) 7/0.74 mm (7/0.029") (660)	Rmtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jharries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (220)	Rmtr			



iv)		Distribution board to General Purpose (5A/13A) socket				
		Wiring of circuit from Distribution Board to 5A/13A, 230Volts with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts graded, 2&3 pin switched socket, stranded copper conductor cables in concealed PVC conduit, including conduit accessories, etc (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in pre-laid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: ii) 7/0.74 mm (7/0.029") (396)	Rmtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jhamries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (132)	Rmtr			
v)		Socket to Socket				
		Wiring from 5 Amps, 2&3 pin socket to socket with 3 nos. single core 2.5 Sqmm PVC insulated 450/750 Volts grade solid or stanerd copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc complete. (conduit partly shared). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iii))	Supply and erection of single core PVC insulated copper conductor cables, in pre-laid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iii) 7/0.74 mm (7/0.029") (384)	Rmtr			
b	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jhamries, and repairing surface, etc., complete with all specials. iii) 25 mm i/d (128)	Rmtr			
vi)		Distribution board to AC 20Amps DP socket				
		Wiring of circuit from distribution board to 15A, 230Volts, DP switch with 3 nos. single core 4Sqmm PVC insulated 450/750 Volts grade stranded copper conductor cables in concealed PVC conduit including PVC conduit, Conduit accessories, etc (conduit partly shared for A/Cs). Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/10 (a(iv))	Supply and erection of single core PVC insulated copper conductor cables, in pre-laid PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: iv) 7/0.91 mm (7/0.036")	Rmtr	660.00		
b	ch/24/3 (iv)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jhamries, and repairing surface, etc., complete with all specials. iv) 32 mm i/d	Rmtr	220.00		
2		LT CABLES				



		Supply at site, installation, testing and commissioning of PVC insulated armoured copper conductor cable 600 / 1000 Volt grade (or otherwise mentioned in cable description) in prelaid 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
i)	ch/24/13 (c-v)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- v) 6 mm sq (7/0.044")	R.Mtr	100.00		
ii)	ch/24/13 (c-viii)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- viii) 25 mm sq (19/0.052")	R.Mtr	100.00		
iii)	ch/24/13 (c-xii)	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire/trenches, etc. (rate for cable only):- c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- xii) 95 mm sq (37/0.72")	R.Mtr	50.00		
3		GROUNDING SYSTEM				
i)		Grounding Cables				
		Supply at site, installation, testing and commissioning of PVC insulated non armoured copper conductor cable 450/ 750 Volt grade (or otherwise mentioned in cable description) in prelaid 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. Actual length of cables to be installed shall be practically measured at site by the Contractor, duly authenticated by the 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. Cable should be of FAST, Newage or universal cables and conduit should be of Solo, popular, easyfit or equivalent as approved by engineer incharge				
a	ch/24/12 (ii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- ii) 6 mm sq (7/0.044")	R.Mtr	100.00		
b	ch/24/12 (iv)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- iv) 16 mm sq (7/0.064")	R.Mtr	100.00		

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c	ch/24/12 (vii)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in pre-laid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- vii) 50 mm sq (19/0.072")	R.Mtr	50.00		
4		CONDUITS, PIPES, DUCT, CABLE TRAYS, FIXING CLAMPS AND FIXING ARRANGEMENTS Supply, installation, testing and commissioning of following conduits laid under floor for telephone/ data cables, optical fiber cables, Sub main power cables & earth cables including all conduit accessories. The PVC conduits shall be laid under floor including chiseling and cutting of floor for required dimensions, laying of conduit, backfilling of remaining cavity with CC as specified for floor in that area, making good, complete in all respect. conduit made of solo, popular, easyfit or equivalent as approved by engineer incharge.				
i)		PVC Conduit				
a	ch/24/3 (iii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jammies, and repairing surface, etc., complete with all specials. iii) 25 mm i/d	Rmtr	100.00		
b	ch/24/3 (vi)	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-38.2 & 38.3 iii) 100 mm i/d	Rmtr	120.00		
5		DISTRIBUTION BOARDS Supply at site, fabrication, installation, testing and commissioning of Distribution Board (DB), made of sheet steel 16 SWG, degreased and derusted, with 2 coats of antirust paint, 2 coats of powder coated paint of approved colour, protection classification IP-44, totally enclosed indoor floor mounting cubicle type in free standing design, with hinged door, handle including cost of all auxiliaries, internal wiring, designation labels on MCCBS, grounding bar suitable for system Voltage 415 V, 50 Hz, 3 Phase and neutral bus bars of 99.9% electrolytic copper, including cost of cable terminal blocks wiring from breakers, brass cable glands, all accessories complete in all respects. All incoming and outgoing breakers shall be accessible only by opening the front door having further M.S. sheet cover gaskets shall also be provided where necessary. Panel should be completely made in certified factory, ie PEL, Green T & D, Mazcorp engineering or equivalent approved by engineer incharge.				
		All MCCBs shall be suitable to operate without any derating at 40°C ambient temperature and shall be of one make only. The sides of MDB shall also have louvers at bottom and top on sides of panel for hot air exhaust, wire mesh etc. The back of the panel shall be lockable door instead of bolted and shall conform to single line diagram. Item should be of Schneider, Terasaki or equivalent approved by engineer incharge				
i)		MAIN-DB				
	ch24-90(b-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessed/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights, Thimble, Copper Comb, Wiring, Neutral & Earth Bar, Door Earthing, Digital Voltmeter, Digital Ammeter, Volt Selector Switch, Ammeter selector switch, Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (b) 12" deep (ii) 160-200A	CFT	9.00		
		INCOMING				



	ch24-87/(a-iv)	Supplying, Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (iv) 125-250 Amp(18 KA)	Each	1.00		
		OUTGOING				
		Supplying, Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge				
	ch24-87/(a-i)	a) Triple Pole (ii) 15-100 Amp (10 KA, 15 KA)	Each	2.00		
ii)		DB-LIGHTING				
	ch24-90(a-i)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (i) 20-60A	CFT	9.00		
		INCOMING				
	ch24-87/(a-ii)	Supplying, Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaidd DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1.00		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMAN/TERASAKI JAPAN/ ABB SWITZERLAND in prelaidd DBs and Panels i/c the cost of screwes,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Pole (ii) 6-40 Amp (6 KA)	Each	9.00		
iii)		DB-POWER				
	ch24-90(a-ii)	P/F wall mounted DB (Distribution Board) made with 16SWG Sheet (Recessded/Surface mounted Type), Powder coated Paint, i/c the cost of Lock, Indication lights,Thimble, Copper Comb, Wiring, Netural & Earth Bar, Door Earthing, Digital Voltmeter,Digital Ammeter,Volt Selector Switch,Ammeter selector switch,Current Transformers and Controles Complete in all respect as approved and directed by the Engineer Incharge (Breakers will be Paid Separately). (a) 6" deep (ii) 75-100A	CFT	9.00		
		INCOMING				

	ch24-87/(a-i)	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN/SIEMEN/ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge. a) Tripple Pole (ii) 15-100 Amp (10 KA,15KA)	Each	1.00		
		OUTGOING				
		Suppling,Installation and comissioning of MCB (Miniature Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY /SIEMEN GERMANY/TERASAKI JAPAN/ ABB SWITZERLAND in prelaid DBs and Panels i/c the cost of screws,necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
	ch24-86/(a-ii)	a) Single Poie (ii) 6-40 Amp (6 KA)	Each	19.00		
6		MISCELLANEOUS FITTINGS				
		Providing and fixing Copper winded Exhaust fan with louver and shutter made of Pak/Younas/G.F.C. i/c the cost of necessary cable and hardware for connection from ceiling rose complete as approved and directed by Engineer Incharge.				
	ch24-102/(a-i)	(a) Plastic body (i) 10" dia	Each	8.00		
7		WIRING ACCESSORIES				
		P/F PVC double layer Switch kit Faceplate with specified switch holes i/c the cost of switches / sockets / dimmer made of Hi-Life / Bush / Schenider, screws complete as approved and directed by the Engineer Incharge				
		(a) One way Gange Switch				
	ch24-103 (a-vi)	(vi) Fan Dimmer	No.	30.00		
	ch24-103 (a-ii)	Small (ii) 02 Gange	No.	2.00		
	ch24-103 (a-iii)	Small (iii) 03 Gange	No.	2.00		
	ch24-103 (a-iv)	(iv) Three pin Light Plug 10/13 Amp	No.	16.00		
	ch24-103 (a-i)	Large (i) 04 Gange	No.	6.00		
	ch24-103 (a-ii)	Large (ii) 05 Gange	No.	2.00		
	ch24-103 (a-iii)	Large (iii) 06 Gange	No.	9.00		
	ch24-103 (a-viii)	(viii) Three Pin Power Plug 15-32 Amp	No.	10.00		
		P/F PVC concealed Switch kit Box i/c the cost of screws complete as approved and directed by the Engineer Incharge				
	ch24-104 (i)	(i) Small	No.	20.00		
	ch24-104 (ii)	(ii) Large	No.	27.00		
8		CCTV System				
i		Camera Cable				
		Supply, Installation and commissioning of wiring with 4-pair data Cable, 23 AWG UL/EN listed cable * Conforming to following standards: TIA/EIA 568 / ISO/IEC 11801, in prelaid conduit / cable tray from including all accessories, Manufacturer/OEM Authorization, Make: Schneider / i-connect UK/3M Coming USA/ D-Link/ Polto Australian or equivalent complete in all respect as approved and directed by Engineer Incharge.				
	ch24-106 (a-ii)	a) UTP (Unshielded Twisted pair) (ii)CAT-6A (Min.1G/ 10G @ 500MHz or higher)	MTR	120.00		



9		Sound System Installation				
i)		Speaker				
		Supply, Installation & Commissioning of recessed/surface mounted Speakers of specified capacity housed in metallic enclosure with builtin 70v/100v transformer, aluminium grill, SPL (Sound Pressure Level) (1W / 1M)= 92dB max 99dB, frequency response 130-13 KHz, EN-54 compliant, Including cost of all accessories and materias, complete in all respect made of Ecier Europe/Bosch/ Norden / Honey Well or equivalent as approved and directed by the Engineer Incharge				
	ch24-150 (a-iv)	a) Ceiling mounted speaker (iv) 40 Watt	Each	14.00		
ii)		Amplifier				
		Supply, Installation and commissioning of Power / Mixer Amplifier of specified wattage, Including cost of all necessary accessories / materials, complete in all respects made of Ecier Europe/Bosch/ Norden / Honey Well or Equivalent or as approved and directed by Engineer Incharge.				
	ch24-152 (iii)	(iii) 120 Watt	Each	1.00		
iii)		Handheld Microphone with Stand				
		Supply, Installation of Microphone of specified quality as per requirement made of : Norden, Bosch, Honeywell. Complete in all respect. as approved and directed by Engineer Incharge.				
	ch24-155 (iii)	(iii) Handheld Microphone with Stand	Each	1.00		
iv)		Wiring for Sound System				
a	ch24-10 (a-i)	Supply and erection of single core PVC insulated copper 38.1 conductor cables, in prelaidd PVC pipe/M.S. conduit/G.I pipe/wooden strip batten/wooden casing an capping/G.I. wire/trenches (rate for cables only):- a) 250/440 volts, PVC insulated: i) 3/0.74 mm (3/0.029")	Per Mtr	100.00		
b	ch/24/3 (ii)	Supply and erection of PVC pipe for wiring recessed in walls, including inspection boxes, pull boxes, hooks, cutting jhamies, and repairing surface, etc., complete with all specials. ii) 20 mm i/d	Rmtr	100.00		
10		AC PIPING INSULATION				
		Supply & installation closed cell type Aluminium foil faced XLPE (Cross linked polyethelene) polyolefin pipe insulation tube of density 25 Kg/m³ of specified thickness & thermal conductivity 0.035 w/m °C and fire retardent of Class "o" rating as specified for refrigerant copper piping as approved by the Engineer Incharge. a) 20 mm thick				
	ch27-21(a-ii)	(ii) 3/8" dia	ft	200.00		
11		Control Wire				
	ch24-13(b-iii)	Supply and erection of copper conductor cables for serviceconnection, in prelaidd pipe/G.I. wire/trenches, etc. (rate for cable only):- b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable: iii) 7/0.74 mm (7/0.029")	Rmtr	120.00		
11		Drain Pipe				



ch23/47(a-1)		Providing, laying, testing and commissioning of POLY PROPYLENE RANDOM COPOLYMER (PPRC) water supply pipe made of (Dadex/Popular/Beta/BB.J) with specified pressure rating PN (PRESSURE NOMINAL) and conforming to DIN8077 code i/c cost of solvent, specials, making jharries complete in all respect as approved and directed by Engineer Incharge. (Internal/External Diameters mentioned). a) PN-16 pipe (i) (1 1/2") 20 mm	MTR	120.00		
Total of MRS Items						
1		LIGHT FIXTURES				
		Supply, installation, testing and commissioning of following light fittings, ceiling, recessed, wall mounted as per specified fixture. Complete with internal wiring, Grounding terminal, driver complete in all respects. Lights should be of ledvance, Osaka or equivalent approved by engineer incharge				
i)	NSI	20 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	46.00		
ii)	NSI	15 Watt (White) LED Light Fixture surface/recessed mounted, IP-22 rated	No.	72.00		
iii)	NSI	10 Watt LED Light Fixture surface/recessed mounted, IP-22 rated	No.	28.00		
2		MISCELLANEOUS FITTINGS				
		Supply, installation, testing & commissioning of Ceiling/ Exhaust fan. The ceiling/exhaust fan shall comprise circular fan metallic/ plastic body, metallic fan blades, down rod (if necessary) of suitable dia & length, AC capacitor, internal wiring, terminals all installation & operational accessories as per tender specifications, as per site requirements and as directed by the Engineer. make Bilal Switchgear Engineering, GFC, Pak Fan or approved equivalent by engineer incharge				
i)	NSI	56" dia ceiling fan suitable to give an air displacement of minimum 8000 Cu. ft./ min. Fan shall be made with 99% purity Copper windings.	No.	30.00		
3		WIRING ACCESSORIES				
		Supply at site, installation, testing and commissioning of the following wiring accessories, complete in all respects. Made of T.J, HiLife or equivalent approved by engineer incharge				
i)	NSI	Appropriate size of plastic body fan box and ceiling fan rod 48" in length	Nos	30.00		
4		Sound System Installation				
i)		Headgear Microphone				
	NSI	Supply, installation, testing and commissioning of K-Audio Headgear Microphone Model:- DM600 complete in all respect or approved equivalent as per instructions by engineer incharge	No	1.00		
ii)		Outdoor Horn				
	NSI	Supply, installation, testing and commissioning of TOA Outdoor Horn TU-651 with Local Horn complete in all respect or approved equivalent as per instructions by engineer incharge	No	4.00		
5		Fire Alarm System				
		(General Description) Supply, installation, testing and commissioning of following items as per drawings, specifications, & instructions of the Engineer, complete in all respect, all item should be of Gent by honeywell, ETON uk or approved equivalent as per instructions by the Engineer as required.				
i)		Manual Call Point				



	NSI	Supply, install testing and commissioning of manual call point RESET type with allied components with full functionality as per specification of manufacturer / drawing with proper staff and tools and plants etc. Input Source Zone signal Address Coding dip switch Operating Voltage 26V DC Alarm Current 6mA Quiescent Current 850µA Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	1.00		
ii)		Smoke Detector				
	NSI	Supply, install testing and commissioning of Addressable Optical Smoke Detectors incorporating a with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds. Address Coding Binary Alarm Current DC26V 6mA Standby Current DC26V 850µA Sensitivity Setting Comply to EN54 Ambient Temperature 0°C ~ +50°C Material Fire-proof plastic	Each	10.00		
iii)		Sounder				
	NSI	Supply, install testing and commissioning of Intelligent analogue addressable Loop powered sounder with flasher and red body and wall mounting base. Input Source Zone signal Address Coding Binary dip switch Operating Voltage 26.5V DC Standby Current Under 850µA Alarm Current Under 8mA Sound Output 90 ±4dB at 1 meter Sounder Output 2.3~3.4KHz Ingress Protection IP65 Ambient Temperature -20°C ~ +50°C Ambient Humidity 10% ~ 95% Material Fire-proof plastic	Each	1.00		
iv)		FACP				
	NSI	Supply, install, testing and commissioning of Addressable FACP. Each loop can connect up to 250 addressable devices. Maximum networking are 32 loops and total addressable points are 8000. Large LCD screen (40 x 15 lines) allows more events to be displayed on the same screen. Power 220V AC 50/60Hz *Others also available Battery Capacity 24V DC 4Ah Charging Voltage, Current 26V DC 100~400mA *With auto adjustment function Zone Voltage, Current 26.5V DC 340mA System Capacity 250 devices/1 loop *Expandable for site requirement Exterior Resistance Round-trip under 40Ω Transmitting Method Digital series transmitting Accumulation Time 0~40 seconds Main Sound 85dB @1M Material 1.6mm steel plate	Each	1.00		
v)		Cable				
	NSI	Supply, install testing and commissioning of 2 x 2.5 mmsq shielded drain wire, 30 minutes fire resistance, red, LPCB approved, BS 7629-1/2008, BS 5839-1 standard in 25 mm dia pvc conduit complete in all respects including cost of conduit and its accessories installing arrangement, making joints in wall and repairment of wall. (Newage, Pakistan Cable, Fast or approved equivalent). conduit should be of Dadex, Turkplast, Easyfit or equivalent as per instructions by engineer incharge.	Rmtr	150.00		
vi)		Programming, Testing and Commissioning				
	NSI	Programming, Testing and Commissioning of Complete system by authorized certified company complete in all respects as per instructions of the Engineer.	Job	1.00		
vii)		Fire Extinguishers				



	NSI	Supply & installation of 1 x 6kg DCP CO2 Fire Extinguishers installed as per instructions of Cleint, complete with wall hanging and mounting arrangement complete in all respects. Complete in all respect as per instructions by site engineer	Nos.	2.00		
6		GROUNDING SYSTEM				
i)		Earthing system with road				
	NSI	Supply and install pair of earth electrode comprising 13ft (4m) long 2" (50mm) dia G.I. pipe having 3/8" (10mm) dia holes at 20" (500mm) c/c all along the length of pipe burie 40ft (8.09m) underground in upright position including all accessories for complete installation such as nuts bolts, washers 2x3/0 SWG copper conductor earthing lead complete in all respect	No.	1.00		
ii)		Grounding Connection Point				
	NSI	Supply of Grounding connecting points consisting of copper plate 300mm long x50mm wide x 6mm thick to be installed, complete with fixing arrangement, brass nuts bolts, washers, lugs, 12.5mm dia. holes to facilitate connections of Incoming copper strips / copper conductors.	Nos.	1.00		
iii)		Testing and commissioning				
	NSI	Testing and commissioning of the earthing system in the presence of site engineer with electronic devices such as megger etc, making so report with after approximating 3 time testing and the grounding ohm must be less than or upto 3 ohms	Nos.	1.00		
7		Air Conditioning				
		Providing, shifting, fixing, testing, commissioning, adjusting and balancing of standard (Cool only) DC inverter technology air conditioning units, including indoor evaporating and out door condensing unit, the indoor units wall mounted of capacities as specified below, complete with factory charged refrigerant, piping insulation including condensate copper piping connection, between indoor/outdoor units conduiting and any additional charge of refrigerant accessories, and Drain piping upto nearest drain water line included in these rates making the job complete in all respect. AC should be of Haier,dawlance, gree or equivalent, copper piping should be of muller, trox and insulation of Durkflex or equivalent, Drain pipe should be 3/4" dia pvc pipe of master, turkplast or equivalent as approved by engineer incharge				
		1/4 and 1/2 copper piping should be used till 1.5 ton AC and 5/8 and 3/8 piping should be used for 2 ton AC and 3/8 and 1/2 for 4 ton AC between indoor and outdoor unit.				
		The AC Unit should maintain approx 11 BTU per cubic feet plus addition of 3000BTU in the total amount for persons and devices				
i)		Copper pipe				
a	NSI	Supply ,installation testing and commissioning of Copper piping 5/8 & 3/8 with insulation and control wire including making jharies and repairing of surface with all necessary item job must be complete in all respect	RFT	200.00		
8		Duct Panel				
		Supply at site and installation of dura duct on wall where necessary on per instruction of engineer incharge				
i)	NSI	25 x 25 mm	Rmtr	100.00		
Total of Non-MRS Items						
Grand Total						





Islamia University of Bahawalpur – IUB

**CONSTRUCTION OF ROADS
FOR THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB-CAMPUS AT AHMADPUR
EAST UNDER THE PROJECT TITLED
“STRENGTHENING OF ISLAMIA UNIVERSITY OF
BAHAWALPUR & ITS SUB CAMPUSES”**

Bill of Quantities

May, 2023

**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF
BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST
ROAD WORKS**

BILL OF QUANTITIES

SUMMARY OF COST

BILL NO.	ITEM OF WORK	AMOUNT (RS.)
1	EARTHWORKS	
2	SUB BASE AND BASE COURSES	
3	SURFACING	
4	CULVERTS	
5	ANCILLARY WORKS	
	SUB-TOTAL	
	ADD PST	
	GRAND TOTAL	



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB
CAMPUS AT AHMADPUR EAST
ROAD WORKS**

BILL OF QUANTITIES

BILL NO. 1 : EARTH WORKS

Sr. No.	Item No.	Item Description	Unit	Quantity	Unit Rate	Amount (Rs.)
1	Ch-3 - 48	Uprooting Sarkanda growth and disposal within 100 ft. (30 m)	100Sft.	320,011.523		
2	Ch-3 - 25/i	Preparation and compaction upto 95% to 100% maximum modified AASHTO of natural ground upto a depth of 6" in ordinary soil.	1000Cft.	160,005.762		
3	Ch-3 - 5 (i) & 17	Earthwork in ordinary soil for embankments lead upto 7 km., including ploughing and mixing with blade grade or disc harrow or other suitable equipment, and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in respects 95% to 100% maximum modified AASHO dry density (lead will be paid as per actual but not more then 7 Km)	1000Cft.	121,159.574		
GRAND TOTAL OF BILL NO 01: EARTHWORKS						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB
CAMPUS AT AHMADPUR EAST
ROAD WORKS**

BILL OF QUANTITIES

BILL NO. 2 : SUB-BASE AND BASE COURSES

Sr. No.	Item No.	Item Description	Unit	Quantity	Unit Rate	Amount (Rs.)
1	Ch-18 - 3/a/ii	Providing and laying sub-base course of stone product of approved quality and grade, including placing, mixing, spreading and compaction of sub-base material to required depth, camber, grade to achieve 100% maximum modified AASHO dry density, including carriage of all material to site of work except gravel and aggregate. ii) Crushed stone aggregate	100Cft	97,271.437		
2	Ch-18 - 4/a	Providing and laying base course of crushed stone aggregate of approved quality and grade, and supply and spreading of stone screening, including placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHO dry density, including carriage of all materials to site of work except gravel and aggregate.	100Cft	96,017.695		
3	Ch-6 - 5/f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): Ratio 1: 2: 4	100Cft	7,070.527		
4	Ch-1 - 1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Sargodha to Ahmadpur East 399 KM)	100Cft	240,089.376		



Sr. No.	Item No.	Item Description	Unit	Quantity	Unit Rate	Amount (Rs.)
5	Ch-18 - 5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	P.Rft	3,922.658		
GRAND TOTAL OF BILL NO. 2 : SUB-BASE AND BASE COURSES						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB
CAMPUS AT AHMADPUR EAST
ROAD WORKS**

BILL OF QUANTITIES

BILL NO. 3 : SURFACING

Sr. No.	Item No.	Item Description	Unit	Quantity	Unit Rate	Amount (Rs.)
1	Ch-18-6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.	100Sft	185,509.199		
2	Ch-18/8a 1(i) + 2(i) + 3 + Ch- 1/1 (R.A.A)	Providing surface treatment to roads, including supply of bitumen and bajri/crushed stone aggregate of approved quality, including cleaning of road surface, heating and spraying bitumen, spreading bajri and rolling with road roller (including its operation cost, fuel and hire charges, etc.) etc. complete including carriage of all materials to site of work except bajri/crushed stone aggregate. 1) 1st coat:- i) 40 lbs. bitumen, and 5.5 Cft. bajri of nominal size 1" (25mm) per 100 sq. feet or 1.96 Kg bitumen and 0.017 cu.metre bajri per square metre. 2) 2nd coat:- i) 25 lbs. bitumen, and 2.75 Cft. bajri of nominal size 1/2" (13 mm) per %sft or 1.23 Kg bitumen and 0.008 cu. metre bajri per sq.metre. 3) 3rd coat:- 14 lbs. bitumen, and 1.5 Cft. bajri of nominal size 1/4" (6mm) per %sft or 0.69 Kg bitumen and 0.005 cubic metre bajri per sq.metre.	100Sft	185,509.199		
4	Ch-6-52 b(i)	Providing and fixing precast Edge Kerb Stone (4"to 6" thick), of 3500 PSI Compressive Strength, embedded in PCC 1:2:4 over lean concrete 1:4:8 etc complete in all respect. With Painting. 14" high	P.Rft	11,945.343		
5	Ch-6-2	Dry rammed brick or stone ballast, 1 1/2" to 2" (40 mm to 50 mm) gauge.	100Cft	6,906.093		
6	Ch-10- 41/a	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope, complete in all respect. (50% Grey / 50% Coloured) a) 50-mm thick	P.Sft	29,005.591		
GRAND TOTAL OF SURFACING						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB
CAMPUS AT AHMADPUR EAST
ROAD WORKS**

**BILL OF QUANTITIES
BILL NO. 4: CULVERTS**

Sr. No.	Item No.	Item Description	Unit	Quantity	Unit Rate	Amount (Rs.)
1	Ch-3 - 7/i	Earthwork excavation in open cutting upto 5'-0" (1.5m) depth for storm water channels, drains, sullage drains in open area, 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 50ft. (15 m) lead. Ordinary soil.	1000Cft	3810.000		
2	Ch-7 - 30	Supplying and filling sand under floor; or plugging in wells.	100Cft	952.500		
3	Ch-6 - 3/d	Cement concrete brick or stone ballast 1½" to 2" (40 mm to 50 mm) gauge, in foundation and plinth (1:6:12)	100Cft	952.500		
4	Ch-6 - 5 (f)	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate) - 1:2:4	100Cft	99.667		
5	Ch-7 - 4/i	Pacca brick work in foundation and plinth in: Cement, sand mortar:- Ratio 1:4	100Cft	2,895.012		
6	Ch-6 - 6ai(3)	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.);- Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- 1:2:4 For slab & parapet	P.Cft	401.526		
7	Ch-6 - 12 c	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- Deformed bars (Grade-60)	100 Kg	1,429.232		
8	Ch-1 - 1	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor. (Sargodha to Ahmadpur East 399 KM)	100Cft	441.050		
GRAND TOTAL OF BILL NO.4: CULVERTS						



**ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB
CAMPUS AT AHMADPUR EAST
ROAD WORKS**

BILL OF QUANTITIES

BILL NO. 5 : ANCILLARY WORKS

Sr. No.	Item No.	Item Description	Unit	Quantity	Unit Rate	Amount (Rs.)
1	Ch- 18-19iv(a)	Providing and erection at site of work-Sign post of M.S. plate 1/8" thick (3 mm): Mandatory	Each	2.00		
2	Ch- 18-19iv(b)	Providing and erection at site of work-Sign post of M.S. plate 1/8" thick (3 mm): Warning/ Direction/ Informatory	Each	9.00		
3	Ch- 13-35	Pavement traffic lane 5"(125 mm) wide with reflection chlorinated rubber (CR) paint including glass beads complete in all respect.	Rft	17969.28		
4	Ch-18-28a 2(ii)	Providing & fixing Cat Eyes of size 4" x 4" x 3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white/red/yellow having specifid reflections , quality & shape i/c the cost of self built in 12 mm diax120 mm long steel zinc plated nail, fixing to road with epoxy/hammering with separate nail complete. a) Acrylic material. Uni-Directional: 43 Glass beads a side	Each	556		
GRAND TOTAL OF BILL NO. 05: ANCILLARY WORKS						



ESTABLISHMENT AND DEVELOPMENT OF THE ISLAMIA UNIVERSITY OF BAHAWALPUR SUB CAMPUS AT AHMADPUR EAST EXTERNAL & INTERNAL WATER DISTRIBUTION SYSTEM WITH UNDERGROUND & OVERHEAD TANK INCLUDING DESIGN OF TURBINE & EXTERNAL PRIMARY FEEDER

ENGINEER'S COST ESTIMATE

SOURCE INVESTIGATION WORKS

MRS, 1st BI-ANNUAL-2023 (01.01.2023 to 30.06.2023) DISTRICT BAHAWALPUR

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-23/1-d	Boring for tubewell in all types of soil except shingle and rock, from ground level to 100 ft. (30 m) depth, including sinking and withdrawing of casing pipe, complete: d) 6" (150 mm) i/d	P.Rft	100		
2	C-23/2-b	Boring for tubewell in all types of soil except shingle, gravel & rock, from a depth of 100.1 ft. to 200 ft. (30 to 60 m) below ground level, including sinking and withdrawing of casing pipe, complete: b) 6" (150 mm) i/d 100-200ft depth	P.Rft	50		
3	C-23/8	Furnishing sample of water from bore hole.	Each	6		
Total of MRS ITEMS						
1	NSI	Electrical resistivity Survey (ERS) to determine the availability of portable water.	P. Job	1		
2	NSI	Conducting well logging (SPR & SP logging) of tube well bore hole. Prior to conversation into tube well upto the required depth at site, completing of data and preparation of lithology chart, complete in all respect rate i/c transportation of logger etc.	P. Job	1		
3	NSI	Testing charges of water samples from PHE Laboratory.	Each	6		
Total of NON MRS ITEMS						
GRAND TOTAL OF SOURCE INVESTIGATION WORKS						

TUBE WELL BORING WORKS

0

Sr. No.	Item No.	Description of Item	Unit	Qty	Rate	Amount
1	C-23/5-a	Direct Rotary/Reverse Rotary drilling of bore for tubewells, in all types of soil except shingle, gravel and rock:- a) from ground level to 250 ft. (75 m) below ground level:-ii) 20" to 26" (500 to 650 mm) i/d	P.Rft	120		
2	C-23/7	Providing strong substantially built box of deodar wood 4'x2½'x9" (1200x750x225 mm), with compartments, lock and locking arrangement, for preserving samples of strata from bore hole.	P.Job	1		
3	C-23/8	Furnishing sample of water from bore hole.	P.Set	3		
4	C-23/14-i&j	Providing and installing M.S. blind pipe socketed/welded joint, M.S. reducer (where necessary), in tubewell bore hole, including jointing/welding with strainer, etc. complete:- i) 12" i/d, ¼" (300 mm i/d 6 mm) thick (i/c stick up above G.L)	P.Rft	80		
5	C-23/9-k	Providing and installing, brass strainer in tubewell bore hole, including sockets, special sockets, studs, etc included in the complete:- k) 12" i/d, ¼" (300 mm i/d 6 mm) thick	P.Rft	42		
6	C-23/18	Shrouding with graded pea gravel 3/8" to 1/8" (10 to 3 mm), around tubewell in bore hole.	P.Cft	337.34		
7	C-6/5-c	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):c) Ratio 1: 1½: 3	%Cft	90.97		
8	C-23/18	Testing and developing of tubewell of size 6" (150 mm) i/d and above continuously.i) upto 1.5 cs. Discharge	P.Hr	72.00		
Total of MRS ITEMS						
1	NSI	P/L Sanitary seal at site complete in all respect as per entire satisfaction of Engineer-In-charge. The provision is only for estimation purpose. Payment should be made after detail analysis duly approved by the Suprintending Engineer. Minimum 10' in Depth from G.L.	P.Job	1.00		
2	NSI	Providing and fixing MS well cap12" i/d with lock and locking arrangement	Each	1		
3	NSI	Testing charges of water samples from PHE Laboratory	Each	3		
4	NSI	Electric Logging arrangement (for correct placement of strainer & blind pipe)	P.Job	1		
Total of NON MRS ITEMS						
GRAND TOTAL OF TUBE WELL BORING WORKS						

PUMP HOUSE WORKS

1	C-3/21-a2-ii	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)	%0Cft	601.75		
2	C-6/3-d	Cement concrete brick or stone ballast 1½ " to 2" (40 mm to 50 mm) gauge, in foundation and plinth:-	% Cft	325.00		
3	C-7/4-i	Pacca brick work in foundation and plinth in:-i) cement, sand mortar:- Ratio 1:5	% Cft	1489.21875		
4	C-6/33(b-1)	Providing and laying damp proof course of cement concrete 1:2:4 (using cement, sand and shingle), including bitumen coating :-i) 1½" thick (40 mm)	% Sft	73.50		
5	C-3/15 (i)	Filling, watering and ramming earth under floors:-i) with surplus earth from foundation, etc.	%0Cft	4663.5		
6		(a) (i) Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) (c) Type C (No.minal mix 1: 2: 4)	P.Cft	300.44		
7	C-6/12(b)	Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (b) Deformed bars (Grade-40)	% Kg	694.02		
8	C-7/5	Pacca brick work in ground floor:-i) cement, sand mortar:- Ratio 1:4	% Cft	445.78		
9	C-10/43	Providing and laying Tuff pavers, having 7000 PSI crushing strength, manufactured by approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints, finishing to require slope. Complete in all respect.60-mm thick	P.Sft	810.00		
10	C-9/5	Single layer of tiles 9"x4½"x1½" (225x113x40 mm) laid over 4"(100 mm) earth and 1" (25 mm) mud plaster without Bhoosa, grouted with cement sand 1:3 on top of RCC roof slab, provided with 34 lbs. per %Sft. or 1.72 Kg/Sq.m bitumen coating sand blinded	% Sft	342.56		
11	C-11/8(b)	Cement plaster 1:3 upto 20' (6.00 m) height:-b) ½" (13 mm) thick	% Sft	799.50		
12	C-11/18-a+31	Cement pointing struck joints, on walls, upto 20' (6.00 m) hieght i/c Extra cost of labour and material for red oxide pigment in cement pointing to match with the colour of bricks.1:2	% Sft	502.50		
13	C-25/31	Making and fixing steel grated door with 1/16" thick (1.5mm) sheeting, including angle iron frame 2"x2"x3/8" (50x50x10 mm) and ¾" (20 mm) square bars 4" (100 mm) centre to centre, with locking arrangement.	P. Sft	28		
14	C-25/41-b-ii	Providing and fixing steel windows with openable glazed panels, using beam section for frame 1½"x1"x5/8"x1/8" (40x25x16x3 mm), Z-section for leaves ¾"x1"x¾"x1/8" (20x25x20x3 mm), T-section sashes 1"x1"x1/8" (25x25x3 mm), glass panes, wooden screed for glazing embedded over a thin layer of	P.Sft	24		
15	C-25/58	Providing and fixing M.S. flat ½"x1/8" (13mm x 3mm) grill including ¾" x 1/8" (20 mmx3 mm) M.S. flat frame,in windows of approved design, including painting three coats, complete in all respects.	P.Sft	24		
16	C-7/30	Supplying and filling sand under floor or plugging in wells.	% Cft	164.625		
17	C-10/15-e	Providing and laying topping of cement concrete 1:2:4,including surface finishing and dividing in panels:- (e) 2"(50 mm) thick	% Sft	426.25		
18	C-13/5-d	Painting new surface:-d) Preparing surface and painting guard bars, gates of iron bars, gratings, railing (including standards braces, etc.) and in similar open work:- 3 Coats	% Sft	56		
19	C-11/23-iii	Distempering three coats on new surface wall and ceiling.	% Sft	1202.625		
20	C-13/32-a	Providing and applying weather shield paint of approved quality on external surface of building including preparation of surface, application of primer complete in all respect:a) new surface:-	% Sft	790.5		
21	C-9/14	Khassi parnalas in cement, sand mortar 1:2, 12" (300 mm) outside width finished smooth with a floating coat of neat cement.	P.Rft	13		
22	C-9/15	Khuras on roof 2'2"x6" (600 x 600 x 150 mm) Complete.	Each	1		
23	C-10/25.	Laying floor coloured glazed tiles 1/4" thick laid in white cement and pigment on a bed of 3/4" thick 1:2 cement sand mortar 3/4" thick	%Sft	419.875		
24	C- 25/10	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.	% Kg	139.0748		
25	C-25/ 11	Erection and fitting in position iron trusses, staging of water tanks, etc.	% Kg	64.96		
Total of MRS ITEMS						
GRAND TOTAL OF PUMP HOUSE WORKS (12' X 12') WORKS						
1		L.T. Power Cables Supply and erection of copper conductor cables for service connection, in prelaidd pipe/G.I. wire/trenches, etc. (rate for cable only):-Manufactured by any one of Manufacturers M/s Pakistan Cables Ltd, Newage Cables Allied Cables PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:- vii) 19/1.32 mm (19/0.052")	P.Rft	50		

2		Supply and erection of copper conductor cable for service connection, in pre-laid pipe G.I. wire / trenches etc (rate for cable only) c) PVC insulator, PVC sheathed 4 core, 660/1100 volt 7/1.63 mm (7/0.064")	Mtr	70.0		
Total of MRS ITEMS						
1	NSI	MPB (MAIN PANEL BOARD) Supply, installation and commissioning of MPB-N made of sheet steel 14 SWG, totally enclosed, indoor wall mounting type including all auxiliaries, internal wiring from MCCBs terminating on cable terminals blocks installed at the top of MPB designation labels of all incoming and outgoing feeders as shown on the drawings, 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 MPB-N shall be degreased and de-rusted having one coat of anti-rust paint with further 2 coats of powder paint of approved colour and shall be equipped as mentioned below, 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 GE (Europe/ USA), MG. (Made in France), Mitsubishi and Terasaki (Made in Japan/Spain) ABB, Legrand. 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. to be manufactured by any one of the manufacturers make ELECT OPS ENGINEERING, PEL, Siemens. Incoming 2-50 Amps TP 15 KA MCCB having thermal and magnetic adjustable settings, Having ELECTRICAL. & MECHANICAL INTERLOCKING SYSTEM 3-Phase indication lamps of color Red, Yellow, and Blue or green on incoming side. Make Maruyasu Japan Telemecanique France. 3-Digital Voltmeter 0-500 V make Frer or Revaico Italy. 3-400/5 Amps CTs. Make Revaico Italy accuracy class 0.5. 3-Digital Ampere meter 0-400 make Revaico or Frer Italy. Outgoing 2- 30 Amps TP MCCB 15 KA 04-10/20 Amps SP MCB 6 KA. Space For 2 Nos TP MCCBs for Future. 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	Each	1		
2	NSI	Turbine Water Pump 0.5 Cusec with 20 BHP Motor Providing, installing and testing Turbine pumping unit of approved manufacturers of HUD & PHE Deptt; 1450 RPM water lubricated with discharge head capable of a discharge of 0.5 cusec of clear water against a total head of 300 ft with 80 Rft column setting, bowl assembly coupled with vertical hallow A.C. electric motor (SIEMENS) of 20 BHP 3 Phase 50 Hz. 380/440 volts including carriage, installation charges and below mentioned accessories complete in all respects to the entire satisfaction of the Engineer-in-charge of the work. ACCESSORIES i) Deep well turbine pump i/c bowl assembly, with above mentioned column setting, top pipe, discharge Head, Erection clamps & above mentioned motor (Make Siemens), cast iron Sluice Valve, air valve double action & reflux valve 1 no. each with Turbine Pump i/c Chain pully block 5 Ton capacity and all items mentioned in the analysis of rate. ii) MCU, ASD-KSB Make (Included main Circuit breaker, Contactors, Over Load Relay, Over/under voltage Protection relay, Phase failure and phase reversal protection, Voltmeter, indicating bulbs for on / overload / volt protection, current transformers, on / off Push Buttons, Dry running Protection relay, Lockable Steel Cabinet containing all the above component	P.Set	1		
		ATS for WAPDA				
3	NSI	Supply and Installation of ATS Panel for Wapda and its primary in put set complete in all respect, as approved by the Engineer incharge	Each	1		
4	NSI	Erection of 11 KV line i/c pc poles cross, arms, pin, insulators, stay wire and aluminium conductors (7/0.032") complete in all respect	Km	3		
5	NSI	Providing and installation Transformer 50 KVA with stay wire, plat form, earthing de fuses set etc. complete	Each	1		
6	NSI	Provision of cost of energy consumption Meter 3 Phase	No	1		
Total of NON-MRS ITEMS						
GRAND TOTAL OF PUMPING MACHINERY AT SOURCE/TWS WORKS						
1	C-3/44	Excavation of trenches in all kinds of soil, except cutting rock, for water supply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides, leveling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects.	%0Cft	141625.00		
2	C-23/43	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working pressure pipe, Beta/ Dadex/ Popular/ IIL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects. PN-12.5				
		250 mm o/d	P.Rft	11330		
3	C-6/5-f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):c) Ratio 1: 2: 4	%Cft	30		
4	C-3/15(i)	Filling, watering, ramming earth under floors (with surplus earth foundation).	%0Cft	113300		

		Total of MRS ITEMS				
1	NSI	Construction of masonry chambers 4'X4'X4' for sluice valve	Each	7		
2	NSI	Providing and fixing HDPE specials (such as bends, tee, cross collar, reducer, tail piece, flanged spigot, crap, flanged socket, taper, angle branch, plug etc.) with flanged and flanged joints, complete in all respects. (For PN-8 Pipe) 10% of Pipe Cost.	10%	0.0		
3	NSI	Providing and Fixing Non-return valve BSS quality and weight for PVC pipe line with cast iron flanges including the cost of jointing materials 250 mm o/d	Each	2.0		
4	NSI	Providing and Fixing Imported Air valve 2 1/2 "(65mm) i/d of BSS quality and weight (Complete with jointing material) b) double action.	Each	5.0		
		Total of NON MRS ITEMS				
		GRAND TOTAL OF RISING MAIN				
1	C-3/44	Excavation of trenches in all kinds of soil, except cutting rock, for water supply pipelines upto 5 ft. (1.5 m) depth from ground level, including trimming, dressing sides, leveling the beds of trenches to correct grade and cutting pits for joints, etc. complete in all respects.	%Cft	12444		
2	C-23/43	Providing, laying, cutting, jointing, testing and disinfecting High Density Polyethylene Pipe (HDPE-100) working pressure pipe, Beta/ Dadex/ Popular/ ILL or equivalent including the cost of specials, in trenches, as approved & directed by the engineer incharge, complete in all respects.				
		3" i/d (90 mm)	P.Rft	122		
		4" i/d (110 mm)	P.Rft	1794		
		6" i/d (180 mm)	P.Rft	158		
3	C-23/31	Providing and fixing sluice valve of B.S.S. quality and weight, Class 'B', for cast iron pipe line, and Asbestos cement pipe line (including cost of jointing material):-				
		3" i/d (90 mm)	Each	5		
		4" i/d (110 mm)	Each	10		
		6" i/d (180 mm)	Each	5		
4	C-6/5-f	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):c) Ratio 1: 2: 4	%Cft	25		
5	C-3/15(i)	Supplying and filling sand under bed of water supply etc. Under Road Cuts at Road Crossings	%Cft	688.6		
5	C-3/15(i)	Filling, watering, ramming earth under floors (with surplus earth foundation).	%Cft	9955.2		
6	C-6/5-f	Dry rammed brick or stone ballast, 1½" to 2"(40 mm to 50 mm) gauge.	%Cft	136.9		
7	C-10/15(i)	Providing and laying topping of cement concrete 1:2:4,including surface finishing and dividing in panels:- (e) 3"(75 mm) thick	%Sft	414.80		
8	C-21/12	Restoration of metaled road, on laid service line, including compaction:- a- Carpeted road, with 2" (50 mm) carpet and 10" (250 mm) depth of stone metal for sub-base and base.	%Sft	414.50		
9	C-21/10	Restoration of brick pavement on edge, over laid service line, with 2" (50 mm) sand cushion under soling. Black Topped Road with two coats of surfacing & 10"	%Sft	415.00		
10	C-23/34	Providing and fixing, air valve 2½ (65mm) dia of B.S.S. quality and weight (complete with jointing material). b) double	Each	2.00		
		Total of MRS ITEMS				
1	NSI	Providing and fixing HDPE specials (such as bends, tee, cross collar, reducer, tail piece, flanged spigot, crap, flanged socket, taper, angle branch, plug etc.) with flanged and flanged joints, complete in all respects. (For PN-8 Pipe) 10% of Pipe Cost.	10%	0.0		
2	NSI	Construction of masonry chamber for Sluice valve size 3'x3'.	Each	20.0		
		Total of NON MRS ITEMS				
		GRAND TOTAL OF TUBE WELL BORING WORKS				-
1	C-3/21-2a-ii	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m) b) in ordinary soil.	%Cft	11311.81		
2	C-6/5 (i)	Cement concrete plain i/c placing, compacting, finishing and curing complete (i/c screening and washing of stone aggregate) i) Ratio (1:4:8)	%Cft	780.13		
3	C-6/6 (a-ii)3	Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) Type C (nominal mix 1: 2: 4) (Raft)	P.Cft	3133.13		

4		Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (2) Type B (nominal mix 1: 1½: 3) (Columns)				
	C-6/6 (a-i)2	Foundation to Plinth & plinth to 20' Height	P.Cft	936.00		
	C-6/6 (a-i)2 + C-6/13 (a)	20' Height to 40' Height	P.Cft	720.00		
	C-6/6 (a-i)2 + C-6/13 (a+b)	40' Height to 50' Height	P.Cft	360.00		
	C-6/6 (a-i)2 + C-6/13 (a+b)	50' Height to 60' Height	P.Cft	360.00		
	C-6/6 (a-i)2 + C-6/13 (a+b)	60' Height to 70' Height	P.Cft	330.01		
	C-6/6 (a-i)2 + C-6/13 (a+b)	70' Height to 80' Height	P.Cft	120.00		
	C-6/6 (a-i)2 + C-6/13 (a+b)	80' Height to Top (86' Height)	P.Cft	66.00		
5		Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) (c) Type C (nominal mix 1: 2: 4) (Beams)				
	C-6/6 (a-i)3	Foundation to Plinth & plinth to 20' Height	P.Cft	717.38		
	C-6/6 (a-i)3 + C-6/13 (a)	20' Height to 40' Height	P.Cft	717.38		
	C-6/6 (a-i)3 + C-6/13 (a+b)	40' Height to 50' Height	P.Cft	358.69		
	C-6/6 (a-i)3 + C-6/13 (a+b)	50' Height to 60' Height	P.Cft	358.69		
	C-6/6 (a-i)3 + C-6/13 (a+b)	60' Height to 70' Height	P.Cft	369.51		
	C-6/6 (a-i)3 + C-6/13 (a+b)	80' Height to Top (86' Height)	P.Cft	73.50		
6		Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) (c) Type C (nominal mix 1: 2: 4) (RCC Walls)				
	C-6/6 (a-i)3 + C-6/13 (a+b)	70' Height to 80' Height	P.Cft	916.16		
	C-6/6 (a-i)3 + C-6/13 (a+b)	80' Height to Top (86' Height)	P.Cft	452.38		
7		Reinforced cement concrete in roof slab, beams, columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects:- (3) (c) Type C (nominal mix 1: 2: 4) (Slab)				
	C-6/6 (a-i)3 + C-6/13 (a+b)	60' Height to 70' Height	P.Cft	742.32		
	C-6/6 (a-i)3 + C-6/13 (a+b)	80' Height to Top (86' Height)	P.Cft	350.86		
8	C-6/9 c	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):- (c) Deformed bars (Grade-60)	%Kg	45161.74		
9	C-25/35	Providing and fixing terrace railing of 2" (50 mm) i/d conduit pipe 16 SWG, welded with 5/8"x5/8" (16x16 mm) square bar 2.75 ft. (838 mm) high fixed at 5" (125 mm) centre to centre, in reinforced cement concrete slab with suitable arrangement, complete in all respects, as per design and drawing.	Rft	209.00		

10	C-6/28	Providing embedding 10" (250 mm) wide ¼" (6 mm) thick rubber water stopper in expansion joints of R.C.C. roof slab complete in all respects.	Rft	94.25		
11	C-19/39 (iii)	Supply and fitting of cast iron manhole cover with frame, etc. complete. iii) 60 cm (24") dia	No.	2.00		
12	C-21/13	Providing and fixing 1¼"x1¼"x3/16" (31x31x5 mm) angle iron step, in manhole chambers, including carriage and setting the same in work to correct lines and levels.	No.	30.00		
13	C-10/22 (b)	1½"(40 mm) thick mosaic flooring, consisting of ½ "(13 mm) mosaic topping of one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over 1"(25 mm) thick floor of 1:2:4 cement concrete, including rubbing and polishing complete with finishing :- (b) using white cement	%Sft	616.0		
14	C-10/39 (b-ii)	Mosaic dado or skirting with one part of cement and marble powder in the ratio of 3:1 and two parts of marble chips, laid over ½"(13 mm) thick cement plaster 1:3, including rubbing and polishing, complete with finishing: (b) using white cement : ii) ½"(13 mm) thick	%Sft	1379.50		
15	C-25/10+11	Fabrication of heavy steel work, with angle, tees, flat iron round iron and sheet iron for making trusses, girders, tanks, etc., including cutting, drilling, reviding, handling, assembling and fixing, including erection in position.	%kg	1908.34		
16	C-13/5 d(i+ii)	Painting new surface:- Preparing surface and painting guard bars, gates of iron bars, gratings, railing (including standards, braces, etc.) and in similar open work:- 3 coats	%Sft	973.60		
17	C-18/19	Providing and laying dry brick pavement/soleing in streets or roads, etc. sand grouted, laid in proper camber	%Cft	736.13		
18	C-23/14	Providing and installing M.S. blind pipe socketed/welded joint, M.S. reducer (where necessary), in tubewell bore hole, including jointing / welding with strainer, etc. complete:- j) 12" i/d, ¼" (300 mm i/d 6 mm) thick	Rft	240		
		i) 10" i/d, ¼" (250 mm i/d 6 mm) thick	Rft	304.00		
		e) 6" i/d, 3/16" (150 mm i/d 5 mm) thick	Rft	20.00		
19	C-23/30	Providing and fixing sluice valve of BSS quality and quality and weight for A.C and PVC pipe line with comet joint and rubber complete i/c cost of joining material g) 12" i/d (300 mm)	No.	1.00		
		f) 10" i/d (250 mm)	No.	3.00		
20	C-23/28 (a-ii)	Providing and fixing cast iron special of B.S.S. Class 'B' (such as bend, tee cross collar, reducer, tail piece, flanged spigot, cap, flanged socket, taper, angle branch, plug etc.) for cast iron pipe line , complete:- a) C.I.S.S. Specials, with spigot. and socket joint:- ii) 8" to 12" (200 to 300 mm) i/d	Kg	845.00		
21	C-6/55	Providing and mixing super plasticizer (water reducing admixture) as defined in ASTM C-94 in order to achieve the required consistancy / workability measured by the slump, used in the ratio of (0.05% to 1.00%) by weight of cement as proposed by the designer etc complete in all respect.	P.Ltr	1463.00		
		Total of MRS ITEMS				
1	NSI	Providing and fixing float system and water level indicator guage	P/Set	1.00		
2	NSI	Panting of steel worn with water resisting paint on single coat of red lead primer (2 coats)	P/Job	1.00		
3	NSI	Providing fixing on top of tank slab two No. red air warning lights with necessary wiring in 3.029 electric cab	P/Set	1.00		
4	NSI	Lightening conductor 1" x 1/8" copper strip to earthing point 30ft from tank including earthing. Including manhole excavation & refilling & cost of chamber	Job	1.00		
5	NSI	P.F washout arrangement	No.	1.00		
6	NSI	P.F sluice valve chamber	No.	2.00		
7	NSI	Providing and laying structural pad for foundation made of selected granular fill material (Mixture of 70% gravel and 30% sand of approved quality and grade) including placing, mixing, spreading and compaction of sub-base material to required depth, grade to achieve 95% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as approved by the Engineer incharge.	P.Cft	2340.375		
8	NSI	Providing and painting Two coats of Sika Top Seal 107 (AB) or equivalent on roofs, tank bowl and other wet areas complete in all respect as per instructions of Engineer Incharge.	P.Sft	2611.50		
		Total of NON MRS ITEMS				
		GRAND TOTAL OF WATER SUPPLY PIPE LINE (DISTRIBUTION SYSTEM) ZONE-A- SATELLITE TOWN WORKS				