BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA -1000

DEPARTMENT OF CIVIL ENGINEERING

Committed to Quality Assurance for Better Bangladesh

APPROVED RATES FOR TESTING OF MATERIALS AND SERVICES

Rates include VAT (15%), University Overhead (30%) & Laboratory Development and Maintenance Effective from December, 2024

Department of Civil Engineering reserves the right to change the rates at any time without any prior notice

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BRTC Office Time : Sat to Wed => 9:00 am - 5:00 pm & Thu => 9:00 am - 2:00 pm

Transportation Engineerineering Laboratory

Sl. No.	Name of Tests	Test Rate (Tk.)
	Aggregates (Sample Preparation Charge Tk. 2000 per Sample)	
1	Sieve analysis (CA) / Gradation /FM (CA) Upto No.4	7,500
2	Sieve analysis (CA) / Gradation (Base/subbase)	12,000
3	Sieve analysis / Gradation / FM (CA) (Ballast)	9,600
4	Sieve analysis / Gradation / FM (CA) (Ballast)/Specified Sieve size	12,700
5	Sieve analysis (FA) / FM	4,200
6	% finer than # 200 sieve by washing / Fine content/Silt content	4,200
7	Aggregate Crushing Value(ACV)	8,500
8	Aggregate Impact Value (AIV)	7,400
9	Ten Percent Fine Value (TFV)	12,700
10	Angularity number including specific gravity (Sp.Gr.)	10,600
11	Elongation Index (EI)	9,600
12	Flakiness Index (FI)	8,800
13	L.A. Abrasion of CA (ASTM C131)	8,500
14	L.A. Abrasion of Ballast (ASTM C535)	8,800
15	Unit weight of aggregate (CA)	5,500
16	Unit weight of aggregate (FA)	5,000
17	Soundness with Na_2SO4 (4400/- for chemical)	21,200
18	Soundness with Mg_2SO4 (6600/- for chemical)	23,400
19	Absorption and Specific Gravity / Density	7,500
20	Clay lumps & friable particles	6,300
21	Moisture Content	3,200
22	Percentage of Uncrushed Particle (Fractured face)	9,600
23	Mica Content of Coarse Sand / CA by visual observation	16,600
24	Effect of organic impurities (1300/- for chem)	19,200
25	Organic impurities/Salt content / Sulphate content / Salinity (Checmical 500) (300/- for chem)	5,000
26	Bulking of sand (Single Point/Multi Point)	6100/16500
27	Void Ratio / Porosity / Moh. Hardness	8,500
28	CBR of Base or Sub-base material	65,800
29	Standard Proctor test of aggregate (MDD)	26,500
30	Modified Proctor or Vibrating Hammer	43,500
31	Potential Alkali-Silica Reactivity of Aggregates (Chemical Method) C289	25,000
32	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method) C1260	36,000
33	Coal & Lignite (CA)	30,000
	Coal & Lignite (FA)	20,000

Sl. No.	Name of Tests	Test Rate (Tk.)
	Bitumen (Sample Preparation Charge Tk. 3000 per Sample)	
1	Specific gravity (Sp.Gr.)/ Density	5,800
2	Penetration	5,800
3	Naphta Xylene Equivalent (500 for chem)	24,500
4	Flash & Fire Points	5,800
5	Solubility (500/- for Chem.)	5,500
6	Ductility (300/- for Chem.)	5,500
7	Softening Point (R&B) (300/- for Chem.)	5,500
8	Thin Film Oven (TFO) / Loss-on-Heating (LOH)	7,100
9	Float Test	5,800
10	Foaming Test	5,800
11	Spot Test (200/- for chem)	5,800
12	Viscosity (Dynamic) (200/- for chem)	21,200
13	Ash Content / Inorganic Matter	10,500
14	Any test on residue from LOH/TFOT (if TFOT/LOH included separately)	10,600
15	Any test on residue from LOH/TFOT (if TFOT/LOH not included separately)	17,800
16	Coating & Stripping test with/without Anti-Stripping Agent/Dose	8,100
17	Asphalt Concrete Mix Design (Marshall)*	89,700
18	Particle Charge Test of Bitumen Emulsion	6,100
	Asphalt or Bituminous Material / Pavement Core (Sample Preparation Charge Tk.3000 per Sample)	
19	Bitumen content	18,000
20	Extracted Aggregate Gradation (If Bitumen Content is included)	11,700
21	Extracted Aggregate Gradation ONLY	28,600
22	Water Content	11,500
23	Theoretical Maximum Specific Gravity	8,500
24	Density	4,200
25	Marshall Stability and Flow Test	7,500
26	In-situ core cutting (per sample)	11500+Field Visit
27	Job Mix Formula & Marshall Test	144,000
28	TSR (Tensile Strength Ratio) Test	90,000
29	RTFO	20,000
30	Binder CS (DSR)	20,000
31	RTFO CS (RTFO + DSR)	40,000
32	MSCR	50,000

Notes: [Field visit fee; Inside Dhaka City = Tk. 20,000; Near Districts = Tk. 40,000 ; Farthest Districts = Tk. 60,000 without overnight stay and Tk. 50,000 per day for overnight stay,] [* & Transport, local hospitalities, accommodation (in case of overnight stay) etc. are to be provided by the Client]*

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Concrete Laboratory

Bricks (Bricks needed for ASTM = 5 Nos., BS = 10 Nos.)		
1	Absorption (ASTM / BS Standard)	2,500 / 4800
2	Crushing strength(ASTM / BS Stand; 300/400/- capping mat.)	5500 / 8600
3	Size & shape (ASTM / BS Standard)	3,100 / 3,100
4	Unit Weight (ASTM / BS Standard); 200/300 for S.P.C.	4,300 /5,700
5	Efflorescence (needed 10 additional bricks)	5,500
Hollow / Special Brick Block / Kerb (Set of 3 Nos.)		
1	Comp. strength of Hollow bricks, Paving / Concrete blocks	4,000
2	Compressive strength of Road Kerb Stone (with core cutting)	7,200
3	Absorption	2,800
4	Unit weight	4,800
5	Autoclaved Concrete Block	6,000

R.C.C Pipes		
1	Pipes (dia up to 600mm)	7,500
2	Pipes (dia above 600mm and up to 900mm)	8,500
3	Pipes (dia above 900mm and up to 1200mm)	11,000
4	Pipes (dia above 1200mm and up to 1524mm)	14,000
5	In-situ pipe testing (Per Nos)	12,000
Manhole Covers +		
1	Load & wt. test on manhole covers (<18 inch or 450 mm Dia)	8,500
2	Load & wt. test on manhole covers (>18 inch or 450 mm Dia)	9,500
Miscellaneous		
1	Initial Rate of Absorption/Suction for Brick	3,600

Note: + Pipe specimens & manhole covers have to be taken away by the Client, immediately after the test is performed.

Cement Concrete		
1	Concrete cylinders (100x200mm), for a set of 3 Nos.	2,500
2	Concrete cylinders (150x300mm), for a set of 3 Nos.	4,500
3	Cubes (< 200mm) , for a set of 3 Nos.	3,800
4	Cubes (200mm - 300mm), for a set of 3 Nos.	4,500
5	Cubes (>300mm), each core cutting & testing (300/- for fuel)	7,200
6	Concrete Spun, for a set of 3 Nos.	4,000
7	Concrete beam in flexure, for a set of 3 Nos.	10,000
8	Concrete slab in flexure, for a set of 3 Nos.	14,000
Concrete Mix Designs		
9	Concrete mix design without admixture(Cylinder) (22,000+52,000)	74,000
10	Concrete mix design with admixture (Cylinder) (25,000+57,000)	82,000
11	Concrete mix design without admixture (Cube) (25,000+57,000)	82,000
12	Concrete mix design with admixture (Cube) (28,000+62,000)	90,000
Destructive and NDT Tests		
13	In-Situ core cutting & testing per sample (without scanning) (S.P.C. 200/-)	6,800 +*
14	In-Situ core cutting & testing per sample (with quick scanning) (S.P.C. 400/-)	14,000 +*
15	In-Situ Hammer Test - per spot / location (min. 3 tests)	7,000 +*
16	In-Situ Winsor Pin Test - per spot / location (min. for 3 tests)	6,500 +*
17	In-Situ Scanning (quick & Image) per spot / location (for 2 scans)	14,000 +*
18	In-Lab Block/Kerb core cutting & testing per sample (S.P.C. 300/-)	7,200+
19	In-Lab Supplied Core Testing (per core) (SPC 300/-)	3,000+

Cement (ASTM / AASHTO Standard)		
1	Compressive strength, 3, 7 & 28 days (1000/- Ottowa Sand) (S.P.C. 1,000/-)	11,400
2	Setting time	4,800
3	Fineness	3,500
4	Setting time (only)	5,200
5	Normal Consistency (only)	3,200
6	Density / Sp.Gr.	4,500
7	Weight of cement bag	800
Cement (EN Standard)		
1	Compressive Strength, 2 & 28 days (Ottowa Sand: 600/-)	30,000
2	Compressive Strength 2, 7 & 28 days (Ottowa Sand: 800/-)	38,000
1	Cement - Soundness	12,000
2	Mix Design - Rapid Chlorde Premeability	75,000
3	Slum Retention	200,000
4	R.C.P.T	50,000
5	Aggregate Drying Shrinkage	50,000

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S. M. Laboratory

	Calibration	
1	Pressure gauge / Dial Gauge	6,000
2	Calibration of Hydraulic Jack (up tp 300 ton) with Pressure Gauge Calibration	44,000
3	Calibration of Hydraulic Jack (up tp 1000 ton) with Pressure Gauge Calibration	74,000
4	Proving ring (< 100 kN)	7,000
5	Proving ring (100 kN to 500 kN)	8,000
6	Proving ring (> 500 kN)	9,500
7	Dynamometer	11,500
8	Compression / TensionTesting Machine (with one dial)	20,000
9	Calibration of Concrete Mix Batching Plant	350,000
	Balance and Weight	
10	Electronic Balance up to 20kg / Platform Scale / Balance	11,000
11	CA measuring potable fara / Measuring cub	5,700
12	Schmidt Hammer (Rebound)	14,500
13	Weight < 2kg / Load Cell (Weight Box 17800)	11,000
14	Balance up to 300kg	16,000
15	Balance above 300kg to 1000kg	21,000
16	Balance above 1000kg	32,500
	Cement Testing Apparatus	
17	Mixture Machine (Mortar cube & setting)	9,700
18	Blaine Apparatus /Jolting table / Vibrating Machine	15,000
19	Vicat Apparatus	7,600
20	Cement Autoclave Machine	9,700
21	Cylinder/Cube Mould Calibration	2,900
22	Curing Tank	6,100
23	PH Meter / Stop watch	2,400
	Survey Equipment	
14	Theodolite	15,700
25	Level	12,100
26	Total Station	43,100
	Miscellaneous Equipment / Devices	
27	Vernear Scale/ Micro meter	2,500
28	Steel Scale	2,500
29	Thermometer	4,000
30	Sieve	4,000
31	Tacheometer	18,000
	Outside Laboratory / In-situ Calibration	
32	Compression / TensionTesting Machine (with one dial)	20,000 +*
33	Protable Weighing Bridge	18,500
	Tiles (Set of 5 Nos.)	
1	Size & shape	2,500
2	Absorption (with flexural needs additional 5 Nos.)	3,500
3	Flexural / Modulus of Rupture	3,500
	Rubber / Plastic / PVC Materials	
1	Tension, for a set of 5 samples	3,500
2	Hardness, for 1 sample	2,500
3	Flexural, for a set of 5 samples	4,600
4	Compression, for 1 sample	4,600
5	Compression stiffness, for 1 sample	6,500
6	Water Stopper - Tension, Dim., Elongation (S.P.C. 1000/-)	7,500
7	Water Stopper - Sp. Gr. / Hardness	6,000
	Truck Scale Calibration	
1	Capacity: 0-20 ton	175,000
2	Capacity: 0-40 ton	215,000
3	Capacity: 0-60 ton	260,000
4	Capacity: 0-80 ton	315,000
5	Capacity: 0-100 ton	375,000

	A. Rod (Set of 3 Nos.)	
1	Tension test including wt. & elongation (up to 25mm)	2,500
2	Tension test incl. wt. & elongation (above 25mm & up to 32mm)	3,700
3	Tension test inc. wt. & elongation (above 32 mm & up to 50 mm)	4,500
4	Tension test inc. wt. & elongation (above 50 mm) (S.P.C. 6,000/-)	10,800
5	Bend test (up to 25mm)	1,200
6	Bend test (above 25mm)	1,300
7	Re-bend test (up to 25mm)	1,700
8	Re-bend test (above 25mm)	1,900
9	Deformation Measurement	3,000
10	Elongation at 5D as per ISO 6935-2 per Set	2,000
11	Stress-strain Curves (mod.of elasticity)(for Strand : 12,800/-)	13,000
12	Shear Test for Rod (S.P.C. as per rod dia 1200/- -- 2,000/-)	2,500
13	Shaft Rod < 30 mm	4,000
14	Shaft Rod > 30 mm <50 mm (S.P.C. 4000/-)	10,500
15	Shaft Rod > 50 mm <60 mm (S.P.C. 5000/-)	11,500
16	Shaft Rod > 60 mm <80 mm (S.P.C. 5000/-)	12,500
17	H.T. Wire, Tension test	10,000
18	Strand / Cable Tension test	16,200
19	Welded MS Bar Tension Test (as per MS Bar Rate x 2 times)	
20	Coupler up to 32mm, for a set of 1 No.	3,000
21	Coupler above 32mm, for a set of 1 No.	3,600
	B. Bolt, Angle and Plate (Set of 3 Nos.)	
22	Anchor Bolt/ Hooks Tension test (up to 25 mm) (S.P.C. 1000/-) (if required)	5,800
23	Anchor Bolt/ Hooks Tension test (above 25 mm) (S.P.C. 1000/-) (if required)	7,000
24	Bolt Tension Test (up to 25mm)	4,000
25	Bolt Tension Test (above 25mm) (S.P.C. 1000/-)	6,800
26	Anchor Bolt/Bolt/Hooks Shear Test (up to 25mm) (S.P.C. 1000/-)	4,100
27	Anchor Bolt/Bolt/Hooks Shear Test (above 25mm) (S.P.C. 2,000/-)	6,200
28	Angle/Plate/Sheet Pile/Joist Tension test (up to 16mm) (S.P.C. 1,500/-)	5,200
29	Angle/Plate/Sheet Pile/Joist Tension test (above 16mm up to 30mm) (S.P.C. 2,000/-)	6,300
30	Angle/Plate/Sheet Pile/Joist Tension test (above 30mm) (S.P.C. 2,500/-)	6,900
31	Sheet Pile/Joist wt. per meter & Thickness (S.P.C. 1,000/-)	3,400
32	Sheet Pile/Joist Section Modulus/Moment of Inertia (S.P.C. 2,000/-)	20,000
33	Hardness test (Rockwell) (S.P.C. 1,000/-)	4,500
34	Impact test, for a set of 3 Nos. (S.P.C. 1,000/-)	4,500
	C. Rod (Miscellaneous)	
35	Scaffolding / Steel Props / Jog (for a set of 1 No.)	14,700
36	Steel Sleeper (for a set of 1 No.) (S.P.C. 800/-)	7,400
37	Transverse Breaking Load of Rail (for a set of 1 No.)	27,200
38	Fibre Glass Stainers / Pipes Tension test (for a set of 3 Nos.)	5,400
39	Fibre Glass Compression test (for a set of 1 No.)	2,500
40	Spring test (for a set of 1 No.)	3,700
41	Aluminium Column Compression test (S.P.C. 2,000/-)	11,900
42	Dog Spike	8,800
43	Bond/Weld Test or Rod Lapping Test	6,200
44	MS Box Welding Compressive Strength (S.P.C. 3,000/-)	11,900
45	Butt Welded Joint	8,100
46	Prestressing 12 Wire Anchorage Test (50,000+80,000)	130,000
47	Prestressing 19 Wire Anchorage Test (55,000+88,500)	143,500
48	(for Retest of Prestressing Wire Anchorage, test fee will be one third)	
49	Test on Admixture (Mineral) for Cement/Concrete	Consult with teacher
50	Plate Bend (T-1200 & LC -1500)	2,700
51	Sleeper Test (D.G)	135,000
52	Sleeper Test (B.G)	115,000
53	Sleeper Test (M.G)	90,000
54	Stress Relaxation Test For 1000 Hours	287,500
55	Stress Relaxation Test For 100 Hours	115,000

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Geotechnical Engineering Laboratory

Soil Boring (Including relevant tests and Geotechnical Investigation Report)		
	Per Borehole	
	Within Dhaka City - depth up to 20 m	80,000
	Within Dhaka City - depth up to 25 m	100,000
	Within Dhaka City - depth up to 30 m	135,000
	Outside Dhaka City: *Consult with Teacher*	
(Notes: Minimum 3 borings for a particular site; Guidelines : up to 3 katha - 3 Nos.; 3 - 5 katha - 5 Nos.; 6 - 10 katha - 8 Nos.)		
	Physical and Index Properties	
1	Specific gravity (Sp. Gr.)	2,300
2	Unit weight (wet & dry)	2,200
3	Void ratio (Sp. Gr. & Unit Weight.)	3,600
4	Moisture content	1,100
5	Linear shrinkage	2,200
6	Skrinkage limit	2,000
7	Liquid limit and Plastic limit	5,000
8	Liquid limit and Plastic limit of Bentonite	8,000
9	Grain size analysis by wash sieving/ % finer than # 200 sieve	3,800
10	Hydrometer and wash sieving (including specific gravity)	7,000
11	Organic matter content by Loss on Ignition Test	4,500
12	Sand equivalent test	4,800
	Compaction and Density Tests	
13	Maximum and Minimum density of cohesionless soil	9,000
14	Standard Proctor Compaction test	15,000
15	Modified Proctor Compaction test	20,000
	Permeability and Seepage Characteristics	
16	Permeability of cohesive soil by 1-dimensional consolidation	24,000
17	Permeability of cohesionless soil including Sp.Gr. (Falling Head Method)	11,800
	Consolidation and Swelling Characteristics	
18	One dimensional consolidation Cc,Cs,Cv (Only e - log p Tk. 17,000)	24,000
19	One dimensional consolidation (Cc, Cs, Cv) and Permeability (e - log k)	30,000
20	Swelling Pressure	13,000
21	Swelling Potential	10,000

Sl. No.	Name of Soil Tests	Test Rate (Tk.)
	Strength and Deformation Characteristics	
22	Unconfined compression test (including Sp. Gr.)	10,000
23	Laboratory California Bearing Ratio (CBR) of soils	30,000
	Direct Shear Tests	
24	Consolidated Drained test for sand (including Sp.Gr.)	16,000
25	Consolidated Drained test for clay (including Sp.Gr.)	17,000
	Triaxial Shear Tests	
26	Consolidated Drained compression (including Sp.Gr.)	52,000
27	Con. undrained compression test with pore pressure (including Sp.Gr.)	52,000
28	Con. undrained compression test without pore pressure (including Sp. Gr.)	46,000
29	Uncon. undrained compression test without pore press (including Sp. Gr.)	24,000
30	Con. undrained extension test without pore pressure (including Sp. Gr.)	46,000
31	Cyclic Triaxial Test (including Sp. Gr.)	400,000
	Geotechnical Tests (Field)	
32	Filed CBR per Location with field density (in addition Proctor/max-min density and sieve/Hydrometer tests are needed to be done - please consult wth respective Teacher), **Minimum total fees**: within Dhaka City Tk. 1,50,000/-; Outside Dhaka City 1,95,000; Near Districts Tk. 2,50,000/- and Farthest Districts Tk.	40,000 + *
33	Field density test per spot (In addition Proctor/max-min density and sieve/Hydrometer tests are needed to be done - please consult wth respective Teacher), **Minimum total fees**: within Dhaka City Tk. 1,00,000/- ; Outside Dhaka City Tk. 1,40,000/-; Near Districts 2,00,000/- and Farthest Districts 2,50,000/-	8,000 + *
34	Non-repetitive Plate Load Test per Location, **Minimum total fees**: within Dhaka City Tk. 1,75,000/-; Outside Dhaka City 2,15,000 ; Near Districts, Tk. 2,75,000/- and Farthest Districts Tk. 3,25,000/-	97,000 + *
Note: If field test is to be conducted in a restricted/specialized area, then the testing fee will be at least 1.5 times the speciified fees.		

GEOTEXTILES / GEOBAGS (Set of 3 samples)					
1	Thickness (10 specimens)	1,400	9	Vertical Permeability under 2 kN/m^2 and 200 kN/m^2 Pressure	9,400
2	Unit Weight / Mass per Unit Area (3 specimens)	2,300	10	Vertical Permeability under 2 kN/m^2 Pressure	5,800
3	Apparent/Effective Opening Size (AOS/EOS)/Pore Size (3 specimens)	4,800	11	Water Permeability by Permittivity/Velocity Index	4,800
4	Strip/Wide-Width Tensile strength & elong) (5 specimens x 2-dir)	5,800	12	Vertical Permeability under head loss of 50 mm	4,800
5	Grab Tensile Strength & Elongation (5 specimens x 2-dir)	4,800	13	Horizontal Permeability Under 2kN/m^2 Pressure (S.P.C. 500/-)	10,500
6	Trapezoidal Tear Strength	4,800	14	Index Puncture Resistance or CBR Puncture (10 specimens)	3,600
7	Seam Strength (6 specimens)	4,800	15	Cone Penetration	3,600
8	Burst Strength	3,600			
	ELASTOMERIC BEARING PAD			**EPOXY COATED REBAR**	
1	Rubber Bearing Pad - Checking the dimensional variations - ASTM D4014; Clause 7	5,500	1	Holiday Test (3 specimens, each 4m length)	1,500
2(a)	Rubber Bearing Pad - Bearing compression test for compression stiffness - ASTM D4014; Clause 9	109,250	2	Thickness Measurement Test (3 specimens, each 4m length)	2,000
2(b)	Rubber Bearing Pad - Short-term Compression Proof Load Test to 150% of design load and visual inspection under load using video extensometer -AASHTO 2002, 17th Edition, Clause 18.7.2.5, 18.7.4.5.6		3	Bend (Flexibility Test) (3 specimens, each 4m length)	1,500
2(c)	Rubber Bearing Pad - Long-term Compression Proof Load Test to 150% of design load and visual inspection under load using video extensometer-AASHTO 2002, 17th Edition, Clause 18.7.2.6, 18.7.4.5.7		4	Impact Test (3 specimens each 300mm length)	1,000
3	Durometer hardness test (Shore A)- ASTM D2240	3,700			
4	Heat Resistance	5,000			

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Environmental Engineering Laboratory

Tests on Water

Routine Drinking Water Parameters (Package)

Sl. No.	Name of Tests	Test Rate (Tk.)
1	pH	12,000 +3,000 = 15,000 (Drinking+As+TC/FC) 9,800 + 2,200 = 12,000 (Drinking+As)
2	Colour (True or Apparent)	
3	Turbidity	
4	Total Hardness	
5	Chloride (Cl)	
6	Total Dissolved Solids (TDS)	
7	Manganese (Mn)	
8	Arsenic (As)	
9	Total Iron (Fe)	
10	Total Coliform(TC)/Thermotolerent Coliform (TTC)	
11	Fecal Coliform (FC)	

Environmental Quality of Soil, Sludge and Solids

Sl. No.	Name of Tests	Test Rate (Tk.)
1	pH (Chemical 200/-)	1,500
2	Electrical Conductivity (Chemical 300/-)	1,500
3	Organic Matter Content by Loss on Ignition Test	5,000
4	Water Soluble Cl / Salinity/ PO_4 / SO_4 (each) (Chemical 400/-)	5,500

Metal Analysis of Soil, Sludge and Solids following Total Extraction and / or TCLP

Sl. No.	Name of Tests	Test Rate (Tk.)
5	Total Extraction Charges (each sample) (Chemical 500/-)	3,000
6	*TCLP Extractant Analysis*	
	Ca/Cd/Co/Cr/Cu/Fe/Mg/Mn/Ni/Pb/Zn - using FLAAS (each) (Chemical 600/-)	3,000
	Arsenic (As) - using GFAAS (Chemical 600/-)	3,000
	Mercury (Hg) - Cold Vapor Method (Chemical 1200/-)	6,000
	Selenium (Se) - using GFAAS / Ba (Chemical 800/-)	5,000
	Na / K - using FLAAS (each) (Chemical 500/-)	4,000
7	Toxic Characteristics Leaching Procedure (TCLP) Charge (Chemical 1500/-)	7,000
8	*Extractant Analysis*	
	Ca/Cd/Co/Cr/Cu/Fe/Mg/Mn/Ni/Pb/Zn - using FLAAS (each) (Chemical 600/-)	3,000
	Arsenic (As) - using GFAAS (Chemical 600/-)	3,000
	Mercury (Hg) - Cold Vapor Method (Chemical 1200/-)	6,000
	Selenium (Se) - using GFAAS / Ba (Chemical 800/-)	5,000
	Na / K - using FLAAS (each) (Chemical 500/-)	4,000
	Calorific Values of Sludge, Solids and Semi-Solids	
1	Calorific Values of Sludge/Solids/Semi-Solids	12,000

Ambient Air Quality & Exhaust Emission Monitoring *

	Parameters	
	Ambient Air Quality Parameters	
1	SPM (Chemical 1500/-), PM10, PM2.5 (Chemical 2500/-), CO, NO2, SO2, VOCs	*Please contact us*
	Exhaust Emission Parameters	
2	CO2, CO, O2, NO, NO2, SO2, CH4, NH3	

Noise Level Monitoring *

1	Minimum Fee (per 5 locations in one entity)	25,000
2	Clibration of Noise Meter (per equipment)	6,000

Field Sampling *

1	Sampling for Bacteriological Analysis	10,000 + *
2	Sampling for Physical and Chemical Analysis	10,000 + *

TUBEWELL DESIGN

1	Tubewell Design (depth up to 600'), incl. 8 Nos. sand test ^	20,000+18,000
2	Tubewell Design (depth above 600'), Incl. 11 Nos. sand test ^	21,000+25,000
3	Tubewell Design (depth above 1000'), Incl. 13 Nos. sand test ^	22,000+33,000

Notes :

+++ Sampling charge may vary depending on the area to be sampled

^ Cost depends on the client's requirements

* Usual field visit fees apply in addition to above

Miscellaneous Water Quality Parameters

Sl. No.	Name of Tests	Test Rate (Tk.)
1	pH (Chemical 200/-)	700
2	Colour (True or Apparent) (Chemical 200/-)	700
3	Colour Scanning at Specific Wavelength/UV-VISRange (Chemical 200/-)	2,000
4	Turbidity (Chemical 200/-)	700
5	Carbon-di-Oxide (CO_2) / Acidity (Chemical 150/-)	600
6	P-Alkalinity/ M-Alkalinity/T-Alkalinity (Chemical 200/-)	700
7	Carbonate (CO_3) or Bi-carbonate (HCO_3) + pH (Chemical 200/-)	900
8	Total Hardness (Chemical 300/-)	1,400
9	Ca - Hardness (Chemical 800/-)	3,200
10	Mg - Hardness (Chemical 800/-)	3,200
11	Chloride (Cl) (Chemical 250/-)	1,000
12	Fluoride (F) (Chemical 100/-)	800
13	Ammonia-Nitrogen (NH_3 - N) (Chemical 400/-)	1,500
14	Nitrate - Nitrogen (NO_3 - N) (Chemical 250/-)	1,100
15	Nitrite - Nitrogen (NO_2 - N) (Chemical 250/-)	1,100
16	Total Nitrogen (TN) (Chemical 1500/-)	12,000
17	Total Kjeldahl Nitrogen (TKN) / Organic Nitrogen (Chemical 3,000/-)	16,000
18	Chlorine Content - Total Cl_2 (Chemical 250/-)	1,000
19	Chlorine Content - Free Cl_2 (Chemical 250/-)	1,000
20	Iodine Content (Chemical 200/-)	1,000
21	Bromine Content (Chemical 200/-)	1,000
22	Break Point Chlorination (Chemical 1200/-)	15,000
23	Total Solids (TS) (Chemical 100/-)	1,200
24	Total Suspended Solids (TSS)/Insoluble Solids/(TSS+TDS+TS) (Chemical 500/-)	2,400
25	Total Dissolved Solids (TDS) (Chemical 150/-)	1,200
26	Silica Content (SiO_2) (Chemical 400/-)	1,800
27	Electrical Conductivity (EC) (Chemical 350/-)	700
28	Total Phosphorous (TP) (Chemical 700/-)	4,500
29	Orthophosphate (PO_4) (Chemical 200/-)	1,200
30	Hydrogen Sulphide (H_2S) / Odour (Chemical 200/-)	1,100
31	Sulphate (SO_4) (Chemical 200/-)	1,200
32	Biochemical Oxygen Demand (BOD)-5 day (Chemical 400/-)	2,500
33	Chemical Oxygen Demand (COD) (Chemical 600/-)	2,500
34	Dissolved Oxygen (DO) (Chemical 400/-)	700
35	Boron (B) (Chemical 1,200/-)	3,500
36	Manganese (Mn): UV - VIS (Chemical 500/-)	2,200
37	Aluminum (Al) (Chemical 500/-)	5,000
38	Silver (Ag) (Chemical 500/-)	5,000
39	Arsenic (As) - using GFAAS (Chemical 600/-)	2,200
40	Selenium (Se)/Barium (Ba) - using GFAAS (Chemical 900/	4,500
41	Ca/Cd/Cr/Cu/Fe/Mg/Mn/Ni/Pb/Zn - using FLAAS (each) (Chemical 500/-)	2,200
42	Na / K - using FLAAS (each) (Chemical 400/-)	2,700
43	Nickel (Ni) / Cobalt (each) (Chemical 1,000/-)	3,500
44	Mercury(Hg)-Cold Vapour Method (Mini. 30 days required) (Chemical 1200/-)	5,000
45	Cyanide (Cn) (Chemical 1000/-)	5,000
46	Ferrous Iron/ Ferric Iron (Chemical 500/-)	3,000
47	Total Organic Carbon (TOC) (Chemical 1000/-)	10,000
48	Dissolved Organic Carbon (DOC) (Chemical 1500/-)	11,000
49	Silt Density Index (SDI) with Plugging (Chemical 500/-)	15,000
50	Sodium Absorption Ratio (SAR) (Chemical 1000/-)	6,500
51	Langlier Saturation Index (Chemical 1000/-)	7,500
52	Ryznar Index (Chemical 1000/-)	7,500
53	Aggressiveness / Corrosivity Index (Chemical 1000/-)	7,500
54	Puckorius Scaling index (Chemical 1000/-)	7,500
55	Larson-Skold Index (Chemical 1200/-)	9,000
56	Oil & Grease (Chemical3000/-)	15,000
57	Total Silicon/Total Silica (SiO2) (Chemical 1000/-)	7,000
58	Specific Gravity (Chemical 500/-)	4,000

BACTERIOLOGICAL ANALYSIS

1	Fecal Coliform (FC) / Total Coliform (TC) (each) (Chemical 500/-)	1,600
2	E. Coli (Chemical 1500/-)	4,000
3	Algae / Chlorophyll_a (Chemical 1500/-)	11,000

Notes: [Field visit fee; Inside Dhaka City = Tk. 20,000; Near Districts = Tk. 40,000 ; Farthest Districts = Tk. 60,000 without overnight stay and Tk. 50,000 per day for overnight stay,] [* & Transport, local hospitalities, accommodation (in case of overnight stay) etc. are to be provided by the Client]*

S.P.C. = Sample Preparation Charge. For one trial only using client's supplied sample. However, if design is to be performed by BRTC, BUET item at least 3 trial cost should be borne by the client.

Sl. No.	Name of Tests	Test Rate (Tk.)
	Miscellaneous Wastewater/Effluent Quality Parameters	
1	pH (Chemical 200/-)	800
2	Colour (True or Apparent) (Chemical 200/-)	1,000
3	Colour Scanning at Specific Wavelength/UV-VIS Range (Chemical 200/-)	2,500
4	Turbidity (Chemical 200/-)	800
5	P-Alkalinity/ M-Alkalinity/T-Alkalinity (Chemical 200/-)	1,000
6	Carbonate (CO_3) or Bi-carbonate (HCO_3) + pH (Chemical 200/-)	1,300
7	Total Hardness (Chemical 300/-)	1,500
8	Ca - Hardness (Chemical 800/-)	3,800
9	Mg - Hardness (Chemical 800/-)	3,800
10	Chloride (Cl) (Chemical 250/-)	1,400
11	Fluoride (F) (Chemical 100/-)	1,000
12	Ammonia-Nitrogen (NH_3 - N) (Chemical 400/-)	2,000
13	Nitrate - Nitrogen (NO_3 - N) (Chemical 250/-)	1,200
14	Nitrite - Nitrogen (NO_2 - N) (Chemical 250/-)	1,200
15	Total Nitrogen (TN) (Chemical 1500/-)	12,000
16	Total Kjeldahl Nitrogen (TKN) / Organic Nitrogen (Chemical 3000/-)	16,000
17	Chlorine Content - Total Cl_2 (Chemical 250/-)	1,100
18	Chlorine Content - Free Cl_2 (Chemical 250/-)	1,100
19	Iodine Content (Chemical 200/-)	1,100
20	Bromine Content (Chemical 200/-)	1,100
21	Total Solids (TS) (Chemical 100/-)	1,400
22	Total Suspended Solids (TSS)/Insoluble Solids/(TSS+TDS+TS) (Chemical 500/-)	2,800
23	Total Dissolved Solids (TDS) (Chemical 500/-)	1,400
24	Silica Content (SiO_2) (Chemical 400/-)	2,000
25	Electrical Conductivity (EC) (Chemical 350/-)	1,000
26	Total Phosphorous (TP) (Chemical 700/-)	5,000
27	Orthophosphate (PO_4) (Chemical 200/-)	1,500
28	Hydrogen Sulphide (H_2S) / Odour (Chemical 200/-)	1,200
29	Sulphate (SO_4) (Chemical 200/-)	1,500
30	Organic Matter (Chemical 300/-)	4,500
31	Inorganic Matter (Chemical 300/-)	4,500
32	Biochemical oxygen Demand (BOD) - 5 day (Chemical 400/-)	3,000
33	Chemical Oxygen Demand (COD) (Chemical 500/-)	3,000
34	Dissolved Oxygen (DO) (Chemical 400/-)	1,200
35	Boron (B) (Chemical 1200/-)	4,000
36	Aluminum (Al) (Chemical 500/-)	5,500
37	Silver (Ag) (Chemical 500/-)	5,500
38	Arsenic (As) - using GFAAS (Chemical 600/-)	2,500
39	Selenium (Se) - using GFAAS / Ba (each) (Chemical 900/-)	5,000
40	Ca/Cd/Cr/Cu/Fe/Mg/Mn/Ni/Pb/Zn - using FLAAS (each) (Chemical 500/-)	2,500
41	Na / K - using FLAAS (each) (Chemical 400/-)	3,500
42	Total Organic Carbon (TOC) (Chemical 1000/-)	11,000
43	Dissolved Organic Carbon (DOC) (Chemical 1500/-)	12,000
44	Oil & Grease	15,000
45	Total Silicon/Total Silica (SiO2)	7,000
46	Mercury	5,000
	BACTERIOLOGICAL ANALYSIS	
1	Fecal Coliform (FC) / Total Coliform (TC) (each) (Chemical 500/-)	2,300
2	Algae / Chlorophyll_a (Chemical 1500/-)	12,000

	FECAL SLUDGE ANALYSIS	
1	On-Site Measurement (pH, EC, DO, Turbidity)	Please contact us
2	Solid & Organic Content (TS, TDS, TSS, VS, Fixed Solid, VSS, MC, COD, SCOD, BOD	
3	Nutrient Contents (TN, NH3, NO2, NO3, TKN, TP, PO4	
4	Anaerobic Disgestion related (Fe, Zn, Ni, Pb, VFA)	
5	Patogenes (E. Coli, FC, Helmeinths egg, Salmonella, Enterococci)	

Sl. No.	Name of Tests	Test Rate (Tk.)
	Miscellaneous Saline Water (*EC > 5mS/cm*) Quality Parameters	
1	pH (Chemical 200/-)	800
2	Colour (True or Apparent) (Chemical 200/-)	1,000
3	Colour Scanning at Specific Wavelength/UV-VIS Range (Chemical 200/-)	2,500
4	Turbidity (Chemical 150/-)	800
5	Carbon-di-Oxide (CO_2) / Acidity (Chemical 200/-)	700
6	P-Alkalinity/ M-Alkalinity/T-Alkalinity (Chemical 200/-)	1,000
7	Carbonate (CO_3) or Bi-carbonate (HCO_3) + pH (Chemical 200/-)	1,500
8	Total Hardness (Chemical 500/-)	2,500
9	Chloride (Cl) (Chemical 500/-)	2,500
10	Fluoride (F) (Chemical 500/-)	2,500
11	Ammonia-Nitrogen (NH_3 - N) (Chemical 800/-)	4,000
12	Nitrate - Nitrogen (NO_3 - N) (Chemical 500/-)	3,000
13	Nitrite - Nitrogen (NO_2 - N) (Chemical 500/-)	3,000
14	Total Nitrogen (TN) (Chemical 2000/-)	16,000
15	Total Kjeldahl Nitrogen (TKN) / Organic Nitrogen (Chemical	17,000
16	Chlorine Content - Total Cl_2 (Chemical 300/-)	1,800
17	Chlorine Content - Free Cl_2 (Chemical 300/-)	1,800
18	Iodine Content (Chemical 300/-)	1,800
19	Bromine Content (Chemical 300/-)	1,800
20	Total Solids (TS) (Chemical 200/-)	2,000
21	Total Suspended Solids (TSS)/Insoluble Solids/(TSS+TDS+TS) (Chemical 500/-)	4,000
22	Total Dissolved Solids (TDS) (Chemical 200/-)	2,000
23	Silica Content (SiO_2) (Chemical 500/-)	3,000
24	Electrical Conductivity (EC) (Chemical 500/-)	1,600
25	Total Phosphorous (TP) (Chemical 700/-)	5,000
26	Orthophosphate (PO_4) (Chemical 300/-)	2,200
27	Hydrogen Sulphide (H_2S) / Odour (Chemical 300/-)	1,800
28	Sulphate (SO_4) (Chemical 300/-)	2,000
29	Biochemical oxygen Demand (BOD) - 5 day (Chemical 500/-)	4,000
30	Chemical Oxygen Demand (COD) (Chemical 600/-)	5,000
31	Dissolved Oxygen (DO) (Chemical 400/-)	1,000
32	Boron (B) (Chemical 1200/-)	5,000
33	Aluminum (Al) (Chemical 500/-)	6,000
34	Silver (Ag) (Chemical 500/-)	6,000
35	Arsenic (As) - using GFAAS (Chemical 800/-)	4,000
36	Selenium (Se) - using GFAAS / Ba (each) (Chemical 1000/-)	5,500
37	Ca/Cd/Cr/Cu/Fe/Mg/Mn/Ni/Pb/Zn - using FLAAS (each) (Chemical 1000/-)	4,500
38	Na / K - using FLAAS (each) (Chemical 1000/-)	6,000
39	Mercury(Hg)-Cold Vapour Method (Mini. 30 days required) (Chemical 1500/-)	8,000
40	Total Organic Carbon (TOC) (Chemical 1000/-)	12,000
41	Dissolved Organic Carbon (DOC) (Chemical 1500/-)	14,000
42	Total Silicon/Total Silica (SiO2)	7,000
	BACTERIOLOGICAL ANALYSIS	
1	Fecal Coliform (FC) / Total Coliform (TC) (each) (Chemical 1500/-)	2,500
2	E. Coli (Chemical 1500/-)	6,500
3	Algae / Chlorophyll_a (Chemical 1500/-)	13,500

	FINE AGGREGATE PARAMETERS	
1	Lightweight Particles in Aggregate/Coal and Lignite	20,000
2	Alkali-Silica Reactivity	25,000

	COARSE AGGREGATE PARAMETERS	
1	Lightweight Particles in Aggregate/Coal and Lignite	30,000
2	Alkali-Silica Reactivity	30,000

	ADMIXTURE PARAMETERS	
1	pH	3,000
2	Density/Specific Gravity	4,000
3	Ash	10,000
4	Dry Materials/ Solid Content	5,000
5	Chloride	20,000

Notes: [Field visit fee; Inside Dhaka City = Tk. 20,000; Near Districts = Tk. 40,000 ; Farthest Districts = Tk. 60,000 without overnight stay and Tk. 50,000 per day for overnight stay,] [* & Transport, local hospitalities, accommodation (in case of overnight stay) etc. are to be provided by the Client]*
S.P.C. = Sample Preparation Charge. For one trial only using client's supplied sample. However, if design is to be performed by BRTC, BUET item at least 3 trial cost should be borne by the client.

Sl. No.	Name of Tests	Test Rate (Tk.)
	GRP Board Sandwich Panel	
1	Tensile Strength (5 Nos. from each Sample)	5,100
2	Tensile Modulus (5 Nos. from each Sample)	13,200
3	Flexural Strength (127 mm x 12.7 mm x 3.2mm; 5 Nos.)	5,100
4	Flexural Modulus (100 mm x 10 mm x 4mm; 5 Nos.)	13,200
5	Impact Strength (5 Nos. from each Sample)	5,100
6	Water Absorption (76.2 mm x 25.4 mm x 6mm; 3 Nos.)	3,400
	Consultancy on Pile Integrity	
	Per Pile (see conditions a,b,c) (a) Minimum total fees: within Dhaka City - 75,000/- ; Outside Dhaka City 1,15,000/-; Near Districts 1,50,000/- and Farthest Districts 1,75,000/- (b) Integrity tests be done on all piles for a structure (c) Pile load test be done on at least 1% of piles selected on the basis of integrity results	3,000 + *

Sl. No.	Name of Tests	Test Rate (Tk.)
	Non-Asbestos Fibre-Cement Board	
1	Modulus of Rupture (6" X 12")	
	2 Nos. Parallel to Fibre Lay from Same Sheet (S.P.C. 900/-)	7,900
	2 Nos. Perpendicular to Fibre Lay from Same Sheet	
2	Modulus of Elasticity (6" X 12")	
	2 Nos. Parallel to Fibre Lay from Same Sheet (S.P.C. 900/-)	14,700
	2 Nos. Parpendicular to Fibre Lay from Same Sheet	
3	Density (from MOR Test)	2,500
4	Size & Shape (5 Nos.)	3,400
5	Water Absorption (4" X 4"; 3 Nos. from Per Sheet) (S.P.C. 700/-)	3,500
6	Moisture Content (from MOR Test)	3,400
7	Water Tightness (24" X 20"; 3 Nos. One from each Sheet) (S.P.C. 700/-)	11,000
8	pH Value (from MOR Test)	1,300
9	Heat & Rain Wall Structures (5' X 4'; 2 Nos.; One from each Sheet)	33,400
	Consultancy on Axial Pile Load Capacity	
	Test Supervision & Report (per pile): Minimum total fees: within Dhaka City Tk. 1,35,000/-; Outside Dhaka City 1,75,000; Near Districts, Tk. 2,25,000/- and Farthest Districts Tk. 2,50,000/-	1,07,000 + *

	Various Consultancy Services
1	Land Survey (Plannimetric/Topographic/Contour) by Total Station and GPS
2	Cost Estimation of Civil Structures
3	Asset Evaluation of Civil Structures/Industries/Properties
1	Design of Building, Bridges, Airport, Offshore Structures, Drainage Structures etc.
2	Structural Evaluation of Old Civil Structures without Drawings/Records
3	Quality Assurance (QA) of Civil Structures / Flat
4	Certification on Structural Stability of Civil Structures
5	Design Checking of various Concrete and Steel Structures
6	Investigation of Civil Engineering Projects
7	Assessment of Safety for Old Structures
8	Strengthening of Existing Structures
1	Environmental Site Assessment (e.g. for LPG plants, Power plants)
2	Environmental Impact Assessment (EIA) of Civil Engineering Projects
3	Environmental Monitoring of Civil Engineering Projects
4	Design of Solid Waste Disposal Systems
5	Design of Water and Wastewater Treatment Systems
6	Design of Iron Removal Plants
7	Plumbing and Sewer Systems Design
8	Solid, Hazardous and Industrial Waste Management and Pollution Control
9	Design of Water Supply System
10	Training on Water Quality, Water Supply and Sanitation
1	Design and Analysis of Shallow and Deep Foundations
2	Design and Analysis of Embankments
3	Design and Analysis of Earth Retaining Structures
4	Planning of Soil Investigation Programs
5	Planning and Design of Soil Improvement Schemes
6	Seismic Design of Foundation
7	Seismic Hazard Analysis
8	Microzonation Maps
1	Transportation Impact Assessment (TIA) of Civil Engineering Projects
2	Traffic Studies (Volume, O-D, Speed, Delay, Parking etc.)
3	Traffic Forecasting
4	Geometric and Structural Design of Pavements, Parking Lots etc.
5	Planning and Design of Inland Container Terminal/Depot (ICT / ICD)
6	Planning and Design of Airport Terminal
7	Design of Runway Pavement
8	Design of Road/Highways/Bridge/Culverts
9	Planning and Design of Flyover / Underpass / Interchange
10	Road Accident Investigation/Safety Measure/Road Safety Auditing
11	Development of Transportation Model
12	Training on Traffic Studies, Traffic Management, Transportation Planning, Traffic Safety

Notes: [Field visit fee; Inside Dhaka City = Tk. 20,000; Near Districts = Tk. 40,000 ; Farthest Districts = Tk. 60,000 without overnight stay and Tk. 50,000 per day for overnight stay,] [* & Transport, local hospitalities, accommodation (in case of overnight stay) etc. are to be provided by the Client]*
S.P.C. = Sample Preparation Charge. For one trial only using client's supplied sample. However, if design is to be performed by BRTC, BUET item at least 3 trial cost should be borne by the client.