SHRI RAMDEOBABA COLLEGE OF ENGINEERING AND MANAGEMENT,NAGPUR

RATE LIST FOR LABORATORY AND FIELD TESTING OF MATERIALS
CIVIL ENGINEERING DEPARTMENT

ENVIRONMENTAL / WASTE WATER ENGINEERING

A. TESTS ON WATER SAMPLES

Sr.No.	Tests	Rate (INR)
1	$_{p}$H Determination	150
2	P & M Alkalinity	300
3	Total Hardness	350
4	Magnesium	350
5	Calcium	350
6	Chlorides	350
7	Sulphates	400
8	Turbidity	200
9	Sodium	500
10	Potassium	500
11	Iron	500
12	Manganese	500
13	Nitrate	500
14	Phosphates	500
15	Standard Plate Count Test	1000
16	MPN. Bacteriological	1500
17	Conductivity	150

B. TESTS ON WASTE WATER SAMPLES

Sr.No.	Tests	Rate (INR)
18	PH, Determination	150
19	P & M Alkalinity	300
20	Total Hardness	350
21	Chlorides	350
22	Sulphates	400
23	Sulphides	500
24	Nitrogen	1000
25	Phosphorous	500
26	Total Solids	350
27	Suspended Solids	350
28	Volatile Solids	500
29	Dissolved Oxygen (D.O.)	350
30	Chemical Oxygen Demand (C.O.D.)	1000
31	Biochemical Oxygen Demand (B.O.D. 5 days)	1200

C. TESTS ON WATER SAMPLES FOR CONSTRUCTION

Sr.No.	Tests	Rate (INR)
32	PH Determination	150
33	Total Solids	350
34	Suspended Solids	350
35	Organic & Inorganic Solids	500
36	Acidity	350
37	Alkalinity	350
38	Chlorides	350
39	Sulphates	400

D. ANALYSIS OF FILTER MEDIA

Sr.No.	Tests	Rate (INR)
40	Effective Size & Non-Uniformity coefficient	600
41	Wearing loss	500
42	Loss on Ignition	500
43	Soluble Fraction	300
44	Specific Gravity	300
45	Durability of Sand	1500
46	Silica content of sand	1500

E. AIR QUALITY MONITORING

r of samples, duration of sampling, site conditions etc.)

47	Determination of SPM	
48	Determination of So2	
49	Determination of No2	
50	Determination of Co	

F. ENVIRONMENTAL IMPACT ASSESSMENT

(Rate will be decided on the basis of site conditions, types of assessment etc.)

52	Design, Construction,Commisioning,Operation & Maintenance	
	of water and waste water treatment plant.	

(Rate will be decided on the basis of capacity of plant, site conditions etc.)

CONCRETE TECHNOLOGY

A. TESTS ON CEMENT

Sr.No.	Tests	Rate (INR)
53	Normal Consistency of Cement	300
54	Fineness by Sieving	300
55	Fineness by Blaines Apparatus	400
56	Initial and Final Setting time	300
57	Compressive Strength of Cement (3 Specimens)	500
58	Soundness of Cement	500

B. TESTS ON AGGREGATE (COARSE AGGREGATE)

Sr.No.	Tests	Rate (INR)
59	Specific Gravity and water absorption	300
60	Sieve analysis	300
61	Flakiness Index Test	450
62	Elongation Index Test	450
63	Crushing value	300

C. TESTS ON AGGREGATE (FINE AGGREGATE)

Sr.No.	Tests	Rate (INR)
64	Specific Gravity and water absorption	300
65	Sieve analysis	300
66	Sieve analysis with particle size graph	450
67	Bulking of sand	300
68	Bulking of sand with graph	450
69	Silt content	300
70	Organic Impurities in sand	750

D. TESTS ON BRICKS

Sr.No.	Tests	Rate (INR)	Remark
71	Crushing Strength	1125	6 samples
72	Moisture content	450	6 samples
73	Water absorption	675	6 samples
74	Efforescence test	675	6 samples
75	Dimension test	675	20 samples

E. TESTS ON CONCRETE

Sr.No.	Tests	Rate (INR)	Remark
76	Crushing strength of concrete		
	Size 15 X 15 X 15cm Cube Test	450	3 samples
	Cylinder Test	400	3 samples
77	Modulus of Elasticity of concrete	1000	3 samples
78	Crushing strength of concrete solid/hollow block	1800	3 samples
79	Water absorption of concrete	1000	3 samples
80	Density of concrete hollow block	450	3 samples
81	Flexural strength test on concrete beam		
	size 10 X 10 X 50 cm	450	3 samples
	size 15 X 15 X 70 cm	675	3 samples

F. CONCRETE MIX DESIGN

Sr.No.	Tests	Rate (INR)
82	M20	10000
83	M30	12000
84	M40	14000
85	M45	15000

G. NDT ON CONCRETE

Sr.No.	Tests	Rate (INR)	Remark
86	Rebound hammer test /ultrasonic pulse velocity test.	2250	upto 7 locations
		300	extra for each location

TRANSPORTATION ENGINEERING

Sr.No.	Tests	Rate (INR)
87	Sub grade Soil: CBR test	700
88	Aggregates: crushing value test.	1200
89	Aggregates: Los Angeles abrasion value test.	500
90	Aggregates: impact test.	600
91	Aggregates: shape test.(Elongation Index, Flakiness index and	2500
92	Soundness test	500
93	Aggregates: Specific Gravity and	500
94	Water absorption test.	500
95	Silt Content	600
96	Bitumen: Penetration Value.	600
97	Bitumen: Ductility Test.	500
98	Bitumen: Softening point test.	500
99	Bitumen: Flash and Fire point test.	500
100	Bitumen: Specific gravity.	550
101	Bitumen: Adhesion Test.	550
102	Bitumen: Extraction test (% of bitumen)	1000

STRENGTH OF MATERIALS

Sr.No.	Tests	Rate (INR)	Remark
103	Tension test on-for steel bars upto 20mm	375	per sample
104	Tension test on TOR steel bars upto 20mm	250	per sample
105	Tension test on M.S. steel bars 6mm	160	per sample
106	Torsion test on mild steel upto 20mm	250	per sample
107	Impact test on metals.(charpy and Izod test)	100	per sample
108	Bending test on beams (upto 1m length)	500	per sample
109	Bending test on beams (upto 1m length) stresses and deflection	1500	per sample

A. TEST ON GLAZED / FLOOR TILES (IS 777-1988)

Sr.No.	Tests	Rate (INR)	Remark
110	Water absorption	400	06 tiles
111	Impact resistance	500	06 tiles
112	Resistance to Wear	1000	06 tiles

B. TEST ON MANGALORE TILES

Sr.No.	Tests	Rate (INR)	Remark
113	Water absorption	500	06 tiles
114	Flexural strength	400	06 tiles

C. TESTS ON STONES

Sr.No.	Tests	Rate (INR)	Remark
115	Water absorption and Specific Gravity	600	1 Specimen
116	Crushing strength	500	1 Specimen
117	Impact value	500	1 Specimen

D. TESTS ON TIMBER

Sr.No.	Tests	Rate (INR)	Remark
118	Moisture content of timber	600	1 Specimen
119	Water absorption	600	1 Specimen
120	Compressive strength (i) Prependicular to grain	1200	1 Specimen
	(ii) Parallel to grain	1200	1 Specimen

GEOTECHNICAL ENGINEERING

A. INDEX PROPERTY TESTS

Sr.No.	Tests	Rate (INR)
121	Dry sieve analysis	500
122	Wet sieve analysis	1000
123	Sedimentation analysis (Piptte/Hydrometer)	1000
124	Liquid Limit and Plastic Limit	1000
125	Shrinkage Limit	500
126	Specific gravity of :	
	a) Coarse grained soil	250
	b) Fine grained soil	350
127	Moisture content (Oven method)	150
128	Complete Soil Classification (including Testing)	
	(a) Coarse grained soil	1000
	(b) Fine grained soil	2000
129	Max.and Min. densities of sand.	500

B. COMPACTION AND CONSOLIDATION TESTS

Sr.No.	Tests	Rate (INR)
130	Standard Proctor Compaction Test	800
131	Modified Compaction Test	1000
132	Consolidation Test :	
	a) a_v ,m_v, and c_c	2000
	b) Cv (average of 3 loading stages)	2500

C . SHEAR STRENGTH TEST

Sr.No.	Tests	Rate (INR)
133	UCS Test	1000
134	Direct Shear Test :	
	a) Quick test (UU)	1000
	b) Slow test (CD)	1500
135	Triaxial test	
	c) UU	1500
	d) CU	4000
	e) CD	5500

(for tests on remoulded samples – additional 10%)

D. PERMEABILITY TEST

Sr.No.	Tests	Rate (INR)
136	Constant head test	600
137	Variable head test	800

E. TESTS ON SWELLING SOIL (BCS) :

Sr.No.	Tests	Rate (INR)
138	Free Swell index test	200
139	Swelling pressure test	1000

(II) **FIELD TESTS :**

Sr.No.	Tests	Rate (INR)
140	Field classification tests (Per spot)	100
141	Bulk density	
	(a) Sand replacement test	500
	(b) Core cutter test	500
142	Undistrubed soil sampling	500
143	Distrubed soil sampling	1000
144	Swelling pressue test (by portable kit)	1000
145	Plate Load Test (Plate size 30 X 30 cm)	40000
	(Transportation, test conduction and preparation of results)	
146	Standard Penetration Test	8000
147	Static Cone Penetration Test	2000
	(Transportation, test conduction and preparation of results)	
148	Menard Pressuremeter Test (conduction of test, inter-Pretation	
	& bearing capacity determination).Excluding boring.	
	--upto 3m	10000
	--upto 3m to 5m	12000
	--upto 5m to 8m	15000

SURVEYING AND ESTIMATION WORK

Sr.No.	Particulars of work	Rate (INR)
149	Earthwork calculations.	
150	Topographical map.	
151	Contour maps.	
152	Area measurement and locating boundaries.	
153	Levelling, profile and cross-sectioning.	
154	Theodolite traversing.	
155	Plane table traversing.	
156	Quantity survey of structures.	

(Rate will be decided on the basis of site conditions, types of assessment etc.)