

**Transportation Engineering Laboratory**  
**Department of Civil Engineering**  
**IIT Roorkee**

**TESTING CHARGES (Year 2020)**

**(A) AGGRIGATE TESTS**

Name of Test	Relevant Standard Codes	Rate per Test (Rs.)
Aggregate Crushing Value	IS: 2386 (P-4)	8,000.00
Aggregate Impact Value	IS: 2386 (P-4)	8,000.00
Los Angeles Abrasion Value	IS: 2386 (P-4)	8,000.00
Water Absorption and Specific Gravity	IS: 2386 (P-4)	8,000.00
Flakiness Index Test	IS: 2386 (P-1)	7,000.00
Elongation Index Test	IS: 2386 (P-1)	7,000.00
Flakiness and Elongation combined	IS: 2386 (P-1)	12,000.00
Stripping Value (Coating & Stripping of Bitumen Aggregate Mix)	IS: 6241	15,000.00
Soundness Test	IS: 2386 (P-5)	15,000.00
Sieve Analysis for each size of aggregate	IS: 383	5,000.00
Fineness Modulus for each size aggregate	IS: 383	5,000.00
Bulk Density for each size aggregate	ASTM C29	5,000.00
Polished Stone value	BS812 Part 1 14	1,50,000.00
Sand Equivalent value test	ASTMD 2419	10,000.00
Retained Tensile Strength (Water sensitivity test)	AASHTO 283	60,000.00
Deleterious content test (Cleanliness)	IS:2386 (P-3)	10,000.00
Petrography test without thin section preparation	IS: 2386 (P-8)	15,000.00

**(B) BITUMEN TESTS**

Name of Test	Relevant Standard Codes	Rate per Test (Rs.)
Penetration Test	IS: 1203	8,000.00
Specific gravity Test	IS:1202	8,000.00
Softening Point Test	IS: 1205	8,000.00
Ductility Test	IS: 1208	10,000.00



**Transportation Engineering Laboratory**  
**Department of Civil Engineering**  
**IIT Roorkee**

Viscosity Test (Kinetic or Absolute)	IS: 1206		25,000.00
Flash and Fire Point Test	IS: 1209		10,000.00
Solubility Test	IS: 1216		10,000.00
Binder extraction through centrifuge	ASTM D 2172		15,000.00
Elastic Recovery of PMB	IS: 15462:2019		15,000.00
Tests on Modified Binders	IRC:SP:53/IS:15462/IS:17079		1,00000.00
Tests on Emulsions	IS:8887		1,00000.00
Rheology Tests (DSR)	ASTM D 7175/AASHTO TP5		75,000.00
FRASS Breaking Test	BS EN 12593:200/BS 2000-80		90,000.00
Separation Test on Modified Binders	ASTM 7173		50,000.00
Long Term Aging Tests	AASHTO R 28		1,50,000.00
Short Term aging Tests	AASHTO T240/ASTM D 2872		70,000.00

**(C) TESTS ON SUBGRADE SOIL**

Name of Test	Code No.		Rate per Test (Rs.)
CBR (Lab, Complete analysis)	IS: 2720 (P-16)		15,000.00
Soil gradation*	IS: 2720 (P-4)		10,000.00
Soil Classification (gradation + Atterberg limit)	IS: 2720 (P-5)		20,000.00
Index properties of soil (LL, PL, PI)	IS: 2720 (P-5)		10,000.00
Standard Proctor test	IS: 2720 (P-7)		10,000.00
Modified Proctor test	IS: 2720 (P-8)		10,000.00
Free Swelling Index	IS:2720 (Part-40)		10,000.00
Particle size distribution for clayey soil using Hydrometer Analysis	IS: 2720 (P-4)		60,000.00

**(D) CONCRETE MIX & TESTING**

- |  |                            |
|--|----------------------------|
| 1. Concrete Mix Design for Rigid Pavements | Rs. 75,000.00 per design   |
| 2. Cement content determination            | Rs. 1,50,000.00 per sample |
| 3. Compressive strength test per 3 samples | Rs. 10,000.00 per set      |



**Transportation Engineering Laboratory**  
**Department of Civil Engineering**  
**IIT Roorkee**

4. Flexural strength test per two prisms	Rs. 15,000.00 per set
5. Concrete permeability test per 2 samples	Rs. 50,000.00 per set
6. Load Transfer Efficiency test at site	Rs. 1,50,000.00 per 3 locations
7. Determination of compressive & flexural strength by backcalculations	Rs. 1,50,000.00 per three locations
8. Non-Destructive Tests	Rs. 1,50,000.00 per job
9. Concrete Core Test (supplied samples) (equivalent cube compressive strength)	Rs. 10,000.00 per 3 samples
10. Concrete Core Test including cutting (within 30 km radius)	Rs. 50,000.00 per 3 samples
<b>(E) BITUMINOUS MIX / GSB, WMM MIX</b>	
1. Bituminous Mix Design DBM/SDBC/BC (Asphalt Institute MS-2)	Rs. 75,000.00 per design
2. Bituminous Mix Design – BM	Rs. 50,000.00 per design
3. JMF Micro-surfacing	Rs. 75,000.00 per design
4. JMF Stone Matrix Asphalt (SMA)	Rs. 80,000.00 per design
5. Marshall Stability and Flow Value (set of 3 Specimen as prepared by the client)	Rs. 20,000.00 per set
6. Granular Sub-base / Wet Mix macadam mix design	Rs. 75,000.00 per design
7. Modified GSB/WMM Mix design – with additives	Rs 1,00000.00 per design
<b>(F) BITUMINOUS MIX PERFORMANCE TESTS</b>	
1. Wheel Rut-depth measurement (AASHTO T324-04)	Rs. 1,00000.00 per sample
2. Wheel Rut-depth measurement with design of bituminous mixture using Superpave method (MS-2 & AASHTO T324-04)	Rs. 1,50,000.00 per Job.
<b>(G) PAVEMENT DESIGN AND EVALUATION</b>	
1. Flexible Pavement crust design (data supplied by client)	Rs. 60,000.00 per design
2. Flexible Pavement crust design (with data acquisition)	Rs. 1,00000.00 per design
3. Rigid Pavement crust design (data supplied by client)	Rs. 80,000.00 per design
4. Rigid Pavement crust design (with data acquisition)	Rs. 1,50000.00 per design
5. Benkelman Beam test and overlay design	Rs. 12,000.00 per lane per km
6. Falling weight Deflectometer Test	Rs. 20,000.00 per lane per km
7. Road Roughness test	Rs. 15,000.00 per lane per km
8. Extraction and Analysis of core – Thickness, density and Bitumen content	Rs. 12,000.00 per core



**Transportation Engineering Laboratory**  
**Department of Civil Engineering**  
**IIT Roorkee**

9. Field density by Sand Replacement method (for Base course / sub-base course layers)	Rs. 10,000.00 per location per layer
10. Surface Friction evaluation	Rs. 15,000.00 per location
11. Plate Load Studies (in Field)	Rs 1,00000.00 per location
12. Axle Load Survey / Traffic volume survey /Intersection Count / Network improvement study / Terminal design, etc.	Rs. 75,000.00 per location + Rs. 200,000.00 per plan

**Terms and conditions:**

1. GST as applicable will be charged extra
2. Minimum charges for Laboratory testing will be Rs. 50,000.00 and Rs. 100,000.00 for field testing or field visit.
3. Material and on-site assistance will be supplied by the client. Charges will be borne by the client for the same.
4. The rates are valid for distance within 150 km. Beyond 150 km or in hilly terrain, the rates will be provided by the faculty concerned.
5. Travel and boarding & lodging, if so required, will be chargeable to the client.
6. All works will be governed by IIT Roorkee Consultancy Rules.
7. Above mentioned rates will be reviewed after three years.

\*\*\*\*\*

