

TRANSPORTATION ENGINEERING LAB

Course Code:

L T P C
0 0 3 1.5

Course Outcomes:

At the end of the course, the student will be able to:

CO1: Illustrate engineering properties of aggregates (L3)

CO2: Evaluate bitumen properties (L3)

CO3: Explain the design of bituminous concrete mix (L2)

CO4: Explain the design of overlay thickness using different methods (L2)

CO5: Interpret traffic studies using traffic volume data, spot speed and parking volume data (L3)

(Any 12 out of 15 experiments)

LIST OF EXPERIMENTS:

ROAD AGGREGATES:

1. Find the Aggregate Crushing value.
2. Calculate the Aggregate Impact test.
3. Find Specific Gravity and Water Absorption.
4. Perform Los Angeles Abrasion test.
5. Find Elongation Index, Flakiness Index and Angularity Number from Shape test.

BITUMINOUS MATERIALS:

6. Find Viscosity Test & Flash and fire point tests of bitumen.
7. Penetration test
8. Find the Softening Point Test.
9. Find OBC from Marshall mix design.
10. Find Specific Gravity of bitumen.

TRAFFIC STUDY

11. Perform Traffic volume studies.
12. Find Spot speed studies characteristics.
13. Perform Parking study.

PAVEMENT STUDY

14. Perform Benkelman beam.
15. Perform Unevenness Index by MERLIN.

Reference:

1. S.K.Khanna, C.E.G. JUSTO, A. Veeraghavan, "Highway Materials and Pavement Testing", 2nd Edition, Nem Chand and Bros, 2013.
2. Relevant Bureau of Indian Standards: IS:5640, IS:2386, IS:383, IS:73, IS:1205, IS:1208.