

III Year - I Semester

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TRANSPORTATION ENGINEERING LAB

Course Learning Objectives:

The objective of this course is:

- To test crushing value, impact resistance, specific gravity and water absorption, percentage attrition, percentage abrasion, flakiness index and elongation index for the given road aggregates.
- To know penetration value, ductility value, softening point, flash and fire point, viscosity and stripping for the given bitumen grade.
- To test the stability for the given bitumen mix
- To carry out surveys for traffic volume, speed and parking.

Course outcomes:

- Ability to test aggregates and judge the suitability of materials for the road construction
- Ability to test the given bitumen samples and judge their suitability for the road construction
- Ability to obtain the optimum bitumen content for the mix design
- Ability to determine the traffic volume, speed and parking characteristics.

SYLLABUS:

I. ROAD AGGREGATES:

1. Aggregate Crushing value
2. Aggregate Impact Test.
3. Specific Gravity and Water Absorption.
4. Attrition Test
5. Abrasion Test.
6. Shape tests

II. BITUMINOUS MATERIALS:

1. Penetration Test.
2. Ductility Test.
3. Softening Point Test.
4. Flash and fire point tests.
5. Stripping Test
6. Viscosity Test.