

## Transportation Engineering Lab

**Objective:** Conduct all standardized tests to assess quality of highway materials and pavements. Like, Aggregate impact test, Attrition test, Penetration test for bitumen and other tests



Sections Handled:

III-A, III-B

Major Equipment Details:

| Sl.No | Equipment Name                        | Qty |
|-------|---------------------------------------|-----|
| 1     | Apparatus for Aggregate Crushing Test | 1   |
| 2     | Pycnometer                            | 1   |
| 3     | Deval 's Attrition Testing Machine    | 1   |
| 4     | Length & Elongation Gauges            | 1   |
| 5     | Bitumen Ductility Test setup          | 1   |
| 6     | Viscometer                            | 1   |
| 7     | Aggregate Impact testing machine      | 1   |
| 8     | Los Angeles Abrasion Testing Machine  | 1   |
| 9     | Mechanical Sieve Shaker               | 1   |
| 10    | Bitumen Penetration Test Setup        | 1   |
| 11    | Ring & ball Apparatus                 | 1   |
| 12    | Marshall Mix Design Apparatus         | 1   |
| 13    | Benkelman's Beam Apparatus            | 1   |
| 14    | Radar Gun -Spot speed Studies         | 1   |

Faculty In charge with qualification : V.Swathi Padmaja- M.Tech

Lab Technical name with qualification: A.Naga Raju- D.C.E

Experiment list as per curriculum:

### I.ROAD AGGREGATES:

1. Aggregate Crushing value test
2. Aggregate impact test
3. Specific gravity and water absorption test
4. Attrition test
5. Abrasion test
6. Shape test

### II. BITUMINOUS MATERIALS:

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

### III. BITUMINOUS MIX:

1. Marshall stability test

### IV: TRAFFIC SURVEYS:

1. Traffic volume study at mid blocks
2. Traffic volume study at intersections
3. Spot speed studies
4. Parking studies

### V: DESIGN &DRAWING:

1. Earth work calculations for road work

2. Drawing of road cross sections
3. Rotary Intersection design