

Lesson Plan - Transportation Engineering Laboratory(W-25)

Subject: Transportation Engineering Laboratory

Total Contact Hours: 60 Hours

Weekly Practical Period: 4 Periods/Week

Duration: 15 Weeks (4 Hours × 15 Weeks)

FACULTY - Smt Bijayalaxmi Hembram and Smt Smitarani Patel

Week	Periods (Hours)	Topic / Practical to be Covered	Teaching-Learning Activity
Week 1	4 Hrs	Introduction to Transportation Engineering Laboratory, safety rules, highway materials	Lecture + Demonstration
Week 2	4 Hrs	Flakiness Index and Elongation Index of Aggregates	Demonstration + Student performance
Week 3	4 Hrs	Crushing Strength Test of Aggregates	Practical demonstration + Record preparation
Week 4	4 Hrs	Impact Value Test of Aggregates	Laboratory experiment
Week 5	4 Hrs	Abrasion Value Test of Aggregates	Practical work + Discussion
Week 6	4 Hrs	Angularity Number of Aggregates	Demonstration + Experiment
Week 7	4 Hrs	Softening Point Test of Bitumen	Practical demonstration
Week 8	4 Hrs	Penetration Test of Bitumen	Laboratory experiment
Week 9	4 Hrs	Flash Point and Fire Point Test of Bitumen	Practical demonstration
Week 10	4 Hrs	Ductility Test of Bitumen	Student performance + Observation
Week 11	4 Hrs	Viscosity Test of Bitumen	Practical experiment
Week 12	4 Hrs	Bitumen Content Determination Using Centrifuge Extractor	Demonstration + Hands-on practice

Week 13	4 Hrs	Marshall Stability and Flow Test	Laboratory testing
Week 14	4 Hrs	Road Inspection Visit, Pavement Defects and Drainage Condition Study	Field visit + Report preparation
Week 15	4 Hrs	CBR Test of Aggregates, Revision and Viva Preparation	Practical + Internal assessment

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