



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

DEPARTMENT OF CIVIL ENGINEERING

Laboratory Equipment – Geotechnical Engineering Laboratory

This course focuses on soil testing and provides detailed instructions on how to conduct various types of tests. The experiments are accompanied by an introduction explaining their importance, theory, and purpose. The course also includes information on the required apparatus, procedure, and specimen calculations necessary for performing the experiments and computing the results.

- 1. Equipment Setup:** The geotechnical engineering laboratory offers a wide range of equipment for conducting experiments. The equipment is well-maintained and calibrated regularly. Storage space is provided to keep the equipment organized and easily accessible. This ensures a conducive environment for high-quality research and learning experiences.
- 2. Facility Infrastructure:** The laboratory offers a dedicated workspace equipped with essential utilities for geotechnical engineering experiments. Safety protocols are strictly followed, and regular maintenance routines ensure the reliability of equipment for ongoing research and experimentation.
- 3. Equipment Accuracy Assurance:**
 - Dial gauges and weighing balances undergo regular calibration to maintain high accuracy.
 - Strict adherence to calibration schedules ensures precise measurements during experiments.
 - Quality assurance protocols are implemented to uphold the reliability and integrity of experimental results.
- 4. Laboratory Equipment:**

S.no	Item	Make	Quantity	Cost per Unit (Rs.)	Total Cost (Rs.)
1.	Triaxial-setup	Raj Co. Pvt.Ltd	1	135000	135000
2.	Direct shear apparatus	SSB Enterprises Pvt.Ltd	1	46500	46500
3.	Consolidation with three gang	A.A.B Engineering	1	21000	21000
4.	Mechanical sieve shaker	SSB Enterprises Pvt.Ltd	1	18000	18000
5.	Permeability apparatus	Arvind Engineering Co	1	14100	14100
6.	Universal Auto Compactor	SSB Enterprises Pvt.Ltd	1	48750	48750

S.no	Item	Make	Quantity	Cost per Unit (Rs.)	Total Cost (Rs.)
7.	California Bearing Ratio (CBR) apparatus	SSB Enterprises Pvt.Ltd	1	39000	39000
8.	Hot air oven	Sisco Pvt.Ltd	1	28500	28500
9.	Unconfined compression test apparatus	SSB Enterprises Pvt.Ltd	1	36000	36000
10.	Universal sample extractor	SSB Enterprises Pvt.Ltd	1	10500	10500
11.	Vane shear apparatus	Arvind Engineering Co.	1	24000	24000
12.	Liquid limit apparatus	SSB Enterprises Pvt.Ltd	2	1875	3750

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