

## **K L DEEMED TO BE UNIVERSITY**

### **DEPARTMENT OF CIVIL ENGINEERING**

#### **SOIL MECHANICS LAB (CE 04 A)**

**PURPOSE OF LAB:** To develop fundamental understanding of science and engineering of soil mechanics, through rigorous theoretical discussions, analytical examples, practical applications and computational projects, such that these theories, physical and engineering properties of soils can be effectively used for the design of suitable foundation for any structural design and will be able to choose the suitable field and laboratory tests required for any foundation design.

In this course, the students will gain hands-on experience in conducting soil laboratory tests to determine soil parameters needed for geotechnical engineering design.

**FLOOR AREA: 70 SQ.M**

#### **EQUIPMENTS USED:**

1. CORE CUTTER APPARATUS
2. SAND REPLACEMENT APPRATUS
3. PYCNOMETERS
4. COMPACTION EQUIPMENT
5. LIQUID LIMIT EQUIPMENT
6. VANE SHEAR TEST APPRATUS
7. UNCONFINED COMPRESSION TEST EQUIPMENT
8. DIRECT SHEAR STRESS EQUIPMENT
9. ELECTRONIC DIRECT SHEAR STRESS EQUIPMENT
10. SOIL EXTRUDER
11. DENSITY BOTTLES
12. CONSOLIDOMETER
13. ELECTRIC CONSOLIDOMETER
14. MECHANICAL SIEVE SHAKER
15. HYDROMETER APPRATUS
16. CONSTANT HEAD PERMEAMETER
17. VARIABLE HEAD PERMEAMETER
18. TRI AXIAL TEST EQUIPMENT
19. OVEN
20. RAPID MOISTURE METER





**Relative Density**

**Tri-Axial Apparatus**