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DEPARTMENT OF CIVIL ENGINEERING

Ref. No.

Date: 01/11/2023

**Virtual Lab Simulation on Consolidation and Shear Strength
Practical Experiment**

Course Code and Name: (BTCVL509) Geotechnical Engineering Laboratory

Date: 1/11/2023

Duration: 2 hr

Participants: TY B-Tech Students

Group Size : 16

Objective of the Activity: To determine the settlements due to primary consolidation of soil by conducting one dimensional test to determine:

1. Rate of consolidation under normal load
2. Degree of consolidation at any time
3. Pressure-void ratio relationship
4. Coefficient of consolidation at various pressures
5. Compression index

List of Topics:

1. Consolidation and Compaction of soil.
2. Shear Strength of Soil.

Process: As per the Procedure steps given in virtual lab students carried out the same.

Evaluation Criteria

Following parameters used to evaluate the group performance:

- a) Communication skills
- b) Content knowledge
- c) Teamwork and collaboration
- d) Critical thinking and problem-solving

Outcomes Achieved:

- Students were able to understanding concepts through simulation.
- Students were able to problem identification and solving in between the practical procedure.
- Students were able to design/ Development of Solutions to the problems identified.
- Students were able to collaborative discussion and observations effectively in a group.
- Students were able to articulating concepts and ideas while experiment simulation.

Virtual Labs
At The Core of Your Studies

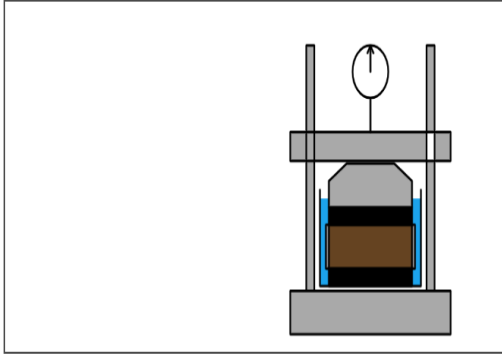
Consolidation Test

★★★★★ Rate Me Report a Bug

Instructions
Click on the loading cap to apply a load/force on the soil.

Apparatus Menu

- Weighing Machine
- Consolidation Ring
- Soil Sample
- Porous Stones
- Loading Device
- Water Bath
- Loading Cap



Observations

- Sample Diameter = 6.35 cm
- Sample Height = 2.54 cm
- Height of Solids, H_s = 1.356 cm

Restart

Activate Windows
Go to Settings to activate Windows.

Virtual Lab Practical Simulation



Students doing Practical Specimen and discussion of results

