Assignment 11

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2018-10-17, 23:59 IST.

State whether the following statements are true or false. Please write either 'TRUE' or 'FALSE' in the response box. Do not put white space or any other extra characters.

1) ESV test was conducted by mixing 2 gm of oven dried bentonite soil with water. Another duplicate test was conducted by mixing the same soil with kerosene. The clay sediment volume at time \( t = \infty \), will be lesser for the case where water was used as the pore fluid.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) False

2) When a clay sample is wetted, the electrostatic potential for an individual platelet decreases linearly from surface to the DDL and bulk-solution interface.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: String) False

3) In the rate of swell potential plot, primary swelling is due to the formation of diffuse double layer around the clay platelets.
4) Expansive soils like bentonite can exhibit both swelling and collapse behaviour when subjected to wetting under different applied stresses.

- No, the answer is incorrect.
- Score: 0
- Accepted Answers: (Type: String) True

5) In a suction controlled oedometer test, with increase in suction, the specific volume with time increases.

- No, the answer is incorrect.
- Score: 0
- Accepted Answers: (Type: String) False

6) In the method of equilibrium void ratios, one single test is sufficient to estimate the swelling pressure of the soil.

- No, the answer is incorrect.
- Score: 0
- Accepted Answers: (Type: String) False

7) Terzaghi 1D consolidation equation is useful for the estimation of both small strain and large strain consolidation settlements.

- No, the answer is incorrect.
- Score: 0
- Accepted Answers: (Type: String) False

8) Suction-stress-characteristics-curve (SSCC) can be understood using the changes in SWCC regime.

- No, the answer is incorrect.
- Score: 0
- Accepted Answers: (Type: String) True

9) For clay soil, as the degree of saturation approaches zero, the capillary effect gets diminished and hence the suction stress becomes zero.
The SSCC can also be established using shear strength data from suction-controlled direct shear test or suction controlled triaxial test.