Assignment 5

For the sake of answering the assignment you must.

1. An unsaturated soil, increase in total stress is equal to a corresponding increase in pore water pressure.

2. Yes

3. No, the increase in total stress is equal to a corresponding increase in pore water pressure.

4. No, the increase in total stress is equal to a corresponding increase in pore water pressure.

5. Similar compressibility. For poorly drained unsaturated soils, change in mechanical behavior is governed by:

   - decrease in pore water pressure
   - increase in external loading
   - decrease in total stress
   - decrease in effective stress

6. Force a saturated soil to dry out, the rate of change is

   - decrease in compressibility of soil skeleton
   - increase in compressibility of soil skeleton
   - high compressibility of soil skeleton
   - low compressibility of soil skeleton

7. Yes

8. By virtue of the fact that more sand is introduced into the sample, the rate of change is

   - decrease in compressibility of soil skeleton
   - increase in compressibility of soil skeleton
   - high compressibility of soil skeleton
   - low compressibility of soil skeleton

9. Overall, pore water pressure can be calculated for:

   - a well drained construction in the field
   - a well drained construction in the field
   - a well drained construction in the field
   - a well drained construction in the field

10. Sampling of unsaturated soil from the field causes:

    - decrease in pore water pressure
    - increase in pore water pressure
    - change in pore water pressure
    - effective stress that equals the net

11. By virtue of the fact that more sand is introduced into the sample, the rate of change is

    - decrease in compressibility of soil skeleton
    - increase in compressibility of soil skeleton
    - high compressibility of soil skeleton
    - low compressibility of soil skeleton

12. Overall, pore water pressure can be calculated for:

    - a well drained construction in the field
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    - a well drained construction in the field

13. A well defined pore pressure parameter in the

    - soil
    - soil
    - soil
    - soil

14. A cylindrical stainless steel pipe with an inner diameter of 10 mm and an outer diameter of 15 mm. The sample is subjected to an external pressure of 60 kPa, with the downslope side open. The resulting pore pressure in the sample is 10 kPa. The initial pore pressure in the sample before the application of all external pressures is __________

    - 50 kPa
    - 40 kPa
    - 30 kPa
    - 20 kPa

15. An unsaturated NC soil sample store Skempton's A parameter is equal to 0.5. It was sampled from a depth of 10 cm below ground water table. Peat ratio is a depth of 2 cm below ground water table. Determine the porosity of the sample. If the sample weight is 7.5 g, the dry sample weight weight is 1.5 g. What is the coefficient of lateral earth pressure at rest at 0.5? The final pore water pressure in the soil sample after sampling is 40 kPa. The weight of water is 10 kPa.

    - 0.5
    - 0.6
    - 0.7
    - 0.8

16. An unsaturated NC soil sample store Skempton's A parameter is equal to 0.5. It was sampled from a depth of 10 cm below ground water table. Peat ratio is a depth of 2 cm below ground water table. Determine the porosity of the sample. If the sample weight is 7.5 g, the dry sample weight weight is 1.5 g. What is the coefficient of lateral earth pressure at rest at 0.5? The final pore water pressure in the soil sample after sampling is 40 kPa. The weight of water is 10 kPa.

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