

## QUIZ NO: 845

### TOPIC: GEOTECHNICAL ENGINEERING

**DATE: 20/07/2024**

1. The coefficient of passive earth pressure for cohesion less granular soil is represented by:

[A]  $(1 + \sin \theta)/(1 - \sin \theta)$

[B]  $(1 + \cos \theta)/(1 - \cos \theta)$

[C]  $(1 - \sin \theta)/(1 + \sin \theta)$

[D] None of these

**Answer: A**

2. During seepage through an earth mass, the direction of seepage is

[A] Parallel to the equipotential lines

[B] Perpendicular to the streamlines

[C] Perpendicular to the equipotential lines

[D] Along the direction of gravity

**Answer: C**

**3. The suitable method for determining stress distribution beneath loaded area in stratified soil**

[A] Westergaard's method

[B] Boussinesq's method

[C] Newmarks method

[D] 2:1 distribution method

**Answer: A**

**4. Coefficient of permeability is directly proportional to the square of:**

[A] Unit weight of water

[B] Viscosity

[C] Average grain size

[D] None of these

**Answer: C**

**5. For better strength and stability, the fine-grained soils and coarse-grained soils are compacted respectively as**

[A] Dry of OMC and wet of OMC

[B] Dry of OMC and dry of OMC

[C] Wet of OMC and dry of OMC

[D] Wet of OMC and wet of OMC

**Answer: C**

**6. The major drawback of direct shear test is**

- [A] Major principal plane is horizontal
- [B] Minor principal plane is horizontal
- [C] Failure plane always kept horizontal
- [D] None of the above

**Answer: C**

**7. Which of the following piles is used to compact loose granular soil?**

- [A] Friction piles
- [B] End bearing piles
- [C] Compaction piles
- [D] Tension piles

**Answer: C**

**8. In which one of the following zones is a logarithmic spiral shape of failure surface assumed in the case of bearing capacity analysis of soils?**

- [A] Active zone
- [B] Radial shear zone
- [C] Passive zone
- [D] Surcharge zone

**Answer: B**

**9. In consolidation testing, curve fitting method is used to determine**

- [A] Compression index
- [B] Swelling index
- [C] Coefficient of consolidation
- [D] Time factor

**Answer: C**

**10. Temperature correction in hydrometer analysis is**

- [A] Negative when temperature  $< 27^{\circ}\text{C}$  and positive when temperature  $> 27^{\circ}\text{C}$
- [B] Positive when temperature  $< 27^{\circ}\text{C}$  and negative when temperature  $> 27^{\circ}\text{C}$
- [C] Always negative
- [D] Always positive

**Answer: A**

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