

Unit 4 - Week 2

Course outline

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Assignment Solution

Assignment 2

The due date for submitting this assignment has passed.

Due on 2019-08-21, 23:59 IST.

As per our records you have not submitted this assignment.

- 1) The observed standard penetration test value in a deposit of fully submerged sand was 45 at a depth of 6 m. The average submerged unit weight of the soil is 9.7 kN/m^3 . The other data given are $E_r = 80$, drill rod length correction factor = 0.9, borehole diameter correction factor = 1.05 and sampler is without liner. Determine N'_{70} (ASTMD 1586)
- a) 43
b) 67
c) 54
d) 62

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

d

- 2) What should be the maximum thickness of cutting edge of sampling tube of 70 mm external diameter which is required for sampling in undisturbed stiff clay soil .(As per Is: 1892-1979)
- a) 2.15 mm
b) 3.05 mm
c) 3.95 mm
d) 6.10 mm

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

b

- 3) The degree of disturbance of a cohesive sample can be estimated by
- a) Recovery ratio
b) Void ratio
c) Consolidation ratio
d) Permeability

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

a

- 4) In-situ vane shear test is used to measure shear strength of
- a) Very soft and sensitive clays
b) Stiff and fissured clays
c) Sandy soils
d) All of the above

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

a

- 5) If the actual value of the standard penetration number (N) is 25 (after overburden correction) for fine sands below water table, the corrected value of N is

- a) N
b) $15 + \left(\frac{N+15}{2}\right)$
c) $15 + \left(\frac{N-15}{2}\right)$
d) $15 - \left(\frac{N+15}{2}\right)$

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

c

- 6) A dilatometer test was conducted in a clay deposit. The ground water table was located at a depth of 1.5m below ground level. At a depth of 8 m below the ground level, the contact pressure (p_0) was 250 kN/m^2 . Determine K_0 . Assume, $\mu =$ Poisson's ratio = 0.45. Saturated and bulk unit weight is 20 kN/m^3 and 17 kN/m^3 , respectively. $\gamma_w = 10 \text{ kN/m}^3$
- a) 0.45
b) 0.55
c) 0.65
d) 0.75

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

b

- 7) At a depth of 6 m below the ground surface at a site, a vane shear test gave a torque value of 30 N-m. The diameter of vane was 50 mm and height 100 mm. Calculate the undrained shear strength of soil
- a) 85 kN/m^2
b) 850 kN/m^2
c) 65 kN/m^2
d) 650 kN/m^2

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

c

- 8) Seismic refraction test is conducted in a layered soil deposit. The velocity of the wave (P – wave) in 1st and 2nd layer are 550 m/sec and 1500 m/sec, respectively. Determine the thickness of the 1st layer when $t_0 = 10^{-2}$ sec, where t_0 is the intercept time
- a) 5.85 m
b) 4.32 m
c) 3.89 m
d) 2.96 m

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

d

- 9) The depth of boring for isolated spread footing or raft is (according to IS 1892-1979)
- a) Equal to the width of the foundation
b) Half times the width of foundation
c) One and half times the width of the foundation
d) None of above

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

c

- 10) Disturbed sample can generally be used for
- a) Consolidation test
b) Soil classification
b) Hydraulic conductivity test
c) Shear strength test

- a
 b
 c
 d

No, the answer is incorrect.

Score: 0

Accepted Answers:

b