



Unit 14 - Week 12

Course outline

How to access the portal

Week 0 : Assignment 0

Week 1

Week 2

Week 3

Week 4 :

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

 Lecture 56 : Sheet Piles - V

 Lecture 57 : Sheet Piles - VI

 Lecture 58 : Sheet Piles and Braced Excavation

 Lecture 59 : Braced Excavation and Underground Conduits

 Lecture 60 : Underground Conduits II

 Lecture Materials

 Quiz : Assignment 12

 Feedback for Week 12

Download Videos

Assignment Solution

Assignment 12

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

Due on 2019-10-23, 23:59 IST.

 1) 1 point

Match the items in List –I with the items in List II and select the correct answer from the codes given below the lists

List –I

- (A) Ditch conduit
- (B) Positive projecting conduit
- (C) Negative projecting conduit

List –II

- I. Installed in a shallow ditch with its top below the natural ground surface
- II. Installed in a narrow ditch and covered with earth backfill
- III. Installed in shallow bedding with its top projecting above the surface of the natural ground and then is covered with an embankment.

- (a) A- I, B – II, C – III
- (b) A – II, B – I, C – III
- (c) A – III, B – II, C – I
- (d) A – II, B- III , C – I

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (d)

 2) 1 point

 A sewer pipe with an outside diameter of 70 cm is to be laid in a ditch which is 1m wide at the top of the rigid pipe and is to be covered with 7 m of clayey soil backfill ($\gamma = 18 \text{ kN/m}^3$). Determine the load on the sewer pipe. Take $K_u = 0.12$.

- (a) 56.73 kN/m
- (b) 61 kN/m
- (c) 66.24 kN/m
- (d) 72.43 kN/m

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (b)

 3) Active arching occurs when 1 point

- (a) The structure is more compressible than the soil
- (b) The soil is more compressible than the structure
- (c) The soil and structure both are incompressible
- (d) All of the mentioned

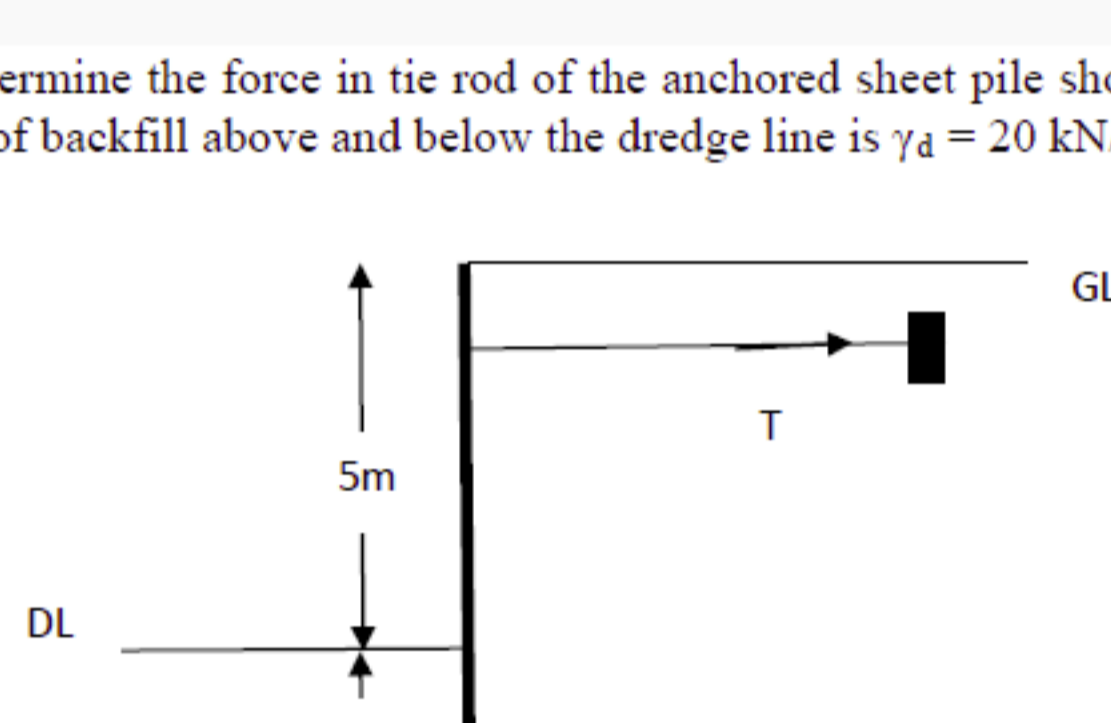
- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (a)

 4) 1 point

 Determine the force in tie rod of the anchored sheet pile shown in figure below. Unit wt of backfill above and below the dredge line is $\gamma_d = 20 \text{ kN/m}^3$ and $\phi = 35^\circ$.


- (a) 80.1 kN/m
- (b) 90.5 kN/m
- (c) 65.5 kN/m
- (d) 60.5 kN/m

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (d)

 5) The component of braced excavation 1 point

- (a) Sheet pile
- (b) Wale
- (c) Strut
- (d) All of the above

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (d)

 6) 1 point

 A trench 3m wide, 10 m long is excavated in medium clay. The side of the trench are supported with sheet pile walls fixed in place by strut and wale (i.e., braced excavation). Determine the load against the sheet pile wall. $\gamma = 18 \text{ kN/m}^3$, $c = 35 \text{ kPa}$.

- (a) 275 kN/m
- (b) 350kN/m
- (c) 250kN/m
- (d) 300 kN/m

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (b)

 7) 1 point

 A trench 2m wide, 7.5 m long is excavated in medium dense sand. The side of the trench are supported with sheet pile walls fixed in place by strut and wale (i.e., braced excavation). Determine the maximum pressure (p_a) against the sheet pile wall. $\gamma = 18 \text{ kN/m}^3$, $\phi = 35^\circ$

- (a) 23.78 kN/m²
- (b) 29.25 kN/m²
- (c) 31.98 kN/m²
- (d) 35.76 kN/m²

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (a)

 8) Which theory is generally used to compute vertical load on the underground conduit 1 point

- (a) Marton's load theory
- (b) Coloumb's earth pressure theory
- (c) Rankine's theory
- (d) Terzaghi's theory

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (a)

 9) Due to active soil arching, the pressure on the structure placed inside a loose soil 1 point

- (a) Increases
- (b) Reduces
- (c) Remains same
- (d) None of the above

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (b)

 10) For the design of braced cuts, the earth pressure distribution is based on 1 point

- (a) Coulomb's theory
- (b) Rankine's theory
- (c) Apparent pressure diagram
- (d) None of above

- (a)
- (b)
- (c)
- (d)

No, the answer is incorrect.

Score: 0

Accepted Answers: (c)