Unit 5 - Week 3

Assignment 3

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

Due on 2020-02-19, 23:59 IST.

Choose all correct answers – more than one answer may be correct

1) What are the disadvantages of reinforced concrete retaining walls? *1 point*

- Construction height is limited due to practical reasons
- Long construction times
- Self-weight is so high that foundation should be strong
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

2) Why is that the geosynthetic reinforced soil walls can withstand seismic forces better than the reinforced concrete walls? *1 point*

- As the reinforced soil structures do not move under seismic forces
- The flexibility of the reinforced soil systems
- Lower inertial forces
- All the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
The flexibility of the reinforced soil systems
Lower inertial forces

3) Why is the inward batter provided in the reinforced soil retaining walls? *1 point*

- For aesthetic appearance
- To compensate for post-construction lateral deformations
- For achieving higher factor of safety
- To compensate for post-construction settlements

No, the answer is incorrect.
Score: 0
Accepted Answers:
To compensate for post-construction lateral deformations

4) What is the function of the facing in the reinforced soil walls? *1 point*

- Aesthetic appearance
- Prevent Soil erosion
- Anchoring the reinforcement
- Protection against vandalism

No, the answer is incorrect.
Score: 0
Accepted Answers:
Aesthetic appearance
Prevent Soil erosion
Protection against vandalism

5) What is the best option to reduce the foundation pressures most economically in retaining walls? *1 point*

- Increase the length of reinforcement layers at bottom portion of wall
- Decrease the vertical spacing of reinforcement layers
- Increase the length of all reinforcement layers
- Increase the strength of bottom most reinforcement layers

No, the answer is incorrect.
Score: 0
Accepted Answers:
Increase the length of reinforcement layers at bottom portion of wall

6) Trapezoidal walls are suitable in case of, *1 point*

- Weak foundation soils
- Strong foundation soils
- For low height of walls
- For high height of walls

No, the answer is incorrect.
Score: 0
Accepted Answers:
Strong foundation soils

7) What is the name of the wall when the reinforcement layers overlap each others in parallel walls built on each side of narrow approach roads? *1 point*

- Trapezoidal wall
- Stepped wall
- Embedded wall
- Back to back wall

No, the answer is incorrect.
Score: 0
Accepted Answers:
Embedded wall

8) Why is the aggregate layer placed behind the facing blocks? *1 point*

- To act as cushion
- To get better reaction from the facing block
- To act as a drainage cum filter medium
- To reduce the lateral earth pressures

No, the answer is incorrect.
Score: 0
Accepted Answers:
To act as a drainage cum filter medium

9) What is the direction of compaction of the backfill soil in retaining walls? *1 point*

- Zig zag manner to achieve best coverage of soil
- Perpendicular to the retaining wall
- Parallel to the retaining wall
- Optimal combination of perpendicular and parallel directions

No, the answer is incorrect.
Score: 0
Accepted Answers:
Parallel to the retaining wall

10) What is the best facing type for water front structures? *1 point*

- Stone filled gabion facings
- Modular blocks
- Full-height panels
- Geotextile wrap-around facing

No, the answer is incorrect.
Score: 0
Accepted Answers:
Stone filled gabion facings

11) Why are the vertical and horizontal joints in incremental panels covered with geotextiles on the soil side? *1 point*

- For practical convenience
- To prevent fines from escaping
- To protect the drainage aggregate from aggressive chemicals in concrete facing panels
- For maintaining the continuity in soil support

No, the answer is incorrect.
Score: 0
Accepted Answers:
To prevent fines from escaping

12) The reason for providing leveling pad in a reinforced soil retaining wall is, *1 point*

- Act as a foundation for the facing panels
- Act as a foundation for the entire retaining wall
- To help maintain the levels along the length of the retaining wall
- Does not serve any purpose in the wall

No, the answer is incorrect.
Score: 0
Accepted Answers:
To help maintain the levels along the length of the retaining wall

13) Which type of backfill soil is preferred in reinforced soil retaining walls? *1 point*

- Silty clay with zero cohesion
- Highly plastic clay with zero cohesion
- Clayey sand with high cohesion
- Granular soil

No, the answer is incorrect.
Score: 0
Accepted Answers:
Granular soil

14) Which are the design codes commonly used for reinforced retaining walls? *1 point*

- BS 8006
- FHWA-NHI-0043
- IS 14716
- ASTM D4354

No, the answer is incorrect.
Score: 0
Accepted Answers:
BS 8006
FHWA-NHI-0043

15) Which of these codes gives guidelines for seismic design of reinforced retaining walls? *1 point*

- BS 8006
- FHWA-NHI-0043
- IS 14716
- ASTM D4354

No, the answer is incorrect.
Score: 0
Accepted Answers:
FHWA-NHI-0043

16) Which of the following is correct *1 point*

- BS 8006 is based on limit state design approach
- Check for overturning and eccentricity is not considered in FHWA-NHI-0043
- Check for overturning and eccentricity is considered in BS 8006
- All the aspect of design of reinforced retaining wall is covered in BS 8006

No, the answer is incorrect.
Score: 0
Accepted Answers:
BS 8006 is based on limit state design approach

17) Which of the following statements are correct? *1 point*

- Lateral earth pressure coefficient for soil can be zero
- Lateral earth pressure coefficient for water is one
- Good drainage of back fill soil is not essential for back fill material
- Installation damage of geosynthetic is high if the soil has large size particles

No, the answer is incorrect.
Score: 0
Accepted Answers:
Lateral earth pressure coefficient for water is one
Installation damage of geosynthetic is high if the soil has large size particles

18) Which of the following statements are WRONG? *1 point*

- For design of reinforced retaining wall direct shear strength values are used
- Cohesion of soil is considered during design of reinforced retaining wall
- Constant volume friction angle is used for design of retaining walls
- Strain of the soil along the length of the reinforcement is very high

No, the answer is incorrect.
Score: 0
Accepted Answers:
Cohesion of soil is considered during design of reinforced retaining wall
Constant volume friction angle is used for design of retaining walls
Strain of the soil along the length of the reinforcement is very high

19) Which of the following should be considered for external stability calculation? *1 point*

- Stability against sliding
- Stability against over turning
- Global slip circle failure
- Rupture failure of reinforcement

No, the answer is incorrect.
Score: 0
Accepted Answers:
Stability against sliding
Stability against over turning
Global slip circle failure

20) Which of the following is correct according to the load combinations given in BS 8006? *1 point*

- A factor of 1.5 is applied for all the loads in combination A
- Combination A generates least reinforcement force and bearing pressure
- Combination C is used to check the serviceability limit state
- A factor of 1.5 is applied for dead load in combination C

No, the answer is incorrect.
Score: 0
Accepted Answers:
A factor of 1.5 is applied for all the loads in combination A
Combination C is used to check the serviceability limit state