Assignment 11

The due date for submitting this assignment has passed.

Due on 2021-04-07, 23:59 IST.

As per our records you have not submitted this assignment.

1) Circular rock slope failure takes place in:
   - hard or soft rock with well-defined discontinuities
   - hard rock with at least two continuous and parallel joint sets
   - heavily jointed and weathered rock masses
   - hard rock with regular, parallel joints dipping into the failure
     plane
     - No, the answer is incorrect.
     - Accepted Answer:
       heavily jointed and weathered rock masses
     - 1 point
   
2) The excavated slope should be cut on the terrace where rock joints:
   - dip away from the excavation
   - dip towards the excavation
   - are vertical
   - are horizontal
     - No, the answer is incorrect.
     - Accepted Answer:
       dip away from the excavation
     - 1 point
   
3) Typically, in toppling failure, width of tension crack is _______ at the top than at the base.
     - narrower
     - wider
     - same
     - none of the above
     - No, the answer is incorrect.
     - Accepted Answer:
       wider
     - 1 point
   
4) Block toppling failure is observed in the rock slope having:
   - One set of discontinuities dipping steeply into the face and second set of very steeply dipping well-developed orthogonal joints
   - One set of discontinuities dipping steeply into the face
   - One set of discontinuities dipping steeply into the face and numerous cross jogs along long columns
   - None of the above
     - No, the answer is incorrect.
     - Accepted Answer:
       None of the above
     - 1 point
   
5) In the following figure, toppling failure only takes place when:
     - 1 point
     
     \[ \begin{align*}
        \frac{1}{2} \times b \times d \times \phi \\
        \frac{1}{2} \times \text{area} \times \phi \\
        \frac{1}{2} \times b \times d \times \phi \\
        \frac{1}{2} \times \text{area} \times \phi
      \end{align*} \]
     
     - No, the answer is incorrect.
     - Accepted Answer:
       \( \frac{1}{2} \times \text{area} \times \phi \)
     - 1 point
   
6) For the limit equilibrium analysis of toppling failure of rock slopes, the analysis is carried out starting from the:
   - Top most block
   - Bottom most block
   - Middle block
   - Third block from the top
     - No, the answer is incorrect.
     - Accepted Answer:
       Top most block
     - 1 point
   
7) Overall stress is said to be in toppling failure if:
   - Top most block is in tension against sliding and toppling
   - Bottom most block is in tension against sliding
   - Bottom most block is in tension against sliding and toppling
   - Bottom most block is in tension against sliding
     - No, the answer is incorrect.
     - Accepted Answer:
       Bottom most block is in tension against sliding and toppling
     - 1 point
   
8) Which of the following is not a geometrical method of rock slope stabilization?
   - Slope grading
   - Construction of pressure beams at the toe
   - Replacement of slipped material by free dressing material
   - Rock bolting
     - No, the answer is incorrect.
     - Accepted Answer:
       Rock bolting
     - 1 point
   
9) The selection of a stabilization technique requires consideration of:
   - Geotechnical aspects
   - Environmental aspects
   - Construction aspects
   - All of the above
     - No, the answer is incorrect.
     - Accepted Answer:
       All of the above
     - 1 point
   
10) Which of the following is not a reinforcement method of rock slope stabilization?
    - Tensioning
    - Dowels
    - Shotcrete
    - Rock bolts
      - No, the answer is incorrect.
      - Accepted Answer:
        Rock bolts
      - 1 point