Assignment 6

The due date for submitting this assignment has passed. Due on 2021-03-03, 23:59 IST.

As per our records you have not submitted this assignment.

1) The coefficient of lateral earth pressure K0 for the rock lying at 1.1 m below the ground surface will vary between -
   - 0.4 & 2
   - 0.3 & 5.8
   - 0.4 & 1.2
   - 0.3 & 2
   - 0.2
   - 0.1
   - 0

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 0.4 & 2

2) What is the bulk modulus (MPa) of a rock having elastic modulus = 5000 MPa and Poisson's ratio = 0.27?
   - 0
   - 1200
   - 3600
   - None of the above

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 0

3) In plane strain loading conditions, the normal strain in the direction perpendicular to the plane is
   - zero
   - non-zero
   - conditionally zero
   - conditionally non-zero

   Red, the answer is incorrect. Score: 0
   Accepted Answers: zero

4) Problems of a retaining wall in geotechnical engineering in a case of
   - plane stress loading
   - plane strain loading
   - axisymmetric loading
   - none of the above

   Red, the answer is incorrect. Score: 0
   Accepted Answers: plane stress loading

5) For the plane stress loading, what will be normal strain in the direction of zero normal stress if Poisson's ratio = 0.35, normal strain in y-direction if zero?
   - 0.6%
   - 0.75%
   - 0.8%
   - 0.9%

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 0.6%

6) Which of these holds good for the following statement:
   - General rocks and boulders at low confining pressures and tend to become ductile with increase in confining pressure
     - Always true
     - Almost true
     - Conditionally true
     - None of the above

   Red, the answer is incorrect. Score: 0
   Accepted Answers: Always true

7) Theoretically, what will be the value of UCS to indicate tensile strength of a rock following Mohr-Coulomb criterion and having p = 30°?
   - 2
   - 3
   - 4

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 2

8) Triaxial tests were conducted on rock specimens and it was observed that rock follows the following relationship:

   \[
   \sigma_1 - \sigma_3 = K (4 + \nu) \sigma_3
   \]

   UCS (in MPa) was found to be 30 MPa and regression analysis of the data yields the values of parameters as a = 5.5 and b = 1.2. As per Bein's approach, what will be normal stress (MPa) for c = 4 MPa?
   - 0.62
   - 23.41
   - 11.33
   - 12.32

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 12.32

9) Por the data provided in Q. 8, what is the value of shear stress (MPa) at failure?
   - 22
   - 38
   - 48

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 38

10) For the data given in Q. 8, what are the instantaneous a and p for th c = 4 MPa?

   - 12 MPa, 47.2°
   - 5.5 MPa, 52.5°
   - 3.75 MPa, 58.2°
   - 7.10 MPa, 54.5°

   Red, the answer is incorrect. Score: 0
   Accepted Answers: 7.10 MPa, 54.5°