Assignment 3

Due date for submitting this assignment has passed.

As per your record you have not submitted this assignment.

1. Length of diameter ratio for torsional tests on rocks should be kept as
   1.1-3
   1.2-5
   1.2-3
   1.2-5
   No, the grader is inconnue.
   Accepted Answers
   1.1-3

2. The uniaxial compressive strength (UCS) of a hard rock specimen of a rock tested at 1154 MPa of unconfined compressive strength
   110 MPa
   120 MPa
   130 MPa
   140 MPa
   No, the grader is inconnue.
   Accepted Answers
   130 MPa

3. As per ISRM, which of these conditions should be met while preparing the specimen
   (a) Circumference of specimen should be 2 to 3 times of diameter
   (b) Circumference of specimen should be 2 to 3 times of diameter
   (c) Circumference of specimen should be 2 to 3 times of diameter
   (d) Circumference of specimen should be 2 to 3 times of diameter
   No, the grader is inconnue.
   Accepted Answers
   (a)

4. The UCS test was conducted on a specimen having length diameter ratio as 1.1 and UCS was found to be 150 MPa. What will be the value of UCS if the specimen having length to diameter ratio of 2?
   150 MPa
   225 MPa
   300 MPa
   375 MPa
   No, the grader is inconnue.
   Accepted Answers
   225 MPa

5. Using UCS test data, tangent and percent moduli of rock are obtained usually at a stress of
   5% of failure stress
   20% of failure stress
   50% of failure stress
   None of the above
   No, the grader is inconnue.
   Accepted Answers
   50% of failure stress

6. Why rock specimens with small length to diameter ratio exhibit large UCS?
   State of stress in the specimen being tested
   State of stress being assumed
   True state of stress
   None of the above
   No, the grader is inconnue.
   Accepted Answers
   True state of stress

7. What is the definition of the rock specimen strength test?
   Stress of the specimen being tested
   State of stress being assumed
   True state of stress
   None of the above
   No, the grader is inconnue.
   Accepted Answers
   True state of stress

8. Regard to in situ failure behavior of rock in compressive test
   Favorable grain size characteristics
   Formation of cracks by the direction parallel to the direction of applied load
   Decreasing of stress
   Falling followed by development of small diameter inclined shear fractures
   No, the grader is inconnue.
   Accepted Answers
   Falling followed by development of small diameter inclined shear fractures

9. Point load strength index test was conducted on 80 mm cube size and the failure load was obtained as 1197 MPa. What will be the value of compressive strength of rock if constant k = 207?
   115 MPa
   335 MPa
   97 MPa
   None of the above
   No, the grader is inconnue.
   Accepted Answers
   335 MPa

10. A rock has the following hardness values of 90 Knoop and 120 Knoop. What will be the UCS of the rock?
    90 MPa
    120 MPa
    160 MPa
    None of the above
    No, the grader is inconnue.
    Accepted Answers
    160 MPa

11. Work of the following tests require the most sample preparation?
    Direct shearing test
    Torsion test
    UCS test
    Standard hammer test
    No, the grader is inconnue.
    Accepted Answers
    Standard hammer test

12. Velocity of P wave through granite rock is 8370 m/s. UCS of intact rock will be
    950 MPa
    70 MPa
    97 MPa
    None of the above
    No, the grader is inconnue.
    Accepted Answers
    97 MPa

13. What is the statement where a masonry wall a follows the following?
    1. Larger tensile stress needs less reinforcement than a masonry wall subjected to bending
    2. Dynamic wave characteristic of rock can be obtained from the results of sound velocity test
    3. The shear is described as a percentage of the shear deflection by a single span of rock
    4. i) i only
    ii) ii only
    iii) i and ii
    iv) i, ii, and iii
    No, the grader is inconnue.
    Accepted Answers
    i and ii only