Assignment 4

The due date for submitting this assignment has passed.

Due on: 2021-02-17, 23:59 IST.

As per your records you have not submitted this assignment.

Query of a bore hole was conducted on NNW-SW oriented core (diameter = 6 cm) and the following results were obtained:

- $16.8 \times 10^5$, $4.2 \times 10^5$, $1.5 \times 10^5$
- $6.4 \times 10^5$, $1.5 \times 10^5$, $1.2 \times 10^5$
- $6.4 \times 10^5$, $1.6 \times 10^5$

None of the above.

No, the answer is incorrect. Score: 0.

1. What will be the effective shear stresses at the failure corresponding to data given in Q. 1?

- $10.8 \times 10^5$, $3.8 \times 10^5$, $1.5 \times 10^5$
- $10.8 \times 10^5$, $2.5 \times 10^5$, $1.2 \times 10^5$
- None of the above.

No, the answer is incorrect. Score: 0.

2. What will be the values of $c$ and $\phi$ for the data given in Q. 1?

- $5 \text{ MPa}$, $40^\circ$
- $1 \text{ MPa}$, $30^\circ$
- $7 \text{ MPa}$, $35^\circ$

No, the answer is incorrect. Score: 0.

3. With increase in confining pressure, the strength of rock under triaxial state of stress:

- remains the same
- reduces
- increases
- none of the above

No, the answer is incorrect. Score: 0.

4. Mohr-Coulomb shear strength parameters of a rock are $c$ and $\phi$. If the data from triaxial test is plotted in a $c$-$\phi$ plane, the intercept on $c$-axis is a $p$ value and value of the straight line is $c$ and $\phi$ which one of these relationships holds you?

- $c = a + b \sin (\phi)$ (linear)
- $c = a + b \cos (\phi)$ (parabolic)
- $c = a + b \cos (\phi)^2$ (parabolic)
- $c = a + b |\sin (\phi)|$ (paraboloid)

No, the answer is incorrect. Score: 0.

5. If sample size of the rock in considerably reduced, most heterogeneous rock will become as a homogeneous rock. This statement is:

- always true
- always false
- conditionally true
- none of the above

No, the answer is incorrect. Score: 0.

6. For an intact rock, UCS = $35 \text{ MPa}$ and $E_{500}=9898 \text{ MPa}$. As per Davenport and Millier classification system, the rock shall be classified as:

- EM
- DM
- DL
- SL

No, the answer is incorrect. Score: 0.

7. For the determination of RQD, the size of core pieces should be:

- more than $100 \text{ mm}$
- less than $100 \text{ mm}$
- more than $200 \text{ mm}$
- none of the above

No, the answer is incorrect. Score: 0.

8. The brane length for medium-persistent joint is:

- between $1-3 \text{ mm}$
- between $3-10 \text{ mm}$
- between $30-200 \text{ mm}$
- between $0-3 \text{ mm}$

No, the answer is incorrect. Score: 0.

9. What will be the compression strength of joint wall surface (in MPa) if unit weight of rock $= 26 \text{ kN/m}^3$ and friction factor unroughened number of joint-surface $= 0.66$?

- 16.2
- 15.7
- 91.5
- 68.7

No, the answer is incorrect. Score: 0.

10. In a rock mass with small blocks, how many joints per $m^2$ can be expected?

- 10-30
- 5-10
- 20-60
- None of the above

No, the answer is incorrect. Score: 0.

Accepted Answers:

- 12.0
- 15.0
- 30.0
- 60.0

No, the answer is incorrect. Score: 0.