4+2=6.

SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | | | | **Total number of pages:02**
Total number of questions:06

B.Tech. || CE || 3rd Sem
ROCK MECHANICS AND ENGINEERING GEOLOGY
Subject Code:BTCE-311A/302 (RP)
Paper ID: M118
(2015 batch onwards)

Time allowed: 3 Hrs **Max Marks: 60**

Important Instructions:

- **All questions are compulsory**
- **Assume any missing data**

PART - A (10 × 2 = 20)

Q 1.

a) Explain the term "Weathering of Rocks".
b) What do you understand by River Meandering.
c) What is meant by the process of Metamorphism.
d) For what purpose Unconfined Compressive Test is used.
e) What are the typical characteristics of "S" waves.
f) What do you mean by dip and strike in a rock strata.
g) What do you understand by Fault Plane.
h) Explain the term "Oases".
i) Explain the phenomenon of Recording of Earthquakes.
j) What do you mean by Plunging Folds.

PART - B (5 × 8 = 40)

Q 2. What is an earthquake. Explain the causes of earthquakes. How an earthquake is recorded.

Or

Explain the characteristics of different types of waves produced during an earthquake. Also discuss the classification of earthquakes. [CO1]

Q 3. Write a brief note on "Joints in rocks, their causes and effects on the engineering quality of rocks".

Or

What are folds. Describe different types of folds along with their neat sketches. [CO2]

Q 4. Explain important physical properties of minerals that are commonly studied for their identification.

Or

What do you mean by rock quality designation (R.Q.D.). Explain with the help of suitable example. How rock classification is done on the basis of rock quality designation. [CO3]

Q 5. What is the necessity of in-situ tests. Explain about uniaxial load test in tunnels and open excavation.

Or

a) Describe with the help of neat sketch Pressure Tunnel Test to determine the engineering properties of rock mass.

b) Explain the phenomenon of rock bolting in detail. [CO4]

Q 6. Give an account of geological work of wind explaining briefly some major geological features produced by this agency on the land surface due to erosion and deposition.

Or

Discuss the geological requirements and investigations to be carried out for a dam site. [CO1]