

Model Question Paper SET3
Paper : MJ8 (ENGINEERING GEOLOGY)
Subject : Geology

Full Marks: 75

Time: 3 hours

Group A

(Short answer-type compulsory questions)

Q1. Fill in the blanks: [5x1=5]

- a) Grouting is used to reduce _____
- b) GSI stands for _____.
- c) Earthquakes occur due to sudden release of _____
- d) The Himalayas are highly prone to _____
- e) RQD stands for _____

Q2. Discuss unified soil classification with diagram . [5]

Q3. Describe Geological Investigations for Tunnel Construction. [5]

Group B [4 X 15]

Answer any four

(Subjective/ Descriptive questions)

Q4. Explain foundation treatment methods with special reference to grouting, rock bolting, and other support systems.

Q5. Explain the physical and engineering properties of soils important in civil engineering.

Q6. Describe the Tunneling Quality Index (Q-system). Explain its significance in tunnel design

Q7. Explain the construction methodology and applications of Tunnel Boring Machines (TBM).

Q8. Explain the geotechnical and environmental impacts associated with dam construction

Q9. Write the petrographic characteristic of any 3 of the following rocks:

- i. Grouting
- ii. Rock Mass Rating (RMR)
- iii. Fore Poling method.
- iv. Types of dams.
- v. Geological Considerations for Road Construction in Hilly Areas.

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