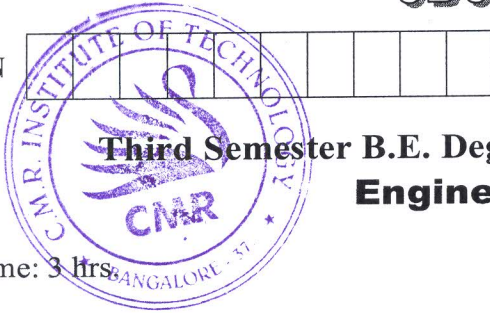


# CBCS SCHEME

USN



18CV36

**Third Semester B.E. Degree Examination, June/July 2023**

## **Engineering Geology**

Time: 3 hrs

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain the parts of the interior of the earth with neat sketches. (12 Marks)
- b. Describe the role of Engineering Geology in the field of Civil Engineering projects. (08 Marks)

**OR**

- 2 a. Critically examine the difference between the Rock forming minerals and arc forming minerals. (06 Marks)
- b. Differentiate between Lustre and Diaphaneity with examples. (04 Marks)
- c. Explain the physical properties of the following minerals and mention their uses:  
i) Quartz      ii) Calcite      iii) Magnetite (10 Marks)

### Module-2

- 3 a. What are Igneous rocks? How are they formed and classify the different types of Igneous rocks based on their mode of origin. (10 Marks)
- b. Describe the different types of concordant Igneous Intrusion with neat sketches. (10 Marks)

**OR**

- 4 a. Explain the origin, mineralogical composition, crushing strength, structure and mention their uses:  
i) Granite    ii) Basalt    iii) Sandstone    iv) Gneiss (12 Marks)
- b. Briefly explain the classification of soil profile with neat sketches. (04 Marks)
- c. Explain the characteristics of rocks as materials for construction. (04 Marks)

### Module-3

- 5 a. What are joints classify different types of joints with neat sketches and mention their engineering uses. (10 Marks)
- b. Describe the different types of uncertainty with neat sketches and mention the engineering considerations. (10 Marks)

**OR**

- 6 a. Explain the parts of the dam with neat sketches? Which are the preventive measures have to be taken for the selection of Dam site. (10 Marks)
- b. Explain the Rock Quality determination and rock structural ratings. (04 Marks)
- c. Differentiate between the strike Dip and Outcrops in the field how are they useful in civil engineering applications? (06 Marks)

### Module-4

- 7 a. With neat sketches describe the confined and unconfined aquifers. (12 Marks)
- b. Explain Hydrological cycle with neat sketches. (08 Marks)

OR

- 8 a. Describe the vertical distribution of ground water with neat sketches. (08 Marks)  
b. Explain the ground water exploration by using Electrical resistivity method. (08 Marks)  
c. Explain the uses of porosity and permeability in ground water exploration. (04 Marks)

**Module-5**

- 9 a. What is Earthquake? Explain the types, causes and effects. (10 Marks)  
b. Explain Tsunami causes and effects. (05 Marks)  
c. What are Landslides and explain causes and effects. (05 Marks)

OR

- 10 Describe the following :  
a. Topographic maps  
b. Remote Sensing  
c. GIS  
d. Impact of Mining and Quarrying (20 Marks)

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