

# CBCS SCHEME



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15CV/CT35

Third Semester B.E. Degree Examination, Feb./Mar. 2022

## Engineering Geology

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Explain the role of Geology in the field of Civil Engineering. (06 Marks)
- b. Explain the internal structured composition of the Earth, with neat sketch. (06 Marks)
- c. Describe the Physical properties, Chemical composition and uses of the following minerals  
i) Transparent Quartz ii) Orthoclase Feldspar. (04 Marks)

OR

- 2 a. What is a Mineral? Describe the following physical properties of a mineral :  
i) Luster ii) Cleavage iii) Streak. (08 Marks)
- b. What is Ore Mineral? Describe Physical properties and Chemical composition and Industrial uses of following minerals : i) Hematite ii) Gypsum iii) Bauxite. (08 Marks)

### Module-2

- 3 a. Write the Engineering properties of Rocks. (06 Marks)
- b. Which of these rocks suitable for I) Concrete aggregate and II) Cladding. Explain?  
i) Gneiss ii) Quartzite iii) Basalt iv) Slate v) Marble. (06 Marks)
- c. Write Mineral Composition and uses of the following rocks : i) Granite ii) Dolerite (04 Marks)

OR

- 4 a. What are Sedimentary Rocks? Write primary structure of Sedimentary rocks. (10 Marks)
- b. Write the mineral composition and uses of the following rocks :  
i) Sand stone ii) Slate iii) Lime stone iv) Shale. (06 Marks)

### Module-3

- 5 a. Define Weathering. Explain different types of Weathering. (06 Marks)
- b. Explain different types of drainage patterns. (06 Marks)
- c. Define Normal fault and Reverse fault. (04 Marks)

OR

- 6 a. What is an Earthquake? Explain its causes and effects. (06 Marks)
- b. What is Tsunami? Explain causes and effects. (04 Marks)
- c. Explain various Geological considerations required during selection of site for Dam. (06 Marks)

### Module-4

- 7 a. Explain Hydrological cycle with neat sketch. (04 Marks)
- b. Explain Confined and Unconfined aquifers. (04 Marks)
- c. Describe how the ground water is explored by Electrical Resistivity method. (08 Marks)

OR

1 of 2

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

- 8 a. Explain various methods of Artificial Recharge of Groundwater. (06 Marks)  
b. Explain Porosity and Permeability. (04 Marks)  
c. Describe the following : (06 Marks)  
i) Spring ii) Artesian well iii) Cone of depression.

**Module-5**

- 9 a. What is Remote Sensing? Write its applications in Civil Engineering. (06 Marks)  
b. What is GPS? Write the uses of GPS. (04 Marks)  
c. What is GIS? Write different components of GIS. (06 Marks)

OR

- 10 a. Explain Environmental impact by mining and quarrying. (06 Marks)  
b. What is a Land set Imageries? Write its uses in Civil Engineering. (06 Marks)  
c. Explain Topographic map and its uses. (04 Marks)

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