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18CV36

**Third Semester B.E. Degree Examination, Feb./Mar. 2022**  
**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. Using diagrams and explanation, describe the Internal Structure and Composition of Earth. (10 Marks)  
b. Write the Physical properties, Chemical composition and uses of Feldspar group of Minerals. (06 Marks)  
c. Differentiate between Rock Forming Mineral and Ore Mineral. (04 Marks)

**OR**

- 2 a. Discuss the relevance of Geology in Civil Engineering Profession. (08 Marks)  
b. Using appropriate examples from the Mineral Kingdom, describe the physical properties of Minerals. (08 Marks)  
c. Differentiate between Calcite and Magnetite. (04 Marks)

**Module-2**

- 3 a. Mention the Mineralogical composition texture, Origin and uses of  
i) Granite ii) Sandstone iii) Marble iv) Shale. (08 Marks)  
b. Explain any three types of Drainage patterns. (06 Marks)  
c. With neat sketch, explain the Soil profile. (06 Marks)

**OR**

- 4 a. Give a detailed account of Structure of Sedimentary Rocks. (08 Marks)  
b. Explain the types of Metamorphism. (06 Marks)  
c. Explain the types of Physical Weathering. (06 Marks)

**Module-3**

- 5 a. Give a detailed classification of folds and their Engineering considerations. (08 Marks)  
b. Differentiate between Horst and Graben. (06 Marks)  
c. List the various Coastline Protection Structures. (06 Marks)

**OR**

- 6 a. Describe the different types of the joints and mention their Engineering considerations. (08 Marks)  
b. Give the detailed account of types of Unconformities. (06 Marks)  
c. Write short note on Rock Quality Designation. (06 Marks)

**Module-4**

- 7 a. Give an account of vertical distribution of groundwater. (06 Marks)  
b. Write short note on Flood Control measures. (06 Marks)  
c. Give the detailed account of types of Aquifers. (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. Give an account of the procedure for Seismic Refraction Survey method for Groundwater Exploration. (10 Marks)  
b. Give a detailed account of methods of Artificial Groundwater recharge. (10 Marks)

**Module-5**

- 9 a. Write the causes and effects of Earthquakes. (08 Marks)  
b. Write the short note on Seismic Zones of India. (06 Marks)  
c. Write a Short note on Tsunami. (06 Marks)

**OR**

- 10 a. Explain the application and limitations of Remote Sensing Techniques. (08 Marks)  
b. Explain the components of GIS. (06 Marks)  
c. Enumerate the applications of Global Positioning System. (06 Marks)

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