

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

December 2023 Supplementary Examinations

Programme: B.E.

Branch: Civil Engineering

Course Code: 22CV3ESEGY

Course: Engineering Geology

Semester: III

Duration: 3 hrs.

Max Marks: 100

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

- 1 a) Analyze the Earth's Internal Structure based on density of different layers with a representative diagram **09**
- b) Explain the physical property "Hardness" and list out the Mohr's hardness scale **05**
- c) Discuss the Physical properties of the following minerals **06**
 - Calcite
 - Hematite

UNIT - II

- 2 a) Explain the Forms of Occurrence of Igneous rocks (Any Five forms) **09**
- b) Explain the rock cycle with examples of types of rocks **06**
- c) Discuss the physical properties of the following rocks **05**
 - Granite
 - Quartzite

OR

- 3 a) Explain the various types of metamorphism **06**
- b) Discuss the various application of rocks in Construction industry **06**
- c) Explain the different textures of igneous rocks and structures of Metamorphism **08**

UNIT - III

- 4 a) Explain the causes and effects of earthquake **08**
- b) Discusses the concept of Plate Tectonics **08**
- c) Explain the causes of landslides **04**

UNIT - IV

- 5 a) Explain the fault terminologies with a representative diagram **08**

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

- b) Discuss the following terminologies in brief **06**
- Dip
 - Strike
 - Clinometer
- c) A coal seam is dipping at an angle of 55° and width of the outcrop is 250 meters. Find the Vertical thickness and True thickness **06**

UNIT – V

- 6 a) Explain the occurrence of Ground water in different geological formations. **06**
- b) Discuss the Electrical Resistivity method of ground water exploration. **08**
- c) Explain the different techniques of artificial ground water recharge. **06**

OR

- 7 a) Explain the aquifers and differentiate the types of aquifers with a representative diagram **10**
- b) Explain the importance of ground water and challenges in Exploration of Ground water **05**
- c) Discuss the following along with their applications **05**
- Toposheets
 - GPS
