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

Autonomous Institute Affiliated to VTU

December 2023 Supplementary Examinations

Programme: B.E.

Semester: III

Branch: Civil Engineering

Duration: 3 hrs.

Course Code: 22CV3ESEGY

Max Marks: 100

Course: Engineering Geology

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 <ul style="list-style-type: none"> • Calcite • Hematite 	06

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 <ul style="list-style-type: none"> • Granite • Quartzite 	05

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
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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
