

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

Autonomous Institute Affiliated to VTU

August 2024 Supplementary Examinations

Programme: B.E.

Semester: III

Branch: Civil Engineering

Duration: 3 hrs.

Course Code: 19CV3ESGEO

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	CO	PO	Marks
1	a)	Describe the Internal structure and composition of the earth with labeled sketch.		<i>CO 1</i>	<i>PO1</i>	10
	b)	What is Mineral? Explain types of Minerals.		<i>CO 1</i>	<i>PO1</i>	06
	c)	Write physical properties, chemical composition and uses of any two minerals. (i) Orthoclase (ii) Hornblende (iii) Galena		<i>CO 1</i>	<i>PO1</i>	04
			UNIT - II			
2	a)	Explain Rock cycle with diagram.		<i>CO 1</i>	<i>PO1</i>	06
	b)	Discuss origin, classification and forms of igneous rocks.		<i>CO 1</i>	<i>PO1</i>	07
	c)	What is Metamorphism? Explain factors affecting on Metamorphism.		<i>CO 1</i>	<i>PO1</i>	07
			OR			
3	a)	Explain the primary structures of Sedimentary rock		<i>CO 2</i>	<i>PO1</i>	07
	b)	Explain classification of Igneous rocks based on depth of origin & silica percentage.		<i>CO 2</i>	<i>PO1</i>	07
	c)	Describe the rock properties and uses of the following. (i) Gabbro (ii) Diorite (iii) Basalt		<i>CO 2</i>	<i>PO1</i>	06
			UNIT - III			
4	a)	What is an Earthquake? Describe the tectonic causes of Earthquake and write a note on effect of Earthquake.		<i>CO 2</i>	<i>PO1</i>	10
	b)	Discuss the geological conditions for selecting site for reservoir construction.		<i>CO 2</i>	<i>PO1</i>	05
	c)	Discuss briefly causes and precautions during Avalanche.		<i>CO 2</i>	<i>PO1</i>	05
			OR			

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.

5	a)	Describe different engineering properties of rocks?	CO 3	PO1	07
	b)	Explain the feasibility of tunnel under faulted and jointed regions.	CO 3	PO1	07
	c)	Describe the geological factors to be considered in the selection of dam site.	CO 3	PO1	06
UNIT - IV					
6	a)	Explain the terms outcrop, folds, dip and strike.	CO 3	PO1	08
	b)	What is Joint? Explain types of joints.	CO 3	PO1	06
	c)	Explain the following types of faults with neat sketch. (i) Normal fault (ii) Reverse fault (iii) Step fault	CO 4	PO1	06
UNIT - V					
7	a)	Discuss confined and unconfined aquifer.	CO 4	PO1	06
	b)	Explain the following properties of aquifer. (i) Specific yield (ii) Specific Retention	CO 4	PO1	04
	c)	Write a brief note on artificial recharge of ground water.	CO 3	PO1	04
	d)	Explain Electrical Resistivity method for ground water exploration	CO 4	PO1	06
