

U.S.N.							
--------	--	--	--	--	--	--	--

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

Autonomous Institute Affiliated to VTU

January / February 2025 Semester End Main Examinations

Programme: B.E.

Semester: III

Branch: Civil Engineering

Duration: 3 hrs.

Course Code: 23CV3ESENG / 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			CO	PO	Marks
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.	1	a)	With suitable sketch explain the internal structure and composition of the Earth.			CO1	PO1	10
		b)	Enumerate the applications of Geology in Civil Engineering projects.			CO1	PO1	5
		c)	Give a note on Mineral classification.			CO1	PO1	5
	OR							
	2	a)	Discuss any five physical properties of Minerals.			CO1	PO1	10
		b)	Comment on industrial applications of Minerals.			CO1	PO1	5
		c)	Describe quartz group of minerals.			CO1	PO1	5
	UNIT - II							
	3	a)	Discuss classification of Rocks with suitable examples.			CO1	PO1	10
		b)	Write a note on textures of Igneous rocks.			CO1	PO1	5
		c)	Explain Sedimentary rocks with examples.			CO1	PO1	5
	OR							
	4	a)	Define rock weathering. Discuss the types of weathering.			CO1	PO1	10
		b)	Discuss the applications of rocks in Civil engineering works.			CO1	PO1	5
		c)	Comment on factors to be considered for dam selection.			CO1	PO1	5
UNIT - III								
5	a)	Discuss the causes and impacts of plate tectonics.				CO2	PO1	10

	b)	Explain the cause and types of Landslides.	CO2	PO1	5
	c)	Explain the how to recognize faulting at the field.	CO2	PO1	5
OR					
6	a)	Define an Earthquake. Comment on seismic waves.	CO2	PO1	10
	b)	How landslides are caused? Explain the preventive measures of Landslide	CO2	PO1	5
	c)	Write a note on Seismic Zones of India.	CO2	PO1	5
UNIT - IV					
7	a)	Explain the term dip and strike and solve the following problem. The apparent dips were recorded in a sand stone quarry namely 1:5 due S 200 E and 1: 11 due N 600 E. Find the direction and amount of true dip. Scale 1 cm = 1 Unit	CO3	PO1	10
	b)	Discuss the significance of Throw and Heave.	CO3	PO1	5
	c)	Give any three differences between Folds and Faults.	CO3	PO1	5
OR					
8	a)	Differentiate between Joints and Faults.	CO3	PO1	10
	b)	Enumerate the importance of folds in tunneling.	CO3	PO1	5
	c)	Discuss the significance of faults in dams and bridges.	CO3	PO1	5
UNIT - V					
9	a)	Explain with neat sketches the vertical distribution of ground water.	CO4	PO1	10
	b)	Explain the term Porosity, Permeability and Transmissibility.	CO4	PO1	5
	c)	Comment on Artificial recharging of groundwater.	CO4	PO1	5
OR					
10	a)	Explain Electrical resistivity method for groundwater exploration.	CO4	PO1	10
	b)	Differentiate between Confined and Unconfined Aquifers.	CO4	PO1	5
	c)	Enumerate the importance of Topo sheet studies in civil engineering practices.	CO4	PO1	5
