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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: 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.

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.			UNIT - I	CO	PO	Marks
	1	a)	Describe importance of Engineering Geology in the planning and execution field of civil Engineering projects.	CO1	PO1 PO2	10
		b)	Explain with a neat sketch the internal structure and composition of the Earth.	CO1	PO1 PO2	10
			OR			
	2	a)	Define a Minerals? Explain the following physical properties of minerals with suitable examples. (i) Habit/Form (ii) Streak (iii) Hardness (iv) Diaphaneity	CO1	PO1 PO2	10
		b)	Write the Chemical composition and uses of the following minerals. (i) Orthoclase (ii) Pyrite (iii) Magnetite (iv) Calcite	CO1	PO1 PO2	10
			UNIT - II			
	3	a)	Describe the formation process of igneous rocks? Write the index properties of any two the following rocks. (i) Basalt (ii) Limestone (iii) Gneiss	CO1	PO1 PO2	10
		b)	Define Sedimentary rocks? Explain with neat sketches the primary structure of Sedimentary rocks.	CO1	PO1 PO2	10
			OR			
	4	a)	Define metamorphism? Mention the agents of metamorphism. Describe the kinds of metamorphism with rock example.	CO1	PO1 PO2	10
		b)	Describe the process of Weathering? Explain the types of weathering.	CO1	PO1 PO2	10

			UNIT - III			
5	a)	Define a Dam? Explain in detail the geological investigation of a good dam site.	CO2	PO1 PO2	10	
	b)	Discuss the scope and objectives of Tunnel? Describe the geological consideration for successful tunneling.	CO2	PO1 PO2	10	
		OR				
6	a)	Define Earthquake? Explain the causes and effects of earthquakes.	CO2	PO1 PO2	10	
	b)	How landslides are caused? Explain the preventive measures of Landslide.	CO2	PO1 PO2	10	
		UNIT - IV				
7	a)	Explain the phenomenon of Folding? Draw a neat diagram of the folds and describe the different parts.	CO2	PO1 PO2	10	
	b)	Explain the different types of folds base on position of axial plane and angle of limbs.	CO2	PO1 PO2	10	
		OR				
8	a)	Describe the term of Faulting? Explain with neat sketches the different parts of faults. Add a note on Horst and Graben fault.	CO2	PO1 PO2	10	
	b)	Define Joints? Explain different types of joints.	CO2	PO1 PO2	10	
		UNIT - V				
9	a)	Explain with neat sketches the vertical distribution of ground water.	CO3	PO1 PO2	10	
	b)	Define an Aquifers? Explain With neat sketch types of Aquifers.	CO3	PO1 PO2	10	
		OR				
10	a)	Explain groundwater investigation by Electrical Resistivity method (VES).	CO4	PO1 PO2	10	
	b)	Describe the methods adopted for artificial recharge of ground water,	CO4	PO1 PO2	10	
