U.S.N.										

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

Autonomous Institute Affiliated to VTU

April 2024 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.

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)	i)What is Geology? With neat diagram discuss the internal structure of the Earth. ii)Describe the physical properties, chemical composition and uses of the following minerals: Quartz , Haematite	*CO*1	*PO1*	**05** **05**
	b)	Explain i) Moh's Scale of Hardness with their Chemical Composition ii) Describe physical properties: Diaphaneity and Cleavage in minerals with examples	*CO*1	*PO1*	**05** **05**
		UNIT - II			
2	a)	i)Define Igneous rocks. Classify igneous rocks on the basis of mode of origin and silica content ,with diagram ii) Define metamorphism. Describe the different agents of metamorphism	*CO*1	*PO1*	**05** **05**
	b)	i)Describe the texture in Igneous Rocks Discuss briefly types of textures found in igneous rocks ii)Illustrate the primary structures in sedimentary rocks.	*CO*2	*PO2*	**05** **05**
		OR			
3	a)	What is weathering? Enumerate the various mechanisms of weathering. Describe chemical weathering	*CO*2	*PO2*	**10**
	b)	Draw a sketch of Rock cycle. Define Sedimentary rocks? Give classification of sedimentary rocks based on Grain size and mode of origin.	*CO*2	*PO2*	**10**
		UNIT - III			
4	a)	i) What is an Earth Quake? Define Focus and Epicenter of Earth Quake with sketch. ii) Explain the engineering properties of good building stones.	*CO*2	*PO2*	**05** **05**

		b)	i)What is a land slide? Draw and Explain slump, rock slides and rock fall ii) Illustrate the causes and remedial measures to control of landslides	***CO***2	***PO2***	**08** **02**
			UNIT - IV			
	5	a)	(i) The apparent dips were recorded in a sand stone quarry namely 1:5 due S 20^0 E and 1:11 due N60^0E. find the direction and amount of true dip. **Scale 1cm = 1unit** (ii) Discuss briefly the geological consideration in selecting the suitable site for the construction of a dam.	***CO*** 3	***PO2***	**06** **04**
		b)	i) Illustrate the phenomenon of faulting with a neat sketch. Describe any five types of faults ii) How do you recognize faulting at the field?	***CO*** 3	***PO2***	**08** **02**
			OR			
	6	a)	i) Define joints. Explain its types ii) Explain the feasibility of tunneling operation through folded and faulted strata	***CO*** 3	***PO3***	**04** **06**
		b)	What are folds? Classify any five types of folds and explain recognition of folds in field.	***CO*** 4	***PO2***	**10**
			UNIT - V			
	7	a)	i)What is an aquifer? Explain the confined and unconfined aquifer with sketch ii) Discuss geological criteria for site selection of a well	***CO*** 4	***PO3***	**06** **04**
		b)	Explain the techniques for identification of ground water potential zones and add a note on VES method for sub-surface investigation.	***CO*** 4	***PO3***	**10**

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