

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Sixth Semester

Civil Engineering

AG3601 - Engineering Geology

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Define weathering.	RE	1	2
2.	State plate tectonics.	UN	1	2
3.	List any two chemical properties of common rock forming minerals.	RE	2	2
4.	Write the physical properties of quartzite.	UN	2	2
5.	Infer fault in rocks.	UN	3	2
6.	What is the importance of geological strength index?	RE	3	2
7.	Extend few uses of geological mapping techniques.	UN	4	2
8.	Outline the basic principle of ground penetrating radar.	UN	4	2
9.	Summarize the geological conditions necessary for the construction of tunnels.	UN	5	2
10.	List any four methods to prevent landslides.	RE	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Explain briefly about the internal structure of earth.	UN	1	13
	Or			
	b Outline the concept of plate tectonics and explain about the natural causes of earthquakes and their effects.	UN	1	13
12.	a Explain about the formation of Igneous, Sedimentary and Metamorphic rocks.	UN	2	13
	Or			
	b Describe the origin, texture, structure, and occurrence of granite, marble, and sandstone rocks.	UN	2	13
13.	a Identify the causes of faults and discuss the effects on the engineering quality of rocks.	UN	3	13
	Or			
	b Describe any two Geo-mechanical classification systems based on their importance in various civil engineering projects.	UN	3	13

14.	a	Examine the role of remote sensing in geological mapping.	AP	4	13
		Or			
	b	Explain the various geophysical methods to investigate sub-surface features.	AP	4	13
15.	a	Discuss on the geological factors to be considered for constructing dams.	UN	5	13
		Or			
	b	Explain in detail about various coastal protection structures.	UN	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Explain the adverse effects of weathering of rocks in detail with a case study.	AP	1	15
		Or			
	b	Interpret the causes and mitigation of Earthquakes with an example.	AP	5	15