

USN 

--	--	--	--	--	--	--	--	--	--

Course Code 

2	1	C	V	3	4
---	---	---	---	---	---

**Third Semester B.E. Degree Examinations, March/April 2023**  
**ENGINEERING GEOLOGY**

Duration: 3 hrs

Max. Marks: 100

- Note:* 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO: PI)</u>
<b><u>MODULE – 1</u></b>			
1.	a. Explain different branches of geology.	10	(2 :1: 1.2.1)
	b. With a neat labelled diagram, explain detailed internal structure and composition of the earth.	10	(3 :1: 1.2.1)
<b>OR</b>			
2.	a. Explain briefly the physical properties which are helpful to identify the minerals.	10	(2 :1: 2.2.2)
	b. Write the physical properties, composition and uses of following minerals. i. Quartz ii. Calcite iii. Orthoclase Feldspar iv. Asbestos	10	(2 :1: 2.2.2)
<b><u>MODULE – 2</u></b>			
3.	a. What are Igneous rocks? Describe different types of Igneous rocks.	08	(2 :2: 1.2.1)
	b. What is Metamorphism? Explain types of Metamorphism with neat sketch.	06	(3 :2: 1.2.1)
	c. With neat sketch, explain structures of sedimentary rocks.	06	(3 :2: 2.2.2)
<b>OR</b>			
4.	a. What is weathering? Explain types of weathering.	08	(2 :2: 1.2.1)
	b. What is soil? With a neat sketch describe soil profile.	06	(3 :2: 1.2.1)
	c. What is landform? With neat sketches explain Aeolian landforms.	06	(3 :2: 1.2.1)
<b><u>MODULE – 3</u></b>			
5.	a. Mention the engineering consideration of Fold, Fault, Joints and Unconformities.	08	(2 :3: 1.2.1)
	b. What are Tunnels? Explain important geological factors taken into account while tunnelling.	08	(2 :3: 1.2.1)
	c. Explain the importance of folds in civil engineering structures.	04	(2 :3: 1.2.1)
<b>OR</b>			
6.	a. With neat sketch, explain dip and strike.	06	(3 :3: 1.2.1)
	b. What is dam? Explain geological consideration in selecting a suitable site for construction of dam.	08	(3 :3: 1.2.1)
	c. What are Joints? With a neat labelled diagram explain types of Joints.	06	(3 :3: 1.2.1)

**MODULE – 4**

7. a. Briefly explain hydrological cycle. **06** (3 :4: 1.2.1)  
b. Define Aquifer. Explain types of aquifers with neat sketch. **08** (2 :4: 1.2.1)  
c. With neat sketch, explain zone of aeration and zone of saturation. **06** (3 :4: 1.2.1)

**OR**

8. a. Explain in detail ground water exploration by electrical resistivity method. **10** (3 :4: 2.2.2)  
b. Explain artificial recharge of ground water by various methods. **06** (2 :4: 1.2.1)  
c. Explain sea water intrusion and its remedies. **04** (2 :4: 1.2.1)

**MODULE – 5**

9. a. Write a short note on; **20** (2 :5: 1.2.1)  
i. Earthquake  
ii. Tsunami  
iii. Landslides  
iv. Cyclone  
v. Impact of mining on environment

**OR**

10. a. Discuss the application of Remote sensing and GIS technique in civil engineering projects. **12** (2 :5: 3.2.1)  
b. Write a short note on; **08** (2 :5: 3.2.1)  
i. Topographic maps  
ii. Contour maps

\*\* \*\* \*