



R22 Regulation

Subject code: 4B44A

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech IV Semester Regular/Supplementary Examinations, April 2025

ENGINEERING GEOLOGY

(Civil Engineering)

Maximum Marks: 60

Date: 28.04.2025

Duration: 3 hours

Note: 1. This question paper contains two parts A and B.

2. Part A is compulsory and carries 10 marks. Answer all questions in Part A.

3. Part B consists of 8 lists. Answer any six full questions from each list.

4. Each question carries 10 marks and may have a, b, c, d as sub-questions.

Part-A

All the following questions carry 4 marks each

(10X10=10 Marks)

Marks	CO	Blom Tx
1M	1	L2
1M	1	L2
1M	2	L2
1M	2	L2
1M	3	L2
1M	3	L2
1M	3	L2
1M	4	L2
1M	5	L2
1M	5	L2

1.a) What is meant by Hutton?

b) Write what is a local scale can do?

c) Distinguish between the diachronous and Allochronous colours of the mineral.

d) Identify the hardness and a specific gravity of the Olivine

e) Distinguish between the primary and secondary.

f) Define con. limestones.

g) Write the difference between true di. and a. di.

h) List the components of Electrical Resistivity Meter.

i) Write what is meant by (10m of tunnel)?

List the significance of Upstream dipped strata and Downstream dipped

j) strata of the down dip.

Part-B

Answer All the following questions.

(5X10=50 Marks)

Marks	CO	Blom Tx
5M	1	L2
5M	1	L2
5M	1	L2
5M	1	L2
5M	2	L2
5M	2	L2
5M	2	L2

1. a. Classify the branches of geology? How would you explain the significance of structural geology in the field of civil engineering?

2. b. Explain briefly, the case histories of construction failures due to soil local draw backs.

OR

1. a. Explain the significance of weathering of rocks with reference to dams and reservoirs.

3. b. Explain what is meant by weathering of rocks and classify the types of weathering briefly.

4. a. Summarize the physical properties of Quartz and Anorthite.

4. b. Explain the physical properties and civil engineering significance of Muscovite and Plagioclase.

OR

5. a. Explain the methods of macroscopic study in identification of mineral physical properties.

	b. Explain the physical properties and civil engineering significance of Hematite and Bauxite.	5M	2	L2
6	a. Explain how the textures of igneous rock have been classified. Discuss them briefly.	5M	3	L2
	b. Explain the dykes and skills with a neat sketch.	5M	3	L2
	OR			
7	a. Illustrate with a neat sketch the following structures and textures of sedimentary rocks. i) Ripple Marks ii) Mud Cracks	5M	3	L2
	b. Explain the dykes and skills with a neat sketch.	5M	3	L2
8	a. Explain what is meant by outcrop and illustrate the outcrop width in relation to surface slope with a neat sketch.	5M	4	L2
	b. Explain the seismic zones of India.	5M	4	L2
	OR			
9	a. Explain the types of transported soils.	5M	4	L2
	b. Explain how the movement of groundwater is controls by geology.	5M	4	L2
10	a. Interpret with a neat sketch, the desirable and undesirable considerations of the faulted strata in the selection of a dam site.	5M	5	L2
	b. Explain what are the geological factors influences the water tightness?	5M	5	L2
	OR			
11	a. Interpret with neat sketches, the desirable and undesirable considerations of the folded strata in the alignment of tunnels.	5M	5	L2
	b. Explain what is meant by life of reservoirs and discuss the purpose of tunnels?	5M	5	L2