R22 Regulation *Subject Code: 4E4AA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B. Tech IV Semester Regular/Supplementary Examinations, June 2026

ENGINEERING GEOLOGY

(CE)

Maximum Marks: 60 Date: 08.06.2026 Duration: 3 hours

Note:
1. **This question paper contains two parts A and B.**
2. **Part A is compulsory which carries 10 marks. Answer all questions in Part A.**
3. **Part B consists of 5 Units. Answer any one full question from each unit.**
4. **Each question carries 10 marks and may have a, b, c, d as sub questions.**

Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	Bloom Tx
1.a)	Define weathering.	1M	1	L1
b)	What is physical geology?	1M	1	L1
c)	Define mineral.	1M	2	L1
d)	Name any two rock forming minerals.	1M	2	L1
e)	Define igneous rocks.	1M	3	L1
f)	Differentiate magma and lava.	1M	3	L1
g)	Define dip angle.	1M	4	L1
h)	What is meant by outcrop?	1M	4	L1
i)	Define water table.	1M	5	L1
j)	What is tunnel lining?	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
2	a) Explain the importance of geology in civil engineering with suitable examples. b) Explain effects and importance of weathering of rocks with reference to dams and tunnels	5M 5M	1	L2
	OR			
3	a) Write a note on geological work of river. b) Explain the process of Weathering in Granite.	5M 5M	1	L2
4	Describe the physical properties of minerals (i)Quartz (ii)Hematite	5M 5M	2	L2
	OR			
5	Define the following terms: i) Hardness, ii) Luster, iii) Fracture, iv) Cleavage, v) Optical property	(2X5M) = 10M	2	L2
6	a) Write the megascopic and microscopic features of the rock. b) What are the types of Granite?	5M 5M	3	L1

	OR			
7	a) Write petrographic characteristics of sedimentary rocks i) Sandstone ii) Shale b) What is metamorphic rock? Write the texture and structure of the metamorphic rock?	5M 5M	3	L2
8	a) Effects enumerate the classification and causes of landslides. b) How are folds classified? Describe different types of folds.	5M 5M	4	L3
	OR			
9	a) What is the difference between free ground water and artesian water? b) Explain the various properties and functions of an aquifer.	5M 5M	4	L2
10	a) Explain geological considerations for successful reservoirs. b) Explain geological considerations in selection of dam sites.	5M 5M	5	L2
	OR			
11	a) Explain engineering geological considerations involved in tunneling. b) Discuss purposes of tunneling and role of geology in tunnel lining.	5M 5M	5	L3