



Roll No:

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

BTECH
(SEM V) THEORY EXAMINATION 2024-25
ENGINEERING GEOLOGY

TIME: 3 HRS

M.MARKS: 70

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1. Attempt all questions in brief.

2 x 07 = 14

Q no.	Question	CO	Level
a.	What are the major branches of geology that contribute to civil engineering?	1	K1
b.	Explain the role of mineralogy in civil engineering projects.	1	K1
c.	What are the basic physical properties of minerals?	2	K1
d.	What is an outcrop, and how is it related to the topography of an area?	3	K2
e.	Explain the process of erosion and its effect on rock formations.	3	K1
f.	What is the significance of a geological survey in site selection for bridges?	4	K1
g.	Explain the concept of an artesian well and its importance in water management.	5	K1

SECTION B

2. Attempt any three of the following:

07 x 3 = 21

a.	Describe the structure and texture of igneous rocks. How do these properties affect their use as building materials?	1	K2
b.	Explain the classification of faults and how each type influences construction activities.	2	K2
c.	Discuss the process and causes of landslides and their preventive measures in hilly regions.	3	K2
d.	Explain the significance of the dip and strike of beds in geological mapping and its application in civil engineering.	4	K2
e.	Discuss the role of the Geological Survey of India (GSI) and NIRM in geological investigations in India.	5	K3

SECTION C

3. Attempt any one part of the following:

07 x 1 = 07

a.	Explain how the classification of rocks based on texture and origin helps in their selection for engineering purposes.	1	K2
b.	Discuss the process of weathering and the factors that influence it, especially in the context of construction.	1	K3

4. Attempt any one part of the following:

07 x 1 = 07

a.	Describe the types of folds found in rock formations and explain their impact on construction stability.	2	K2
b.	Discuss the geological considerations for selecting a site for a reservoir, focusing on the factors related to the underlying rock and soil.	2	K3

5. Attempt any one part of the following:

07 x 1 = 07

a.	What is the significance of studying rock deformation for civil engineers, particularly in earthquake-prone regions?	3	K2
----	--	---	----



PAPER ID-310890

Printed Page: 2 of 2
Subject Code: BCE054

Roll No:

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

BTECH
(SEM V) THEORY EXAMINATION 2024-25
ENGINEERING GEOLOGY

TIME: 3 HRS

M.MARKS: 70

b.	Explain the geophysical exploration methods used for investigating subsurface structures.	3	K3
----	---	---	----

6. Attempt any one part of the following:

07 x 1 = 07

a.	Define the term "aquifer" and discuss its role in groundwater management. Provide examples.	4	K2
b.	Explain the classification of seismic zones in India and their relevance to construction practices.	4	K3

7. Attempt any one part of the following:

07 x 1 = 07

a.	Discuss the engineering properties of common building stones and their suitability for use in large-scale projects like dams and bridges.	5	K2
b.	Explain the concept of unconformities in geology and their relevance in geological hazard assessment.	5	K3

QP25DP1_290
| 25-Jan-2025 9:17:36 AM | 117.55.242.132