



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Regular/Supplementary) - July, 2021

Regulation: R18

ENGINEERING GEOLOGY

Time: 3 Hours

(CE)

Max Marks: 70

Answer FIVE Questions choosing ONE question from each module
(NOTE: Provision is given to answer TWO questions from any ONE module)

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

MODULE – I

1. (a) Discuss the various branches of geology and its scope. How the geology is useful for civil engineers? [7M]
(b) Explain difference between physical and chemical weathering process in detail. Categorize weathering grade and its engineering significance. [7M]
2. (a) Enumerate the primary and secondary minerals with examples. [7M]
(b) Elucidate the process associated with river, wind and sea and describe its engineering significance. [7M]

MODULE – II

3. (a) List the types of volcanic eruptions. Describe the characteristics of different types of magma generated. [7M]
(b) Describe fracture and enlist the types of fracture. [7M]
4. (a) Give the classification of igneous rocks based on chemical composition. Discuss the mode of formation of sedimentary rocks. [7M]
(b) Interpret the significance of different physical properties in mineral identification. [7M]

MODULE – III

5. (a) Write about the superficial deposits and its significance. Discuss the process of meandering in rivers and its complications. [7M]
(b) Describe the civil engineering considerations in seismic areas with reference to building construction. [7M]
6. (a) Write a short notes on solifluction deposits and coastal deposits. Describe the structural geology of rocks. [7M]
(b) List out the types of aquifers. Describe the operation of aquifers in detail. [7M]

MODULE – IV

7. (a) List the various causes and types of landslides. Explain the concept of sliding blocks and how it is controlled? [7M]
(b) Describe the principle of gravity method with the help of a neat sketch and explore the different parameters measured. [7M]
8. (a) Summarize the various causes of earthquake and remedial measures for it. [7M]
(b) Distinguish dams and reservoirs? Describe the purpose of construction of major dams and reservoirs in India. [7M]

MODULE – V

9. (a) Describe role of igneous and metamorphic rocks at the tunnel site. [7M]
(b) What are the various details to be collected before the construction of dam? Explain in detail. [7M]
10. (a) Give the various treatments to be done, if there are discontinuities are present in the dam. [7M]
(b) Discuss the factors to be considered for site selection for a reservoir. [7M]

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