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# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Regular), November – 2020

Regulation: IARE–R18

## ENGINEERING GEOLOGY

(CE)

Time: 2 Hours

Max Marks: 70

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Answer any Four Questions from Part A  
Answer any Five Questions from Part B

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### PART – A

1. How the SEM and XRD used in mineralogy study? [5M]
2. Elaborate the rock forming processes. [5M]
3. Discuss the various types of faults and write about the engineering applications. [5M]
4. What are the causes of earthquake? How to measure the intensity of earthquake? [5M]
5. Discuss about the influence of water table in leakage of reservoir [5M]
6. State that geological survey of India (GSI). [5M]
7. List the various types of igneous rock and explain in detail. [5M]
8. Explain the factors to be considered for successful reservoir? [5M]

### PART – B

9. Describe the various branches of geology useful to civil engineering and mention the purpose of NIRM. [10M]
10. Explain about the importance of physical properties of minerals considered in mineralogy. [10M]
11. Give in detail explanation about sedimentary petrology and its classification. [10M]
12. Discuss about the division of rocks on the basis of depth of formation and its classification? [10M]
13. Describe about the various folds of rocks with neat sketches. [10M]
14. Write a critical essay on weathering and its significance in engineering construction? [10M]
15. Elaborate about rock instability and slope movement. What are the controlling factors of instability. [10M]
16. Briefly explain the origin and occurrence of ground water with pervious and impervious rock strata. [10M]
17. Explain about geological consideration for selection of dam and reservoir site. [10M]
18. Write in details of case histories of Nagarjuna sagar dam with geology of dam construction, geotechnical problems encountered and remedial measure taken up. [10M]

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