

**R16**

Code No: 134AZ

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.Tech II Year II Semester Examinations, May - 2019**

**ENGINEERING GEOLOGY**

**(Civil Engineering)**

**Time: 3 Hours**

**Max. Marks: 75**

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

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

**PART - A**

**(25 Marks)**

- 1.a) Define weathering and denudation. [2]
- b) What is geology? Explain importance of structural geology in civil engineering. [3]
- c) Define columnar structure in igneous rocks. [2]
- d) What is the importance of studies of minerals? [3]
- e) Define strike and dip with neat sketch? [2]
- f) Distinguish between outlier and inliers. [3]
- g) List the causes of landslides. [2]
- h) What are the causes of earthquake? [3]
- i) List the geological factors influencing life of Reservoirs. [2]
- j) List the purposes of dams. [3]

**PART - B**

**(50 Marks)**

2. What are the end product of rock weathering? Explain the properties of rocks importance of weathering with reference to reservoir and dams? [10]
- OR**
3. Discuss the importance of physical geology and petrology. [10]
  4. Define stratification and lamination? Explain classification of sedimentary rocks. [10]
- OR**
5. Write the physical properties of the following: a) Calcite b) Mica group c) Garnet. [10]
  6. Define Ground water and Water table. Explain the geological controls of ground water movement. [10]
- OR**
7. Explain briefly the joints in rocks, their causes and effects on engineering quality of rocks. [10]
  8. Enumerate the two different types of earthquakes and discuss the major types with reference to the causes and the produced waves. [10]
- OR**
9. Explain about Rock mechanics and Environmental geology. [10]

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- 10.a) State and explain the causes of failure of a reservoirs.  
b) Define a dam? Explain types of dams and their geological requirements of dam construction in civil engineering. [5+5]

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- OR**  
11.a) Describe geological considerations for a successful reservoir. [5+5]  
b) Explain engineering geological consideration in tunneling.

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