

**R13**

Code No: 115AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, November/December - 2016

**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, c as sub questions.

**PART - A**

(25 Marks)

- 1.a) Define Weathering and its types. [2]
- b) Mention disadvantage of clay soil. [3]
- c) Mention the physical properties of Quartz. [2]
- d) Discuss the classification of igneous rock. [3]
- e) Differentiate fault zone and shear zone. [2]
- f) List out different causes of Landslide. [3]
- g) Mention the different types of aquifers. [2]
- h) What are the different types of Dams? [3]
- i) What is impact of water table on tunneling? [2]
- j) Discuss different types of tunnels. [3]

**PART - B**

(50 Marks)

- 2.a) With a neat sketch, explain the erosional action of Wind. [5]
  - b) Mention different river erosional processes. [5]
- OR**
- 3.a) With a suitable sketch, explain the rock cycle. [5]
  - b) Give the classification of different types of drainage patterns. [5]
- 4) With Suitable example, explain the physical properties of minerals. [10]
- OR**
- 5.a) Give the physical properties of Mica. [5]
  - b) Draw the mechanical structure of sedimentary rock. [5]
- 6.a) Mention the different classification of earthquake. [5]
  - b) Give the classification of fold depending on its axial plane. [5]
- OR**
- 7.a) Give the detailing of earthquake measurement using seismograph. [5]
  - b) Draw the sketch of different types of fold. [5]

- 8.a) With a suitable sketch, explain the electrical resistivity survey. [5+5]  
b) Mention the seismic survey methods.

**OR**

9. Discuss in detail, different geophysical prospecting methods. [10]

- 10.a) Discuss different purposes of tunneling.

- b) Explain in detail the geological consideration of tunneling. [5+5]

**OR**

- 11.a) Mention the topographical consideration for dam construction and explain.

- b) Mention the advantages of RS and aerial photography for different civil engineering surveying. [5+5]

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