

Code No: 115AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, March - 2017

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) What is tunnel? [2]
- b) What is structural geology? [3]
- c) What are the physical properties of rock? [2]
- d) What is a mineral? [3]
- e) What is Strike and dip? [2]
- f) What is down throw of seam? [3]
- g) What is RQD? [2]
- h) What is porosity? [3]
- i) What is volume loss? [2]
- j) Describe the purposes of tunnelling. [3]

**PART - B**

**(50 Marks)**

2. Write an essay on importance of Geology in Civil Engineering. [10]
- OR**
3. Discuss in detail failure of any dam in India. [10]
- OR**
- 4.a) What is the Sedimentary rock? Write the classification of Sedimentary rocks. [5+5]
- b) What is igneous rock? Explain the classification of igneous rocks. [5+5]
- OR**
- 5.a) What is metamorphic rock? Write the texture and structure of metamorphic rock. [5+5]
- b) What is texture of rock? Describe the texture of igneous rocks. [5+5]
- OR**
- 6.a) What is fold? Write the different types of fold with sketches. [5+5]
- b) State and explain different fault terminology. [5+5]
- OR**
- 7.a) What is Joint? Write the different types of the joints with sketches. [5+5]
- b) Describe the anticline and decline with sketches. List the types of faults. [5+5]
- OR**
8. Describe the following methods with a neat sketch: [5+5]
  - a) Magnetic methods
  - b) Seismic method
- OR**
- 9.a) What are the considerations to be taken for constructing the dam? [5+5]
- b) List the contributing factors for the success of a reservoir. [5+5]

- 10.a) Explain the effect of tunnel on the ground surface with a neat sketch.  
b) What is settlement trough? Describe the settlement trough with a neat sketch. [5+5]
- OR**
11. What is subsidence? Describe the various methods for prevention of subsidence. [10]

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