

END TERM EXAMINATION

THIRD SEMESTER [B.TECH] DECEMBER 2015-JANUARY 2016

Paper Code: ETCE-211

Subject: Engineering Geology

Time: 3 Hours

Maximum Marks: 75

Note: Attempt any five questions including Q.no.1 which is compulsory.
Select one question from each Unit.

- Q1 Answer **any five** from the following: (5x5=25)
- (a) Write in detail about the structure of the earth and its composition with a neat diagram.
 - (b) Define dip and strike.
 - (c) Give an account of the various properties and function of an aquifer.
 - (d) What are the types of land slide? Briefly explain its preventive measures.
 - (e) Define the following:
 - (i) Spheroidal weathering.
 - (ii) Use of stereoscope.
 - (f) Write short notes on engineering significance of joints.

Unit-I

- Q2 Briefly explain the various physical properties which help in identification of minerals. (12.5)
- Q3 (a) Briefly explain the soil profile of residual soil. (4.5)
(b) Explain the physical properties of Mica group of minerals. (8)

Unit-II

- Q4 Describe fault structures with neat sketches and also write their engineering significance with suitable example. (12.5)
- Q5 What is a fold? Describe various type of fold structure with neat sketches and also write their engineering significance. (12.5)

Unit-III

- Q6 (a) Give a brief description of Seismic zone of India. (6)
(b) Define following term: (6.5)
 - (i) L-wave (ii) P-wave (iii) Artesian aquifer
- Q7 (a) Explain the investigation to be carried out in ground water exploration. (6)
(b) Briefly explain the cause and effects of earthquake. (6.5)

Unit-IV

- Q8 What are the Geological Consideration necessary in the selection of a Dam Site? Briefly explain the geological Causes for the Failure of Dams. (12.5)
- Q9 (a) What are the various geological factors to be considered for the construction of tunnels? Explain with suitable example. (6.5)
(b) What are the various geological factors to be considered for the construction of Highway? (6)

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