

**B.Tech. Civil (Water Resources Engineering)  
BTCLEVI / BTMEVI / BTELVI / BTECVI / BTCSVI**

**00665 Term-End Examination**

**June, 2015**

**ET-531(A) : EARTH AND ITS ENVIRONMENT**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Answer any **five** questions. All questions carry equal marks. Well-labelled diagrams will be given due weightage.*

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1. (a) Explain atmospheric stratification and its significance. How are they responsible for different phenomena on the Earth ? 7
- (b) Explain the variations of pressure and temperature with depth inside the Earth. How are these different from variations observed with height on the Earth ? 7
2. (a) Explain various effects of mechanical and chemical weathering of rocks. 7

- (b) What are meanders ? How are these formed ? Explain with the help of a neat sketch. 7
3. (a) How are endogenic earth processes different from exogenic ones ? Explain the characteristics of any one type of earthquake wave. 7
- (b) What are the different types of volcanic eruptions ? Explain the mechanism of occurrence of any one type. 7
4. (a) What do you understand by climate of a place ? Which factors are important in this regard ? 7
- (b) Explain the formation of cloud. Differentiate between high altitude and low altitude clouds. 7
5. (a) What do you understand by orographic features ? Explain the patterns of rainfall over India considering such features. 7
- (b) How are clay mineral groups important for engineers ? Enlist the names of different clay mineral groups and explain the basic features of any one of them. 7

6. (a) Write short notes on any *two* of the following :  $2 \times 3 \frac{1}{2} = 7$

- (i) Global Energy Balance
- (ii) Fold
- (iii) Joints in Rocks

(b) Differentiate between any *two* of the following cases :  $2 \times 3 \frac{1}{2} = 7$

- (i) Foliations and Lineations
- (ii) Igneous and Metamorphic Rocks
- (iii) Active and Inactive Faults

7. (a) Explain any *two* of the following :  $2 \times 3 \frac{1}{2} = 7$

- (i) Ecological niche
- (ii) Community ecology
- (iii) Diversity of species

(b) Explain the influence of environmental factors on the process of succession in detail. 7

8. (a) Describe how various human activities are responsible for ecological instability. 7

(b) Explain the concept of sustainable development. Why have environmental activists opposed construction of large dams in the past ? 7