

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

Term-End Examination

00865

June, 2017

ET-531(A) : EARTH AND ITS ENVIRONMENT

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **five** questions. Give neat, well-labelled sketches wherever necessary.

1. (a) Describe Kepler's three laws of planetary motion. 7
- (b) Explain the chemical weathering of the common rock forming materials — Quartz (SiO_2), Potassium Feldspar (KAlSi_3O_8) and Muscovite [$\text{KAl}_3\text{Si}_3\text{O}_8(\text{OH})$]. 7
2. (a) Describe the magnitude of earthquakes on a Richter scale in a tabular form. How do we record earthquakes ? 7
- (b) Discuss the various types of energy transformations in the atmosphere with the help of a neat sketch. What are its influences on climate ? 7

3. (a) Explain the components of the total surface runoff. How do they relate to the surface runoff cycle? 7
- (b) Define minerals. Explain the chemical classification of non-silicate minerals with examples. Also mention their uses. 7
4. (a) Describe the concept of rock cycle with the help of a neat sketch. 7
- (b) Describe the elements of a fault plane. 7
5. (a) Describe the uses of clay deposits occurring in Gondwana sequence. 7
- (b) Explain the concept of the food chain giving suitable examples. 7
6. (a) Describe the influence of environmental factors on succession. 7
- (b) Explain the three broad categories of aquatic ecosystem. 7
7. (a) Describe the formation of acid rain and its possible consequences. 7
- (b) Explain two important methods of soil conservation. 7

8. Differentiate between the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Fog and Cloud
 - (b) Evaporation and Evapotranspiration
 - (c) Exogenic and Endogenic textures
 - (d) Fault zone and Shear zone
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