

**B.Tech. Civil (Water Resources  
Engineering)**

**Term-End Examination**

**June, 2012**

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

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Answer any five questions. Give neat, well-labelled sketches where necessary.*

1. (a) Outline the structure of the atmosphere that envelopes Earth, giving a neat sketch. 7  
(b) Discuss what is understood by *lithosphere* and *hydrosphere*. 7
2. (a) Discuss and compare mechanical and chemical weathering. 7  
(b) Explain the process of erosion denudation and regeneration. Give examples. 7
3. (a) What is an earthquake ? Discuss its various types. How do they provide us information about the interior of Earth ? 9  
(b) Explain how do we record an earthquake, and what is Richter's scale ? 5

4. (a) Give an isometric view of a glaciated U-shaped valley. Incorporate hanging and tributary valleys in the view. Discuss its main features. 10
- (b) State and explain the five laws of radiation in respect of heat balance on earth. 4
5. (a) Discuss the various structures as observed in igneous rocks, and detail out their respective textures. 7
- (b) Explain *foliation*, *lineation* and *cleavage* of rocks. 7
6. Discuss in detail the fold-classification as found in rock formations. 14
7. (a) Detail out what you understand by : 7
- (i) population ecology
- (ii) properties of population;
- (iii) regulation of population;
- (iv) functions of population
- (b) Discuss- *tundra* biome; *desert* biome; and *grass-land* biome. 7
8. Write short notes on *any four* of the following : 3.5x4=14
- (a) Core of earth
- (b) Quartz group of rocks
- (c) Geological time-scale
- (d) Motion of planets
- (e) Magna and Lava
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