No. of Printed Pages : 3

ET-531(A)

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

Term-End Examination

00268

June, 2016

ET-531(A) : EARTH AND ITS ENVIRONMENT

Time : 3 hours *Maximum Marks : 70*

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

1. (a) Describing the composition of crust and upper mantle, discuss the crust – mantle relationship. 7

(b) How would you define seismicity ? What are seismic waves ? How do they help in delineating the internal structure of the Earth ? 7

2. (a) How are tributaries and sub-tributaries formed ? Explain through neat sketches of three prominent drainage patterns. 7

(b) Describe graded river profile. Outline the conditions ideal for the maintenance of such profile of equilibrium. 7

3. (a) Define sedimentary rocks. Describe the classification of sedimentary rocks and their properties. 7

(b) Describe various sedimentary structures and their significant characteristics. 7

4. (a) What are joints ? Explain. Give the geometrical and genetic classification of joints. 7

(b) Define structural geology. State what are the various geological factors to be considered for the construction of dams, tunnels, buildings and regional structures. 7

5. (a) Discuss Proterozoic deposits of India. Give the geographical distribution of the Vindhyan Supergroup. 7

(b) What are Charnockites and Khondalites ? Explain their mineral assemblages and mode of formation. 7

6. Give a detailed account of the factors responsible for the ecological instability and destruction of ecosystem. 14

7. (a) Discuss the following : 6

(i) Planetesimal Hypothesis

(ii) Prediction of Earthquake

(iii) Igneous Textures

(b) Distinguish between the following : 8

(i) Turbulent flow and Laminar flow

(ii) Erosion and Denudation

(iii) Phacoliths and Batholiths

(iv) Mudstones and Shales

8. Write short notes on any ***four*** of the following : $4 \times 3\frac{1}{2} = 14$

(a) Biosphere

(b) Diagenesis

(c) Feldspar Group of Minerals

(d) Indo-Gangetic Alluvium

(e) Diastrophism