

8500

Your Roll No.....

**B.Tech. (C) / I**

**A**

Paper (ECE - 105)  
GEOLOGY

Time : 3 hours

Maximum Marks : 70

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt all questions.

1. a) Brief the main branches of Geology. 03
  - b) Discuss the Interior of the earth giving the characteristic of each part. 03
  - c) Discuss the chief agents of weathering and their effects upon rocks. 03
  - d) Describe the chief physical properties of mineral. How do they help in identifying them. 03
  - e) Give a comparison of cubic, tetragonal and orthohombic system in respect of their elements of symmetry. 03
  - f) Distinguish between joints and faults. 03
  - g) What do you mean by seismic waves ? Discuss the zones in India. 03
  - h) Write a brief account of formation and classification of soils adding a note on the soil groups of India. 03
  - i) What are artesian wells ? Describe their formation. 03
  - j) Describe the properties that are described in good building stones. 03
2. Explain various methods used for determining age of the earth ? Explain your answer answering the various hypothesis. 10

OR

What are the three chief Geological agents ? Compare their work in respect of erosion, transportation and deposition. 10

3. Write shorte notes on
- (i) Meandering
  - (ii) Deserts.
  - (iii) Oasis
  - (iv) Sand - dunes
  - (v) Hanging Valley

10

OR

Write short notes on

- (i) Streak
- (ii) Fracture
- (iii) Cleavage
- (iv) Hardness
- (v) Isotopism

10

4. What is texture of a rock ? Discuss the type of texture seen in Igneous, Sedimentary and metamorphic rocks. Also describe their use as Engineering material. 10

OR

What are Joints ? How are they formed ? Distinguish between Joints and Faults. Illustrate your answer with diagrams. 10

5. Discuss various types of waves generated by earthquakes. How can you deduce the Interior of earth using earthquake waves ? Also explain the construction and working of the Instrument which records these waves. 10

OR

- (i) Discuss in detail the Geological Investigation required in tunnelling operations.
- (ii) What is Soil erosion ? Explain its possible preventive measures.

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