

# Geology

## Paper-I

**Time Allowed: Three Hours**

**Maximum Marks: 300**

- Note:* 1. The figures in the margin indicate full marks for the questions.
2. Candidate should answer questions No. 1 and 5 which are compulsory and any **three** of the remaining questions, selecting at least **one** from each section.

### SECTION – A

1. Write short notes on any **three** of the following in about **200** words each: 20×3=60
- (a) Plate Tectonic theory and its significance.
  - (b) Evidences of seismology and its applications.
  - (c) Internal Structure of the Earth.
  - (d) Concept of Geosynclines.
2. (a) Factors controlling weathering and types of weathering. 30
- (b) Geological significance of drainage patterns. 30
3. (a) What is Darcy's law? Describe its validity with verification. 30
- (b) Write about the classification folds. 30
4. Describe in brief any **three** of the following. 20×3=60
- (a) Electromagnetic spectrum.
  - (b) Resolution types in Remote Sensing.
  - (c) Orbital parameters of Cartosat-1.
  - (d) Elements of satellite image interpretation.

## SECTION – B

5. Write short notes on any **three** of the following in about **200** words each: 20×3=60
- (a) Morphology and evolutionary trends of brachiopods.
  - (b) Discuss the palaeobotanical basis of the classification of Gondwana rocks.
  - (c) Give an account of stratigraphy of Manipur.
  - (d) Saline water intrusion.
6. (a) Describe the lithostratigraphic units and their use in stratigraphy. 30
- (b) Write about the K/T Boundary and its significance in stratigraphy. 30
7. Write in brief about the following: 30×2=60
- (a) Earthquake zones of India.
  - (b) Importance of foraminifera studies in Petroleum exploration.
8. Write in brief about the following: 30×2=60
- (a) Importance of rain water harvesting techniques.
  - (b) Stratigraphic succession of Cuddapah Basin.