

IAS Mains Geology 1999

Paper I

Section A

1. Explain any three of the following in about 200 words each:
 - a. Caldera and Stratovolcanoes
 - b. Internal Constitution of the earth
 - c. Lineaments with reference to India
 - d. Major Geomorphic features of Indian subcontinent
2. Describe and discuss how folds and faults can be identified in the field. What is the relevance of these for the society?
3. Describe:
 - i. deep sea trenches
 - ii. mid-ocean ridges
 - iii. sea-floor spreading and discuss their significance.
4. Write brief notes on the following giving Indian examples wherever possible:
 - a. Guyot
 - b. Landforms of Glaciated mountains
 - c. Significance of Linear and Planar structures
 - d. River-piracy
 - e. Barchans and Loess

Section B

5. Answer any three of the following in about 200 words each:
 - a. Present day horses are different from their geological ancestors. Comment.
 - b. Evolutionary trends in Trilobites
 - c. Boundary problems in Indian stratigraphy
 - d. Correlation of Gondwanas of India with their world equivalents
6. Describe the morphology and classification of Ammonoids and give their distribution in space and time.
7. Briefly give the classification. Conditions of deposition and fossil fauna of Siwalik system of India.
8. Write stratigraphic notes on any three of the following:
 - a. Precambrian rocks of Karnataka (Modern views)

- c. Principles of stratigraphic classification
- d. Geological succession and fauna of the Cretaceous formations of Narmada Valley