

IAS Mains Geology 1994

Paper I

Section A

1. Explain any three of the following in about 200 words each:
 - a. Superimposed drainage
 - b. Oceanic trenches
 - c. Tectonic divisions of India
 - d. Radioactivity and its applications to geological problems
2. Describe the various types of mountains and emphasise the origin of fold mountains. Give example.
3. Describe the following landforms:
 - a. Sand bars
 - b. Incised meanders
 - c. Barrier reef
 - d. River terraces
 - e. Crag and tail structure
4. Describe the geometric features of folds caused by different mechanisms.

Section B

5. Answer any three of the following in about 200 words each:
 - a. Older Metamorphic Group of Bihar
 - b. Structure of Gondwana basins and its bearing on sedimentation
 - c. Utility of fossils
 - d. Extinction of Dinosaurs
6. Describe the stratigraphy and sedimentation characters of the Vindhyan Super Group of rocks. Briefly state its economic importance.
7. Draw a large labelled diagram of a Brachiopod shell and describe the important morphological characters.
8. Discuss the following briefly:
 - a. Stromatolites and their importance in Precambrian stratigraphy
 - b. Role of microfossils in oil exploration
 - c. Divisions of stratigraphy and their significance