

IAS Mains Geology 1993

Paper I

Section A

1. Explain any three of the following in about 200 words each:
 - a. Crust, its composition and relationship with the mantle
 - b. Drainage patterns
 - c. Cleavage-bedding relationships in folds and its application
 - d. Tectonic linear structures
2. How do you distinguish the following structures in each pair? Draw sketches to illustrate your answers:
 - i. A dome from a doubly plunging fold
 - ii. A bedding plane from a joint plane
 - iii. A recumbent fold from a reclined fold. Draw stereograms
 - iv. A fault surface from an unconformable surface
 - v. A Strike fault from a strike slip fault
3. Discuss briefly the theory of Plate tectonics and show how it differs from the hypothesis of Continental drift.
4. Describe the important land forms developed as a result of varying Lithology.

Section B

5. Answer any three of the following in about 200 words each:
 - a. Peninsular gneiss and its relationship with the schist belts
 - b. Lower Gondwana flora
 - c. Copper belt thrust
 - d. Himalayan uplift
6. Draw a neat labelled diagram of a pelecypod shell and briefly describe it. Show its main differences with the BrachioPod shell.
7. Describe the Cretaceous rocks of South India.
8. Write brief notes on:
 - a. Delhi Super Group
 - b. Barail Series
 - c. Umaria marine bed and its importance