IAS Mains Geology 2005

Paper I

Section A

1. Attempt any THREE of the following in about 200 words each: (20 × 3 = 60)

   a. Radioactivity and age of the earth.

   b. Geomorphic cycles and their interpretation.

   c. Global Positioning System.

   d. Strain markers in deformed rocks.

2. What is a volcanic belt? Discuss causes and products of volcanoes. Illustrate your answer with suitable neat sketches (50 + 10 = 60).

3. Discuss the following: (30 × 2 = 60)

   a. Fluvial Landforms.

   b. Geographic Information System.

4. Discuss the classification and mechanics of Faults. Illustrate your answer with neat sketches (50 + 10 = 60).

Section B

5. Discuss any THREE of the following in about 200 words each: (20 × 3 = 60)

   a. Application of microfossils in petroleum exploration.

   b. Chronostratigraphic classification.

   c. Classification of aquifers.

   d. Landslide-its causes and prevention.

6. Discuss the evolutionary trends of Trilobita. Illustrate your answer with sketches (50 + 10 = 60).

7. Write about the following: (30 × 2 = 60)

   a. Cambrian-Precambrian Boundary

   b. Climatic conditions in Gondwana time.

8. Discuss the following: (30 × 2 = 60)

   a. Water-bearing characteristics of rocks.

   b. Engineering properties of rocks.