Chapter 2: Structure and Physiography

Exercises — Exercises

Q1 1. (i) Which one of the water bodies separates the Andaman from the Nicobar? (a) 11° Channel (b) Gulf of Mannar (c) 10° Channel (d) Andaman Sea

(c) 10° Channel. The Andaman group in the north and the Nicobar group in the south are separated by the Ten Degree Channel. The 11° Channel is not mentioned in the chapter, the Gulf of Mannar lies elsewhere, and the Andaman Sea is a larger water body, not the dividing channel.

Q2 1. (ii) On which of the following hill range is the 'Dodabeta' peak situated? (a) Nilgiri hills (b) Anaimalai hills (c) Cardamom hills (d) Nallamala hills

(a) Nilgiri hills. Dodabetta (2,637 m) stands on the Nilgiri hills of the Western Ghats. The highest peak of the Peninsular plateau, Anaimudi (2,695 m), is on the Anaimalai hills, which is why (b) is incorrect.

Q3 2. (i) If a person is to travel to Lakshadweep, from which coastal plain does he prefer and why? (about 30 words)

He should travel from the western coastal plain, particularly the Kerala (Malabar) coast, because Lakshadweep lies only 220-440 km off the Kerala coast. Natural ports such as Cochin and Mangalore on this coast provide the shortest sea route.

Q4 2. (ii) Where in India will you find a cold desert? Name some important ranges of this region. (about 30 words)

A cold desert lies in the high, arid northern mountains, in the Ladakh region of the Himalayan and trans-Himalayan belt. Its important ranges are the Karakoram, Ladakh and Zaskar ranges, with the Great Himalayan range to the south.

Q5 2. (iii) Why is the western coastal plain devoid of any delta? (about 30 words)

The western coastal plain is a submerged coast and is narrow. Rivers flowing through it are short, fast and drop quickly into the Arabian Sea, so they cannot spread sediment into delta formations as the east-flowing rivers do.

Q6 3. (i) Make a comparison of the island groups of the Arabian Sea and the Bay of Bengal. (not more than 125 words)

The Bay of Bengal group has about 572 islands and islets between 6°N-14°N and 92°E-94°E, divided into the Andaman in the north and the Nicobar in the south by the Ten Degree Channel. They are believed to be elevated parts of submarine mountains, though some smaller islands are volcanic; Barren Island, India's only active volcano, lies here. They have an equatorial type of vegetation and convectional rainfall. The Arabian Sea group, Lakshadweep and Minicoy, lies between 8°N-12°N and 71°E-74°E, 220-440 km off the Kerala coast. It is built entirely of coral deposits and has about 36 islands, 11 of them inhabited. Minicoy is the largest (453 sq. km). The Nine Degree Channel divides the group, and the eastern seaboard has storm beaches of pebbles, shingles, cobbles and boulders.

Q7 3. (ii) What are the important geomorphological features found in the river valley plains? (not more than 125 words)

The northern river valley plains are formed by alluvium brought by the Indus, the Ganga and the Brahmaputra, with a depth of 1,000-2,000 m. From north to south they have the Bhabar, an 8-10 km belt of boulders where streams disappear; the Tarai, a 10-20 km marshy belt where streams re-emerge; and the alluvial plains, divided into older Bhangar and newer Khadar. These plains show features of the mature stage of fluvial erosion and deposition: sand bars, meanders, oxbow lakes and braided channels. The Brahmaputra plains are known for riverine islands and sand bars, and are prone to floods and shifting river courses. The river mouths form huge deltas such as the Sunderbans. Otherwise the plain is featureless, at 50-150 m elevation.

Q8 3. (iii) If you move from Badrinath to Sunderbans delta along the course of the river Ganga, what major geomorphological features will you come across? (not more than 125 words)

Starting in the Himalayas, the Ganga is a youthful river in a tectonic mountain region, so you meet gorges, V-shaped valleys, rapids and waterfalls. On leaving the Shiwalik foothills you enter the Bhabar, a belt of boulders and heavy rock material where streams may vanish, then the marshy Tarai where they re-emerge. Further on lie the alluvial plains of old Bhangar and new Khadar, where the mature river forms sand bars, meanders, oxbow lakes and braided channels, and is prone to floods and shifting courses. Finally, near the Bay of Bengal, the river builds the Sunderbans delta, one of the largest deltas in the world.