

Chapter 2 Physical features of India

Question-1

What are Tectonic Plates?

Solution:

The crust (upper part) of the earth has been formed out of seven major and some minor plates. These are called tectonic plates.

A Tectonic plate (also called lithospheric plate) is a massive, irregularly shaped slab of solid rock, generally composed of both continental and oceanic lithosphere. Plate size can vary greatly, from a few hundred to thousands of kilometers across; the Pacific and Antarctic Plates are among the largest. Plate thickness also varies greatly, ranging from less than 15 km for young oceanic lithosphere to about 200 km or more for ancient continental lithosphere.

Question-2

Which continents of today were part of the Gondwana land?

Solution:

The oldest landmass, (the Peninsula part), was a part of the Gondwana land. The Gondwana land included India, Australia, South Africa and South America as one single land mass.

Question-3

What is the bhabar?

Solution:

The rivers, after descending from the mountains deposit pebbles in a narrow belt of about 8 to 16 km in width lying parallel to the slopes of the Shiwaliks. It is known as bhabar.

Question-4

Distinguish Between Converging and Diverging Tectonic Plates

Solution:

Converging Tectonic Plates: Some plates come towards each other and form convergent boundaries.

Diverging Tectonic Plates: Some plates move away from each other and form divergent boundaries.

Question-5

Distinguish Between Bhangar and Khadar

Solution:

Bhangar:

The largest part of the northern plain is formed of older alluvium. They lie above the flood plains of the rivers and present a terrace-like feature. This part is known as bhangar.

Khadar:

The soil in this region contains calcareous deposits locally known as kankar. The newer, younger deposits of the flood plains are called khadar. They are renewed almost every year and so are fertile, thus, ideal for intensive agriculture.

Question-6

Distinguish Between the Western Ghats and the Eastern Ghats

Solution:

Western Ghats:

The Western Ghats are higher than the Eastern Ghats. Their average elevation is 900– 1600 metres as against 600 metres of the Eastern Ghats. The Western Ghats cause orographic rain by facing the rain bearing moist winds to rise along the western slopes of the Ghats. The Western Ghats are known by different local names. The height of the Western Ghats progressively increases from north to south. The highest peaks include the Anai Mudi (2,695metres) and the Doda Betta (2,637 metres).

Eastern Ghats:

The Eastern Ghats stretch from the Mahanadi Valley to the Nigiris in the south. The Eastern Ghats are discontinuous and irregular and dissected by rivers draining into the Bay of Bengal. Mahendragiri (1,501 metres) is the highest peak in the Eastern Ghats. Shevroy Hills and the Javadi Hills are located to the southeast of the Eastern Ghats.

Question-7

Describe how the Himalayas were formed.

Solution:

The Himalayas and the Northern Plains are the most recent landforms. From the viewpoint of geology, Himalayan Mountains form an unstable zone. The whole mountain system of Himalaya represents a very youthful topography with high peaks, deep valleys and fast flowing rivers. The northern plains are formed of alluvial deposits. The peninsular plateau is composed of igneous and metamorphic rocks with gently rising hills and wide valleys.

Question-8

Which are the major physiographic divisions of India? Contrast the relief of the Himalayan region with that of the Peninsular plateau.

Solution:

The physical features of India can be grouped under the following physiographic divisions:

- *The Himalayan Mountains*
- *The Northern Plains*
- *The Peninsular Plateau*
- *The Indian Desert*
- *The Coastal Plains*
- *The Islands*

The Himalaya consists of three parallel ranges in its longitudinal extent. A number of valleys lie between these ranges. The northernmost range is known as the Great or Inner Himalayas or the 'Himadri'. It is the most continuous range consisting of the loftiest peaks with an average height of 6,000 metres. It contains all the prominent Himalayan peaks.

The Deccan Plateau is a triangular landmass that lies to the south of the river Narmada. The Satpura range flanks its broad base in the north while the Mahadev, the Kaimur hills and the Maikal range form its eastern extensions. Locate these hills and ranges in the physical map of India. The Deccan Plateau is higher in the west and slopes gently eastwards. An extension of the Plateau is also visible in the northeast—locally known as the Meghalaya and Karbi-Anglong Plateau. It is separated by a fault from the Chotanagpur Plateau. Three Prominent hill ranges from the west to east are the Garo, the Khasi and the Jaintia Hills.

Question-9

Give an account of the Northern Plains of India.

Solution:

The northern plain has been formed by the interplay of the three major river systems, namely—the Indus, the Ganga and the Brahmaputra along with their tributaries. This plain is formed of alluvial soil. The deposition of alluvium in a vast basin lying at the foothills of the Himalaya over millions of years, formed this fertile plain. It spreads over an area of 7 lakh sq. km. The plain being about 2400 Km long and 240 to 320 Km broad is a densely populated physiographic division. With a rich soil cover combined with adequate water supply and favourable climate, it is agriculturally a very productive part of India.

The rivers in their lower course split into numerous channels due to the deposition of silt. These channels are known as distributaries. The Northern Plain is broadly divided into three sections. The Western part of the Northern Plain is referred to as the Punjab Plains. Formed by the Indus and its tributaries, the larger part of this plain lies in Pakistan. The Indus and its tributaries—the Jhelum, the Chenab, the Ravi, the Beas and the Satluj originate in the Himalaya. This section of the plain is dominated by the doabs.

Question-10

Write short notes on the following.(i) The Indian Desert, (ii) The Central Highlands (iii) The Island Groups of India

Solution:

(i) The Indian Desert

The Indian desert lies towards the western margins of the Aravali Hills. It is an undulating sandy plain covered with sand dunes. This region receives very low rainfall below 150 mm per year. It has arid climate with low vegetation cover. Streams appear during the rainy season. Soon after they disappear into the sand as they do not have enough water to reach the sea. Luni is the only large river in this region. Barchans (crescent-shaped dunes) cover larger areas but longitudinal dunes become more prominent near the Indo-Pakistan boundary.

(ii) The Central Highlands

The Peninsular plateau consists of two broad divisions, namely, the Central Highlands and the Deccan Plateau. The part of the Peninsular plateau lying to the north of the Narmada river covering a major area of the Malwa plateau is known as the Central Highlands. The Vindhyan

range is bounded by the Central Highlands on the south and the Aravalis on the northwest. The further westward extension gradually merges with the sandy and rocky desert of Rajasthan.

The flow of the rivers draining this region, namely the Chambal, the Sind, the Betwa and Ken is from southwest to northeast, thus indicating the slope. The Central Highlands are wider in the west but narrower in the east. The eastward extensions of this plateau are locally known as the Bundelkhand and Baghelkhand. The Chotanagpur plateau marks the further eastward extension, drained by the Damodar river.

(iii) The Island Groups of India

This group of islands is composed of small coral islands. Earlier they were known as Laccadive, Minicoy and Amindive. In 1973 these were named as Lakshadweep. It covers small area of 32 sq km. Kavaratti island is the administrative headquarters of Lakshadweep.

This island group has great diversity of flora and fauna. The Pitli Island, which is uninhabited, has a bird sanctuary. An elongated chain of islands located in the Bay of Bengal extending from north to south. These are Andaman and Nicobar islands. They are bigger in size and are more numerous and scattered. The entire group of islands is divided into two broad categories – The Andaman in the north and the Nicobar in the south. It is believed that these islands are an elevated portion of submarine mountains. These island groups are of great strategic importance for the country. There is great diversity of flora and fauna in this group of islands too. These islands lie close to the equator and experience equatorial climate and has thick forest cover.