

Chapter-2

Structure and Physiography

1. Choose the right answer from the four alternatives given below:

Question 1(i).

In which part of Himalayas do we find the Karewa formation?

- (a) North-eastern Himalayas**
- (b) Himachal-Uttarakhand Himalayas**
- (c) Eastern Himalayas**
- (d) Kashmir Himalayas**

Answer:

- (d) Kashmir Himalayas**

Question 1(ii).

In which of the following states is Loktak lake situated?

- (a) Kerala**
- (b) Uttarakhand**
- (c) Manipur**
- (d) Rajasthan**

Answer:

- (c) Manipur**

Question 1(iii).

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**

Answer:

(a) 11° Channel

Question 1(iv).

On which of the following hill range is the 'Dodabeta' peak situated?

- (a) Nilgiri hills
- (b) Anaimalai hills
- (c) Cardamom hills
- (d) Nallamala hills

Answer:

(a) Nilgiri hills

2. Answer the following questions in about 30 words.

Question 2(i).

If a person is to travel to Lakshadweep, from which coastal plain does he prefer and why?

Answer:

Lakshadweep islands are situated in Arabian Sea. These islands are located at a distance of 280 km-480 km off the Kerala coast. Its distance is lowest from Malabar Coast. Therefore, it will take us least time to reach at Lakshadweep islands from Malabar Coast.

Question 2(ii).

Where in India will you find a cold desert? Name some important ranges of this region.

Answer:

The north-eastern part of the Kashmir Himalayas is a cold desert, which lies between the Greater Himalayas and the Karakoram ranges. Main ranges of this region are Laddakh, Karakoram, Jasker and Pir Panjal.

Question 2(iii).

Why is the western coastal plain is devoid of any delta?

Answer:

The slope of rivers of western coast is very steep. Therefore, these rivers flow not in different parts but in one part. And hence they do not form any delta. As a result, we do not find any delta in the western coast.

3. Answer the following questions in not more than 125 words.

Question 3(i).

Make a comparison of the island groups of the Arabian Sea and the Bay of Bengal.

Answer:

Island groups of Arabian Sea :

- (i) This island group consists of about 36 islands of which 11 are inhabited.
- (ii) The Lakshadweep islands are scattered between 8° to 12°N latitudes and 71° E to 74° E longitudes.
- (iii) These are situated at the distance of 280 km to 480 km. off the Kerala coast.
- (iv) The entire island group is built of coral deposits.
- (v) Minicoy is the largest island of 453 sq. km. area.

Island groups of Bay of Bengal :

- (i) This island group consists of about 572 islands.
- (ii) These are situated between 6° to 14° N latitudes and 92° E to 94°E longitudes.
- (iii) It is divided into Andaman and Nicobar islands.
- (iv) These are separated by 10 degree Channel.
- (v) These islands are an elevated portion of sub-marine mountains and some are volcanic in origin.

Question 3(ii).

What are the important geomorphological features found in the river valley plains?

Answer:

Alluvial fans are formed when streams flowing from higher levels break into foot slope plains of low gradient. Normally very coarse load is carried by streams flowing over mountain slopes. This load becomes too heavy for the streams to be carried over gentler gradients and gets dumped and spread as a broad low to high cone shaped deposit called alluvial fan. Usually, the streams which flow over fans are not confined to their original channels for long and shift their position across the fan

forming many channels called distributaries. Alluvial fans in humid areas show normally low cones with gentle slope form as a low cone.

Delta is like alluvial fans but develop at a different location. The load carried by the rivers is dumped and spread into the sea. If this load is not carried away far into the sea or distributed along the coast, it spreads and accumulates. Such areas over flood plains built up by abandoned or cut-off channels contain coarse deposits. The flood deposits of spilled waters carry relatively finer materials like silt and clay. The flood plains in a delta are called delta plains.

Floodplain is a major landform of river deposition. Large sized materials are deposited first when stream channel breaks into a gentle slope. Thus, normally, fine sized materials like sand, silt and clay are carried by relatively slow moving waters in gentler channels usually found in the plains and deposited over the bed and when the waters spill over the banks during flooding above the bed. These river valley plains have a fertile alluvial soil cover which supports a variety of crops like wheat, rice, sugarcane and jute, and hence, supports a large population.

Question 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?

Answer:

If we move from Badrinath to Sunderbans delta along the course of the river Ganga, following major geomorphological features will we come across:

1. V Shaped Valleys: Valleys start as small and narrow rills; the rills will gradually develop into long and wide gullies; the gullies will further deepen, widen and lengthen to give rise to valleys. Depending upon dimensions and shape, many types of valleys like V-shaped valley, gorge, canyon, etc. can be recognised.
2. Gorge: A gorge is a deep valley with very steep to straight sides.
3. Canyon: A canyon is characterised by steep step-like side slopes and may be as deep as a gorge. A gorge is almost equal in width at its top as well as at its bottom. In contrast, a canyon is wider at its top than at its bottom. In fact, a canyon is a variant of gorge.
4. Waterfall: When the rivers start falling in pits in mountainous regions, it makes waterfall.
5. Plunge pools: Once a small and shallow depression forms, pebbles and boulders get collected in those depressions and get rotated by flowing water and consequently the depressions grow in dimensions. A series of such depressions eventually join and the stream valley gets deepened. At the foot of waterfalls also, large potholes, quite deep and wide, form because of the sheer impact of water and rotation of boulders. Such large and deep holes at the base of waterfalls are called plunge pools.