

GEOGRAPHY
GRADE IX
CH-2, PHYSICAL FEATURES OF INDIA

NOTES

Deserts, mountains, and all types of landforms etc. are physical **features**. A feature on Earth's surface that has been formed by nature. Example: Trees, mountains, oceans, rivers, lakes, etc.

The present-day continents that made up the **Gondwanaland**:
the past.

- a. India
- b. Australia
- c. South Africa
- d. South America
- e. Antarctica

The major **physiographic divisions** of India are:

- a. The Himalayan Mountains
- b. The Northern Plains (Indo-Gangetic Plains)
- c. The Peninsular Plateau
- d. The Great Indian Desert (The Thar Desert)
- e. The Coastal Plains
- f. The Island groups

Formation of the Himalayas

The northward drift of the Indo-Australian plate resulted in the collision of the plate with the much larger Eurasian plate. Due to this collision, the sedimentary rock which were accumulated in the geosyncline called the Tethys were folded to form the mountain system of western Asia and Himalayas.

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The three parallel ranges of the Himalayas.

Greater Himalaya or Himadri

- a. The northernmost range is called the Great or Inner Himalayas or the Himadri.
- b. It is the most continuous range consisting of the loftiest peaks with an average height of 6000 metres.
- c. It contains all the prominent Himalayan peaks.
- d. It is perennially snow bound, and a number of glaciers descend from this range.
- e. The core of this part of Himalayas is composed of Granite.

Lesser Himalaya or Himachal:

- a. The range lying to the south of the Himadri forms the most rugged mountain system and is known as Himachal or Lesser Himalayas
- b. The ranges are mainly composed of highly compressed and altered rocks
- c. While the 'Pir Panjal' range forms the longest and the most important range, the Dhauladhar and the Mahabharat ranges are also prominent ones
- d. This range consists of the famous valley of Kashmir, the Kangra and the Kullu valley of Himachal Pradesh. This region is well known for hill stations

Outer Himalaya or Shivaliks:

- a. The outermost range of the Himalayas is called the Shiwaliks.
- b. They extend over a width of 10-50 kilometres and have an altitude varying between 900-1100 metres.
- c. These ranges are composed of unconsolidated sediments brought down by rivers from the main Himalayan ranges located farther north
- d. The longitudinal valley lying between lesser Himalayas and the Shiwaliks are called Duns. Examples are Dehra Dun and Kotli Dun.

On the latitudinal basis, identify and explain the different Himalayan ranges.

- a. **Punjab Himalayas:** Kashmir Himalayas: Himachal Himalayas:
The part of the Himalayas lying between Indus and Satluj has been traditionally called as Punjab Himalayas, but it is also regionally called as Kashmir and Himachal Himalayas
- b. **Kumaon Himalayas:** The part of the Himalayas lying between Satluj and Kali rivers is called Kumaon Himalayas
- c. **Nepal Himalayas:** The Kali and Tista rivers demarcate the Nepal Himalayas
- d. **Assam Himalayas** The part lying between Tista and Dihang rivers is called Assam Himalaya.

Contrast the relief of the Himalayan region with that of the Peninsular plateau

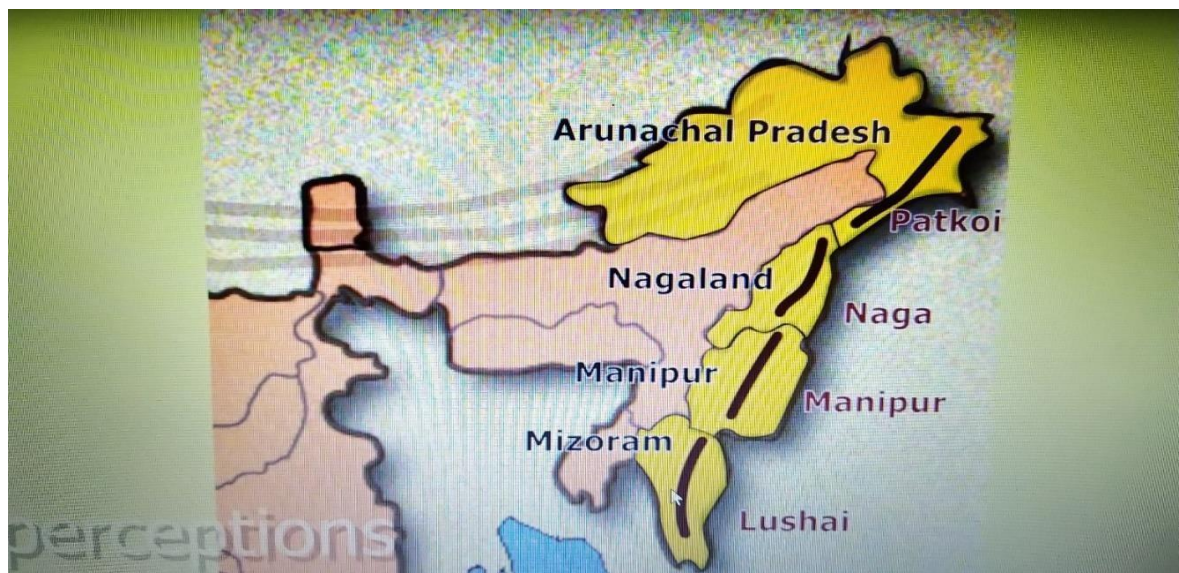
Contrast the relief of Himalayan region and Peninsular Plateau

Geologically, the Peninsular Plateau constitutes one of the ancient landmasses on the earth's surface. It was supposed to be one of the most stable land blocks. The Himalayas 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.

Give features of the “Purvanchals”.

- (a) The Brahmaputra marks the eastern-most boundary of the Himalayas. Beyond the Dihang gorge, the Himalayas bend sharply to the south and spread along the eastern boundary of India. They are known as the Purvachal or the Eastern hills and mountains.
- (b) These hills running through the north-eastern states are mostly composed of strong sandstones which are sedimentary rocks.
- (c) Covered with dense forests, they mostly run as parallel ranges and valleys. The Purvanchal comprises of the Patkai Bum Hills, the Naga Hills, the Manipur Hills and the Mizo Hills.



The Northern Plain

The northern plain has been formed by the interplay of the 3 major river systems – the Indus, the Ganga and the Brahmaputra along with their tributaries. It spreads over an area of 7 lakh sq. km.

The Northern Plain is broadly divided into 3 sections as mentioned below:

1. The Western part of the Northern Plain is referred to as the **Punjab Plains**. This plain is formed by the Indus and its tributaries – the Jhelum, the Chenab, the Ravi, the Beas and the Satluj.
2. The **Ganga plain** extends between Ghaggar and Teesta rivers. It is spread over the states of North India, Haryana, Delhi, U.P., Bihar, partly Jharkhand and West Bengal.
3. **Brahmaputra plain** lies in the state of Assam.

The significance of the Northern Plains

- This plain is made up of the alluvial soil brought down by the rivers. This soil is very soft and fertile. Major crops such as wheat, rice, sugarcane, pulses, oil seeds, etc. are grown here. This plain is the 'food bowl' of India.
- The land of this plain is soft, levelled and flat. Therefore, wells, tubewells and canals can be dug for irrigation. Due to proper irrigation, it is the largest producer of foodgrains in India.
- This plain gets sufficient rainfall. There are many rivers, streams and lakes. There is also rich vegetation. These factors affect the climate. The climate of the Northern Plains is very cold in winter and very hot in summer.
- This is one of the most thickly populated plain of the world. The most thickly populated states of India, Uttar Pradesh and Bihar, lie in this plain.

List out and explain the four regions of the Northern Plains based on the variations in its relief features .

Bhabar

- a. The rivers, after descending from the mountains deposit pebbles in a narrow belt of about 8-16 kilometres in width lying parallel to the slopes of the Shiwaliks. It is known as Bhabar
- b. All the streams disappear in this Bhabar belt as they start flowing under the stones and pebbles.

Terai:

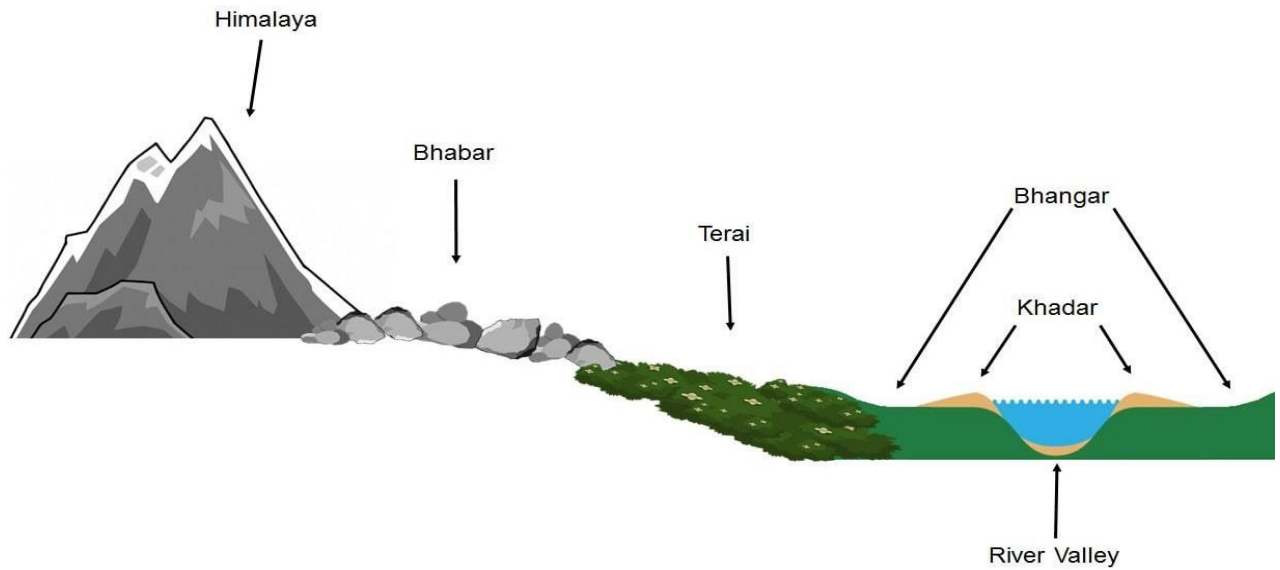
- a. South of the Bhabar belt, the streams and rivers re-emerge and create a wet, swampy and marshy region called the Terai
- b. This was a thickly forested region teeming with wildlife

Bangar

- a. The largest part of the Northern plains is formed of old alluvium
- b. They lie above the flood plains of the rivers and present a terrace like feature.
- c. The soil in this region contains calcareous deposits locally called Kankar

Khadar

- a. The newer, younger deposits of the flood plains are called Khadar
- b. They are renewed almost every year and so are fertile, thus ideal for intensive agriculture.



BHABAR REGION

‘Doab’ is made up of two words- ‘do’ meaning two and ‘ab’ meaning water. Similarly ‘Punjab’ is also made up two words- ‘Punj’ meaning five and ‘ab’ meaning water.

Distributaries

The rivers in their lower course split into numerous channels due to the deposition of silt. These channels are known as distributaries

Distinguish between Central Highlands and Deccan Plateau.

Central Highlands:

- The part of the Peninsular plateau lying to the north of the Narmada river covering a major area of the Malwa Plateau is called central highlands
- The Vindhyan range is bounded by the central highlands on the south and the Aravallis on the north west
- 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 northwest thus indicating the slope.

The Deccan Plateau:

- 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
- The Deccan plateau is higher in the west and slopes gently eastwards
- Three prominent hill ranges from the west to east are the Garo, the Khasi and the Jaintia Hills.

Western Ghats	Eastern Ghats
1. They are formed on the western side or arm of the peninsular plateau.	1. They formed on the eastern side or arm of the peninsular plateau.
2. They are regular and continuous and can be crosses through passes only.	2. They are discontinuous and irregular and dissected by rivers draining into the Bay of Bengal.
3. They lie parallel to the Malabar coast.	3 They lie parallel to the Coromandel coast.
4. They are comparatively higher in elevation. Their average elevation is 900- 1600 metres.	4. They have comparatively lower elevation. Their average elevation is 600 metres.
5. The highest peaks in the Western Ghats are the Anai Mudi and the Doda Betta.	5. The highest peak in the Eastern Ghats is Mahendragiri.

Write short note on the following:

- (i) The Indian desert
- (ii) Western and Eastern coastal plains
- (iii) The Island groups of India.

The Indian Desert

- The Indian desert lies towards the western margins of the Aravali Hills.
- It is a sandy plain covered with sand dunes.
- This region receives very low rainfall below 150 mm per year.
- It has a dry climate with low vegetation cover.

The Coastal Plains

A coastal plain is a flat, low-lying piece of land next to the ocean. To the east and west of the peninsular plateau, 2 narrow strips of plain lands are found, which are respectively called Eastern Coastal Plain and Western Coastal Plain.

Eastern Coastal Plain

The Eastern Coastal Plains is a wide stretch of the landmass lying between the Eastern Ghats and the Bay of Bengal. In the northern part, it is referred to as the **Northern Circar**, while the southern part is known as the **Coromandel Coast**. Large rivers, such as the Mahanadi the Godavari, the Krishna and the Kaveri have formed extensive delta on this coast. Lake Chilika is an important feature along the eastern coast.

Western Coastal Plain

The western coast is sandwiched between the Western Ghats and the Arabian Sea. It is a narrow plain and consists of 3 sections as mentioned below:

- The northern part of the coast is called the **Konkan** (Mumbai – Goa)
- The central stretch is called the **Kannad Plain**
- The southern stretch is referred to as the **Malabar coast**

The Islands

The Lakshadweep Islands group

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.

The Andaman and Nicobar Islands

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.

Short note on ‘coral polyps’.

Coral polyps are short-lived microscopic organisms, which live in colonies. They flourish in shallow, mud-free and warm waters. They secrete hard rock like substance. The coral secretion and their skeletons form coral deposits in the form of reefs.

They are mainly of three kinds—barrier reef, fringing reef and atolls. The Great Barrier Reef of Australia is a good example of the first kind of coral reefs.

Atolls are circular or horse shoe-shaped coral reefs.

Map work

CHAPTER 2: PHYSICAL FEATURES OF INDIA

- Mountain Ranges: The Karakoram, The Zaskar, The Shivalik, The Aravali, The Vindhya, The Satpura, Western & Eastern Ghats
- Mountain Peaks – K2, Kanchenjunga, Anai Mudi
- Plateau - Deccan Plateau, Chotta Nagpur Plateau, Malwa Plateau
- Coastal Plains - Konkan, Malabar, Coromandal & Northern Circar



