



# **Class 9 Geography Notes**

## **Physical Features of India**

Key Notes and Important Questions with Answers

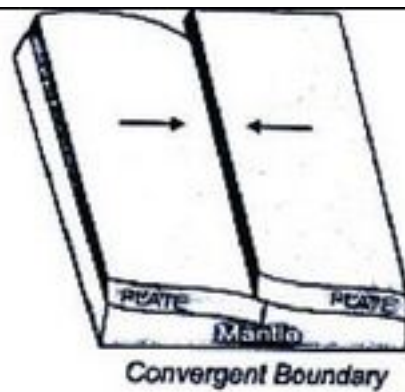
## CHAPTER – 2

### PHYSICAL FEATURES OF INDIA

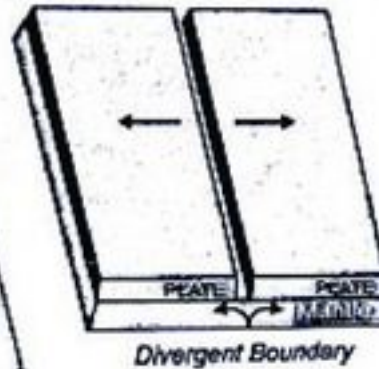
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#### POINTS TO REMEMBER:

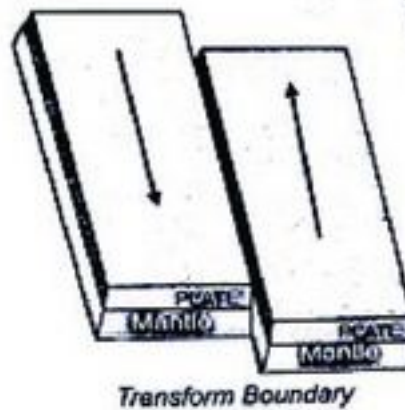
- **Theory of plate tectonics:** this theory tries to explain the formation of physical features of the earth.
- According to this theory, the crust (upper part) of the earth has been formed out of **seven major plates**.
- **Plate movements:** The plate movements have been classified into three types:
  - (i) **Convergent Boundary:** Some plates come towards each other and form convergent boundary.
  - (ii) **Divergent Boundary:** Some plates move from each other and form divergent boundary.
  - (iii) **Transform Boundary:** When two plates come towards each other, they may collide and crumble, or one may slide under the other. At times, they may also move horizontally past each other and form transform boundary.



*Convergent Boundary*



*Divergent Boundary*



*Transform Boundary*

## PLATE BOUNDARIES

- The oldest landmass was (the peninsular part) was part of the **Gondwana land**.
- The Himalayan Mountains have uplifted out of the **Tethys Sea**.
- **Major physiographic Division of India:** The physical features of India can be grouped as under:
  - (i) The Himalayan Mountains
  - (ii) The Northern Plains
  - (iii) The Peninsular Plateau
  - (iv) The Indian Desert
  - (v) The Coastal Plains
  - (vi) The Islands

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- **The Himalayan Mountains:**

- The Himalayas, geologically young and structurally fold mountains stretch over the northern borders of India.

- Total length of the Himalayas is 2400 Km. Their width varies from 400 Km in Kashmir to 150 Km in Arunachal Pradesh.

- The Himalayas consists of three parallel ranges in its **longitudinal extent:**

- (a) **Great or Inner Himalayas or the Himadri-** It is the northern most range of the Himalayas. It is the most contiguous range and contains all the prominent Himalayan peaks. (Average height-6,000 metres). Some highest peaks include- Mount Everest, Kanchenjunga, Makalu, Naga Parbat etc.

- (b) **Himachal (lesser Himalaya)-** The altitude varies between 3,700 and 4,500 metres. Pir Panjal, Dhauladhar and Mahabharat are important range. Famous valley of Kashmir is also in this range.

- (c) **Shivaliks-** This is the outermost range of the Himalayas. The altitude varies between 900 and 1100 metres. The longitudinal valley lying between lesser Himalayas and the Shivaliks are known as Duns. Dehra Dun, Kotli Dun and Patli Dun are some of the well known Duns.

- Further, the Himalayas have been divided on the basis of regions from west to east. These divisions have been **demarcated by river valleys**. These are:

- (i) **Punjab Himalayas-** between Indus and Sutlej rivers.

- (ii) **Kumaon Himalayas-** between Satluj and Kali rivers.

- (iii) **Nepal Himalayas-** between Kali and Tista rivers.

- (iv) **Assam Himalayas-** between Tista and Dihang rivers.

- **The Northern Plain:**

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**. It is agriculturally a very productive part of India.

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- The northern Plain is broadly divided into **three sections**:
    - (a) **Punjab Plains**- This is the western part of the Northern Plain. It is formed by the Indus and its tributaries- the Jhelum, the Chenab, the Ravi, the Beas and the Satluj. This section of the plain is dominated by the *doabs* ( 'do' means two and 'ab' means water)
    - (b) **The Ganga Plain**- It extends between Ghaggar and Teesta rivers. It is spread over the states of Haryana, Delhi, U.P., Bihar, Jharkhand and West Bengal.
    - (c) **The Brahmaputra Plain**- This plain is formed by the Brahmaputra and its tributaries. It lies mainly in the state of Assam.
  - The Northern Plain can be divided into four regions according to the **variations in relief features**-
    - (i) **Bhabar**- This region lies parallel to the slopes of the Shivaliks. The rivers, after descending from the mountains deposit pebbles in this region. All the streams disappear in this bhabar belt.
    - (ii) **Terai**- It lies to the south of bhabar. The streams and rivers re-emerge here. It is a wet, swampy and marshy region.
    - (iii) **Bhangar**- Bhangar is the largest part of the northern plain and is formed of the oldest alluvial soil. They lie above the flood plains of the rivers and present a terrace like feature. The soil in this region contains calcareous deposits locally known as kankar.
    - (iv) **Khadar**- The floodplains formed by newer and younger deposits are called khadar. They are renewed almost every year and so are fertile.
  - **The Peninsular Plateau:**

It is composed of the old crystalline, igneous and metamorphic rocks. It was part of the Gondwana land and thus, making it a part of the oldest landmass.
  - The Peninsular Plateau consists of two broad divisions, namely, **the Central Highlands and the Deccan Plateau.**
  - **Western Ghats and Eastern Ghats: A comparison**

| <b>Western Ghats</b> |   | <b>Eastern Ghats</b> |   |
|----------------------|---|----------------------|---|
| (i)                  | The Western Ghats lie along the Arabian sea                 | (i)                  | The Eastern Ghats lie along the Bay of Bengal.                |
| (ii)                 | They are continuous and can be crossed through passes only. | (ii)                 | They are discontinuous and irregular and dissected by rivers. |
| (iii)                | Average height is 900-1600 metres.                          | (iii)                | Average height is 600 metres                                  |
| (iv)                 | Highest peak- <b>Anai Mudi</b> (2,695 metres)               | (iv)                 | Highest peak- <b>Mahendragiri</b> (1,501 metres)              |

- The black soil area of the peninsular plateau is known as **Deccan Trap**. This is of volcanic origin and hence the rocks are igneous.
- **The Indian Desert: Important features**
  - (i) The Indian Desert is an undulating sandy plain covered with sand dunes.
  - (ii) This region receives very low rainfall below 150 mm per year.
  - (iii) It has arid climate with low vegetation.
  - (iv) Streams appear during the rainy season. **Luni** is the only large rivers in this region.
  - (v) **Barchans** (large shaped dunes) cover larger areas of the Indian Desert.
- **The Coastal Plains:** Some of the important features of western coast and eastern coast are as follows:
  - The western coast:**
    - (i) It is located between the Western Ghats and the Arabian Sea.
    - (ii) It is relatively narrow.
    - (iii) It consists of three sections. The northern part of the coast is called the Konkan, the central stretch is called the Kannad

Plain while the southern stretch is referred to as the Malabar coast.

### **The eastern coast:**

- (i) It lies between the Eastern Ghats and the Bay of Bengal.
  - (ii) This plain is wide and level.
  - (iii) It is divided into two parts. In the northern part, it is referred to as the *Northern Circar*, while the southern part is known as the *Coromandel Coast*.
  - (iv) Large rivers such as the Mahanadi, the Godavari, the Krishna and the Kaveri have formed extensive delta on this coast.
- The **Chilka Lake** is the largest salt water lake in India. It is in the state of Odisha.
  - **The Islands:** The Islands in India is divided into two parts:
    - (i) **Lakshadweep Islands:**
      - (a) This group of Islands is composed of small coral islands.
      - (b) It covers small area of 32 sq. km. Kavaratti island is the administrative headquarters of Lakshadweep.
      - (c) This island group has great diversity of flora and fauna.
    - (ii) **The Andaman and Nicobar islands:**
      - (a) These islands are located in the Bay of Bengal extending from north to south.
      - (b) The entire group of island is divided into two broad categories – The Andaman in the North and the Nicobar in the south.
      - (c) It is believed that these islands are an elevated portion of submarine mountains.
      - (d) These islands lie close to equator and experience equatorial climate and have thick forest cover.

## QUESTIONS

### Very Short Questions (1 Mark)

1. Out of which sea has the Himalaya uplifted?
2. Which peak of the Himalayas is the highest in India?
3. Mention the rivers by which Northern Plain of India has been formed.
4. By which name are the old and new alluvial soils known?
5. What is bhabar?
6. What do you understand by *terai*?
7. In how many parts is the Peninsular Plateau broadly divided?
8. Which group of Islands in India is composed of corals?
9. By which name is the area of land which is surrounded by water on three sides known?
10. Which hills and mountains demarcate the borders between India and Myanmar in the eastern part of India?
11. What do you understand by *doab*?
12. In which state is the Chilka Lake located?

### Short/Long Questions (3/5 Marks)

1. In how many groups are the plate movements classified? Explain.
2. What are the main plates on earth?
3. Mention the highest peaks of the Himalayas in India with their heights?
4. Mention three features of Himadri?
5. Mention three features of Himachal or lesser Himalaya.
6. Mention three features of the Shiwaliks.
7. Classify the Himalayas on the basis of river valleys.
8. In how many sections is the Northern Plain broadly divided?
9. Explain the features of the Northern Plain.
10. Explain the features of the Peninsular Plateau.
11. Differentiate between Western Ghats and Eastern Ghats?
12. Explain the features of the Indian desert.
13. Differentiate between Eastern Coastal Plains and Western Coastal Plains.

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14. Mention the features of the group of Islands in India.
  15. 'The Himalayas is like boon for India.' Explain.

### **ANSWERS**

#### **Very short types (1 Mark)**

1. Tethys
2. Kanchenjunga
3. The Indus, the Ganga and the Brahmaputra along with their tributaries.
4. The old alluvial soil is known as bhangar and the new alluvial soil is known as khadar.
5. 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. All the streams disappear in the bhabar belt.
6. South to the bhabar belt, the streams and rivers re-emerge and create a wet, swampy and marshy region known as terai.
7. The peninsular Plateau consists of two broad divisions- (a) the Central Highlands and (b) the Deccan Traps.
8. Lakshadweep
9. The Peninsula
10. Purvanchal
11. The land between two rivers
12. Odisha

#### **Short/ Long Questions (3/5 Marks)**

1. Plate movements are classified into three types:
  - (i) Convergent boundary- plates come towards each other.
  - (ii) Divergent boundary-plates move away from each other.
  - (iii) Transform boundary- movements of plates horizontally past each other.

2. Important plates are:

- (i) Eurasian plate
- (ii) North American plate
- (iii) South American plate
- (iv) African plate
- (v) Indo-Australian plate
- (vi) Pacific plate
- (vii) Antarctic plate

3. The highest peaks of the Himalayas that are in India are as follows:

- (a) Kanchenjunga(8598 m)
- (b) Nanga Parbat (8126 m)
- (c) Nanda Devi (7817 m)
- (d) Kamet (7756 m)
- (e) Namcha Barwa (7756 m)

4. Features of Himadari are:

- (i) It is the most continuous range consisting of the loftiest peaks with an average height of 6,000 metres.
- (ii) It contains all the prominent Himalayan peaks.
- (iii) The core of this part of Himalayas is composed of granite.
- (iv) It is perennially snow bound, and a number of glaciers descend from this range.

5. Features of Himachal or lesser Himalayas are:

- (i) The ranges are mainly composed of highly compressed and altered rocks.
- (ii) The altitude varies between 3,700 and 4,500 metres and the average width is of 50 Km. Pir Panjal range forms the longest and the most important range.
- (iii) This range consists of the famous valley of Kashmir, the Kangra and Kullu valley in Himachal Pradesh.

6. Features of Shiwaliks are:

- (i) This is the outer most range of the Himalayas.
- (ii) They extend over a width of 10-15 Km and have an altitude varying between 900 and 1100 metres.

- (iii) These ranges are composed of unconsolidated sediments brought down by rivers from the main Himalayan ranges locate farther north.

7. Division of the Himalayas by river valleys:

- (i) Punjab Himalayas- between Indus and Sutlej rivers.
- (ii) Kumaon Himalayas- between Satluj and Kali rivers.
- (iv) Nepal Himalayas- between Kali and Tista rivers.
- (v) Assam Himalayas- between Tista and Dihang rivers.

8. The Northern Plain is broadly divided into following three sections:

- (i) Punjab Plains- the western part of the Northern Plain is referred to as the Punjab Plains. It is formed by the Indus and its tributaries-the Jhelum, the Chenab, the Ravi, the Beas and the Satluj. The larger part of this plain lies in Pakistan. This section of the plain is dominated by the doabs.
- (ii) Ganga Plain- the Ganga plain extends between Ghaggar and Teesta rivers. It is spread over the states of Haryana, Delhi, U.P. Bihar, partly Jharkhand and West Bengal.
- (iii) Brahmaputra plain- This plain is formed by the Brahmaputra and its tributaries. It lies mainly in the state of Assam.

9. Important features of the Northern Plain are as follows-

- (i) 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.
- (ii) It spreads over an area of 7 lakh sq. km. The plain being about 2400 Km long and 240 to 340 Km broad.
- (iii) It is made of alluvial soil brought by the rivers. The newer alluvial soil called khadar is ideal for intensive agriculture.
- (iv) It's densely populated area.

10. Important features of the Peninsular Plateau are as follows:

- (i) The Peninsular plateau is a tableland composed of the old crystalline, igneous and metamorphic rocks.

- (ii) The plateau consists of two broad divisions, namely, the Central Highlands and the Deccan Plateau.
- (iii) An extension of the Plateau is also visible in the northeast-locally known as the Meghalaya, Karbi-Anglong Plateau and the North Cachar Hills.
- (iv) The Western Ghats and the Eastern Ghats mark the western and eastern edges of the Deccan Plateau respectively.
- (v) One of the distinct features of the peninsular plateau is the black soil area known as Deccan Trap.

11. Comparison between the Western Ghats and the Eastern Ghats:

- (i) The Western Ghats and the Eastern Ghats mark the western and the eastern edges of the Deccan plateau respectively.
- (ii) The Western Ghats are continuous and can be crossed through passes only while the Eastern Ghats are discontinuous and irregular and dissected by the rivers draining into the Bay of Bengal.
- (iii) The Western Ghats are higher than the Eastern Ghats. The average elevation of the Western Ghats is 900-1600 metres as against 600 metres of the Eastern Ghats.
- (iv) The highest peak in the Western Ghats is Anai Mudi (2,695 metres) while Mahendragiri (1,501) is the highest peak in the Eastern Ghats.

12. See the key points.

13. See the key points.

14. See the key points

15. The Himalayas have following importance for our country:

- (i) It provides the invincible northern boundary to our country.
- (ii) The Himalayas prevent the cold winds from Central Asia from entering the subcontinent.
- (iii) The Himalayan Rivers are perennial. Thus, our country gets water throughout the year.
- (iv) Having rich sources of natural resources.
- (v) The Himalayas are home to beautiful hills and tourist places.

