

## 02. PHYSICAL FEATURES OF INDIA

### NOTES –

- Major Physiographic Divisions-
  - [i] The Himalayan Mountains
  - [ii] The Northern Plains
  - [iii] The Peninsular Plateau
  - [iv] The Indian Desert
  - [v] The Coastal Plains
  - [vi] The Islands
- The Himalayan Mountains-
  - [i] The Himalayas, geologically young and structurally fold mountains stretch over the northern borders of India.
  - [ii] These mountain ranges run in a west-east direction from the Indus to the Brahmaputra.
  - [iii] They form an arc, which covers a distance of about 2400km. Their width varies from 400km in Kashmir to 150km in Arunachal Pradesh.
- The Himalaya consists of three parallel ranges longitudinal extent-
  - [i] Himadri - The northern-most range is known as the Himadri. It is the most continuous range consisting of the most loftiest peaks with an average height of 6,000 metres. It contains all prominent Himalayan Peaks. The folds of these Himadri are asymmetrical in nature. The core of this part of Himalayas is composed of granite. It is perennially snow bound, and a number of glaciers descend from this range.
  - [ii] Himachal - The range lying to the south of the Himadri forms the most rugged mountain system and is known as Himachal. The altitude varies between 3700 and 4500 metres and average width of 50 km. The three ranges are the Pir Panjal, the Dhauladhar and the Mahabharat ranges. This range consists of famous valley of Kashmir, the Kangra and Kullu Valley in Himachal Pradesh. This region is well-known for its hill stations.
  - [iii] Shiwaliks - The outermost range of the Himalayas is called the Shiwaliks. They extend over a width of 10 to 50 km and have an altitude varying between 900 and 1100 metres. These ranges are composed of unconsolidated sediments brought down by rivers. The longitudinal valley lying between lesser Himalayas and Shiwaliks are known as duns. For example - Dehra Dun, Kotli Dun, Patti Dun.
- Latitudinal divisions have been demarcated by river valleys-
  - [i] The part of Himalayas lying between Indus and Satluj has been traditionally known as Punjab Himalayas but it is also known regionally as Kashmir and Himachal Himalaya from west to east respectively.
  - [ii] The part of Himalayas lying between Satluj and Kali rivers is known as Kumaon Himalayas
  - [iii] The Kali and Teesta rivers demarcate the Nepal Himalayas.
  - [iv] The part lying between Teesta and Dihang rivers is known as Assam 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 - Patkai hills and in Arunachal, the Naga hills in Nagaland, the Manipur hills in Manipur and the Mizo hills in Mizoram.

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- The Northern Plains-
  - [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] This plain is formed of alluvial soil.
  - [iii] It spreads over the area of 7 Lakh sq. km.
  - [iv] The plain began about 2400km long and 240 to 320 km broad.
  - [v] It is densely populated because of a rich soil cover, has adequate water supply, favourable climate, agriculturally productive part and plain topography.
  - [vi] In the lower course, due to gentle slope, the velocity of the river decreases, which results in the formation of riverine islands.
  - [vii] The river in their lower course split into numerous channels due to the deposition of silt.
- The Northern Plain is divided into three sections-
  - [i] The Punjab Plains.
  - [ii] The Ganga Plains.
  - [iii] The Brahmaputra Plains.
- [i] The 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 Indus and its tributaries are - the Jhelum, the Chenab, the Ravi, the Beas and the Satluj. All these originate in the Himalaya. This section of the plain is dominated by the doabs.
- [ii] Ganga Plains - The Ganga Plains extend between Ghaggar and Teesta rivers. It is spread over the North India, Haryana, Delhi, UP, Bihar, Partly Jharkhand and WB. River Ganga and its tributaries is drained.
- [iii] The Brahmaputra Plains - Assam lies in the Brahmaputra Plain.
- According to the varying in relief features, the Northern Plains can be divided into 4 regions:
  - [i] Bhabar Belt
  - [ii] Terai
  - [iii] Bhangar
  - [iv] Khadar
- [i] Bhabar Belt - The rivers, after descending from the mountain deposits 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.
- [ii] Terai - South of Bhabar Belt, the streams and the rivers re-emerge and create a wet, swampy and marshy region known as Terai. This was a thickly forested region full of wildlife. The forests have been cleared to create agricultural land and to settle migrants from Pakistan after partition.
- [iii] Bhangar - The largest part of the Northern Plains is formed of older alluvium. It lies above the floodplains and presents a Terrace like feature. This part is known as Bhangar.
- [iv] Khadar- The soil in this region contains calcareous deposits known as kankar. The newer, younger deposits of the floodplain are called khadar. They are renewed almost every year and so are fertile, thus, ideal for intensive agriculture.

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- The Peninsular Plateau-
  - [i] The Peninsular Plateau in the north is bounded by Aravali Range, the Vindhya, the Satpura, the Bharmar and the Rajmahal hills.
  - [ii] In the west, it is bounded by western ghats.
  - [iii] In the east, it is bounded by eastern ghats.
  - [iv] It is a tableland composed of the old crystalline, igneous and metamorphic rocks.
  - [v] It was formed due to the breaking and drifting of the gondwana land and thus making it a part of the oldest landmass.
  - [vi] The Peninsular Plateau has broad and shallow valleys and rounded hills.
  - [vii] Peninsular Plateau is the black soil area known as deccan trap.
  - [viii] Deccan trap is a volcanic origin.
  - [ix] These rocks have denuded over time and are responsible for the formation of black soil.
- The peninsular plateau consists of two broad divisions-
  - [i] The Central Highlands –
    - I. It is a part of Peninsular Plateau lying to the north of the Narmada River, covering major parts of Malwa plateau.
    - II. The Vidhyan range is bounded by the Satpura range on south and Aravali on the northwest.
    - III. The further westward extension gradually merges with Rajasthan.
    - IV. The flow of river draining this region, namely the Chambel, the Sind, the Betwa and the Ken is from southwest to northeast indicating towards the slope.
    - V. The central highlands are wider in west but narrower in the east.
    - VI. The Central highlands are composed of four plateaus:
      - i. The Malwa Plateau
      - ii. The Bundelkhand Plateau
      - iii. The Baghelkhand Plateau
      - iv. The Chotanagpur Plateau
  - [ii] The Deccan Plateau –
    - I. The Deccan Plateau is a triangular landmass which is bordered in the north by river Narmada, in the east by the eastern ghats, in the west by the western ghats and in the south by Nilgiri hills.
    - II. The Deccan Plateau is higher in the west and slopes gently eastwards.
    - III. An extension of the plateau is also visible in the northeast, locally known as the Meghalaya, Karbianglong Plateau and the North Cachar Hills.
    - IV. It is separated by a fault from Chotanagpur Plateau
    - V. These prominent hill ranges from the west to the east are the Garo, the Khasi and Jaintia Hills.

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- Western Ghats and Eastern Ghats –

Western Ghats	Eastern Ghats
<ul style="list-style-type: none"> <li>[i] They mark the western edge of Deccan Plateau</li> <li>[ii] They run parallel to the western coast</li> <li>[iii] These are continuous range and can be crossed through passes</li> <li>[iv] These are higher than eastern ghats with average elevations of 900-1600m</li> <li>[v] These ranges stops south-west monsoon causing rainfall in western coastal plains during summer season</li> <li>[vi] The highest peaks include the Anai Mudi (2695m) and Doda Betta (2637m)</li> </ul>	<ul style="list-style-type: none"> <li>[i] They mark the eastern edge of Deccan Plateau</li> <li>[ii] They run parallel to the eastern coast</li> <li>[iii] These are discontinued range and are divided by rivers</li> <li>[iv] These are lower than western ghats with average elevations of 600m</li> <li>[v] These ranges stops north-east wind causing rainfall in eastern coastal plains during winter season</li> <li>[vi] Mahendragiri (1501m) is the highest peak in the eastern ghats</li> </ul>

- The Indian Desert –

- [i] The Indian Desert lies towards the western margins of the Aravali Hills.
- [ii] It is an undulating sandy plain covered with sand dunes.
- [iii] This region receives very low rainfall below 150mm per year.
- [iv] It has arid climate with low vegetation cover.
- [v] Streams appear during the rainy season. Soon after they disappear into the sand as they don't have enough water to reach the sea.
- [vi] Luni is the only large river in this region.
- [vii] Barchans (Crescent-shaped dunes) cover larger areas but longitudinal dunes become more prominent near the Indo-Pak boundary.

- The Coastal Plains –

Western Coastal Plains	Eastern Coastal Plains
<ul style="list-style-type: none"> <li>[i] They run along the western ghats and Arabian Sea</li> <li>[ii] They are divided into four sections: <ul style="list-style-type: none"> <li>• Kankan coast lies between Goa and Mumbai</li> <li>• Gujarat coast: covers the state of Gujarat</li> <li>• Kannad coast: lies between Goa and Mangalore</li> <li>• Malabar coast: lies between Mangalore and Kanniyakumari</li> </ul> </li> <li>[iii] Western Coastal Plain is narrower than eastern coastal plains</li> <li>[iv] It receives rainfall in summer season from south-west monsoon</li> </ul>	<ul style="list-style-type: none"> <li>[i] They run along the eastern ghats and Bay of Bengal</li> <li>[ii] They are divided into four sections: <ul style="list-style-type: none"> <li>• Coromandal coast lies between Mahanadi Delta and Kanniyakumari</li> <li>• Northern Circar: State of West Bengal to Mahanadi delta</li> </ul> </li> <li>[iii] They are wider than the western coastal plains</li> <li>[iv] It receives rainfall in winter season from north-east monsoon</li> </ul>

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- The Islands –

- [i] Lakshadweep Island group lies close to the Malabar coast of Kerala.
- [ii] This group of islands is composed of small coral islands.
- [iii] They were known as Laccadive, Minicoy and Amindive but in 1973, these were named as Lakshadweep.
- [iv] It covers a small area of 32 sq. km.
- [v] Kavaratti island is the administrative headquarters of Lakshadweep.
- [vi] This island group has great diversity of flora and fauna. The Pitti islands, which is uninhabited, has a bird sanctuary.
- [vii] The elongated chain of islands located in the Bay of Bengal extending from north to southeast are Andaman and Nicobar Islands.
- [viii] They are bigger in size and are more numerous and scattered.
- [ix] The entire group of islands is divided into two broad categories:
  - i. The Andaman in the North.
  - ii. The Nicobar in the South.
- [x] It is believed that these islands are an elevated portion of submarine mountains.
- [xi] These island groups are of great strategic importance for the country.
- [xii] There is great diversity of flora and fauna.
- [xiii] These islands lie close to equator and experience equatorial climate and has thick forest cover.

### Exercise –

01. Choose the right answer:

[i] A landmass bounded by sea on three sides is referred to as

→ Peninsula

[ii] Mountain ranges in the eastern part of India forming its boundary with Myanmar are collectively called

→ Purvachal

[iii] The western coastal strip, south of Goa is referred to as

→ Kannad

[iv] The highest peak in the Eastern Ghats is

→ Mahendragiri

02. Answer the following:

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[i] What is the Bhabar?

→ The rivers after descending from the mountains deposits 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.

[ii] Name the three major divisions of the Himalayas from north to south.

→ Himadri, Himachal and Shiwaliks.

[iii] Which plateau lies between the Aravali and the Vidhyan ranges

→ Central Highlands.

[iv] Name the island group of India having coral origin

→ Lakshadweep

03. Distinguish between:

[i] Bhangar and Khadar

Bhangar	Khadar
[i] These are old alluvial deposits	[i] These are new alluvial deposits
[ii] These are less fertile	[ii] These are more fertile
[iii] These are located at a higher elevation than Khadar	[iii] These are located at a lower elevation than Bhangar and near the river bank

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Sources – Shibani Ma'am : A teacher of geography at BMSSS.