

QUESTION BANK IN SOCIAL SCIENCE CLASS-IX (TERM-I)

2

PHYSICAL FEATURES OF INDIA

CONCEPTS

Location

- India has all major physical features of the Earth, i.e. mountains, plains, deserts, plateaus and islands.
- In India the soil colour varies from place to place as it is formed from different types of rocks.
- India has varied physical features whose formation can be explained on the basis of the 'Theory of Plate Tectonics'.
- According to the theory of Plate Tectonics the seven major and minor plates that form the Earth's crust keep moving, causing stress and thus leading to folding, faulting and volcanic activity.
- The physical features of India can be grouped under the following 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

- The Himalayas are young-fold mountains which are the loftiest and one of the most rugged mountain barriers of the world.
- The Himalayas are 2400 km long, 400 km to 150 km wide from Kashmir to Arunachal Pradesh respectively.
- The Himalayas have three parallel ranges in the longitudinal extent namely :
 - Great or Inner Himalayas also called *Himadri*.
 - Middle Himalayas or *Himachal*.
 - Outer Himalayas or *Shivalik*.
- The Himalayas can be divided into four sections :
 - Punjab Himalayas — between Indus and Satluj.
 - Kumaon Himalayas — between Satluj and Kali.
 - Nepal Himalayas — between Kali and the Tista.
 - Assam Himalayas (Eastern Himalayas) — Between Tista and the Dibang (Tsangpo).

The Northern Plains

- The Northern Plains spread over an area of 7 lakh sq. km, 240 km long and 240 km to 320 km broad.
- The rivers that flow to the plains from the mountains are involved in depositional work.
- Difference in relief causes the Northern Plain to have four regions.
 - *Bhabar* — laying at the foot of Shivalik, a narrow 8 to 16 km wide belt of pebbles.

- *Terai* — lying next to *Bhabar*, a wet and marshy area with wildlife and forests.
- *Bangar* — Older alluvium plain which rises above the level of the flood plains.
- *Khadar* — Younger alluvium of the flood plains.

The Peninsular Plateau

- The Peninsular Plateau is the tableland formed due to the breaking and drifting of the Gondwanaland.
- The plateau consists of two broad divisions, namely, the Central Highlands and the Deccan Plateau.
- The eastward extensions of Peninsular Plateau are locally known as Bundelkhand and Baghelkhand. The Chhota Nagpur Plateau marks the further eastward extension drained by the Damodar river.
- The Deccan Plateau, a triangular mass, lies to the south of the river Narmada.
- The western and eastern edges of the Deccan Plateau are marked by the Western Ghats and the Eastern Ghats respectively.
- The Western Ghats are higher than the Eastern Ghats.
- A distinct feature of the peninsular plateau is the black soil area known as Deccan Trap.

The Indian Desert

- The undulating sandy plain covered with sand dunes towards the western margins of the Aravalli Hills is the Indian Desert.
- Crescent shaped dunes called barchans cover large parts of the Indian Desert.
- Luni is the only large river in this region.

The Coastal Plains

- The narrow coastal strips flank the Peninsular Plateau.
- On the west the coastal strips are divided into *Konkan* (Mumbai-Goa), *Kannad Plain* and the *Malabar coast* from northern to southern part.
- On the east the coastal strip is divided into *Northern Circars* and the *Coromandal Coast* from northern to southern part.

The Islands

- The Lakshadweep Islands group in the Arabian Sea is close to Kerala.
- The Lakshadweep Islands were formerly known as Laccadive, Minicoy and Amindive.
- The Andaman and Nicobar Islands are an elongated chain of islands located in the Bay of Bengal.
- The Andamans and Nicobar Islands are an elevated portion of submarine mountains.

I. SUMMATIVE ASSESSMENT

A. NCERT TEXTBOOK QUESTIONS

Questions within the Lesson

Q.1. Find out the names of the glaciers and passes that lie in Great Himalayas. (Page 11)

Ans. Glaciers in the Great Himalayas — Gangotri, Chaturangi, Bhagirathi, Kharak, Satopanth, Kamet, Milam and Pindari.

Passes in the Great Himalayas — Karakoram pass, Shipkila pass, Nathula, Bomdila pass.

Q.2. Find out the name of the states where highest peaks are located. (Page 11)

Ans. Mountain peaks	States
Kanchenjunga	Sikkim
Nanga Parbat	Jammu and Kashmir
Nanda Devi	Uttarakhand
Kamet	Uttarakhand
Namcha Barwa	Assam

Q.3. Find out location of Mussoorie, Nainital, Ranikhet from your atlas and also name the states where they are located. (Page 11)

Ans. Mussoorie	Uttarakhand
Nainital	Uttarakhand
Ranikhet	Uttarakhand

Questions in the Exercise

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

(i) A landmass bounded by sea on three sides is referred to as

- (a) Coast (b) Island (c) Peninsula (d) None of the above.

Ans. Peninsula

(ii) Mountain ranges in the eastern part of India forming its boundaries with Myanmar are collectively called :

- (a) Himachal (b) Uttaranchal (c) Purvanchal (d) None of the above.

Ans. Purvanchal

(iii) The western coastal strip south of Goa is referred to as

- (a) Coromandel (b) Konkan (c) Kannad (d) Northern Circar

Ans. Konkan

(iv) The highest peak in the Eastern Ghats is

- (a) Anai Mudi (b) Kanchenjunga (c) Mahendragiri (d) Khasi

Ans. Mahendragiri

Q.2. Answer the following questions briefly

(i) What are tectonic plates ?

Ans. Large fragments of the Earth's crust torn due to the rising currents are called tectonic plates.

(ii) Which continents of today were part of the Gondwanaland? (CBSE - 2010)

Ans. South America, Africa and Australia.

(iii) What is the 'Bhabar'?

Ans. Bhabar is a pebble studded formation situated at the junction of mountain and plain.

(iv) Name the three major divisions of the Himalayas from north to south.

Ans. The Great or the Inner Himalayas or the Himadri, the Middle Himalayas or the Himachal, and the Outer Himalayas or the Shivaliks.

(v) Which plateau lies between the Aravali and the Vindhya ranges?

Ans. The Malwa plateau lies between the Aravali and the Vindhya Ranges.

(vi) Name the island group of India having coral origin.

Ans. Lakshadweep Islands is the island group of India having coral origin.

Q.3. Distinguish between**(i) Converging and Diverging Tectonic Plates.**

Ans.	Converging Plates	Diverging Plates
	(a) When tectonic plates move towards each other, they are called converging plates. (b) When they move towards each other, they collide or crumble or one of them slides under the other. (c) Converging plates cause folds.	(a) When tectonic plates move away from each other, they are termed as diverging plates. (b) When they move away from each other, they do not collide or crumble. (c) Diverging plates cause fractures in the crust.

(ii) Distinguish between Bangar and Khadar.

Ans.	Bangar	Khadar
	(a) Formed of older alluvium (b) Lies above flood plains of rivers. (c) Presents a terrace like feature. (d) Less fertile	(a) Renewed every year. (b) Is newer, younger deposit of flood (c) Contains calcareous deposits locally known as <i>Kankar</i> . (d) More fertile

(iii) Distinguish between the Western Ghats and the Eastern Ghats.

Ans.	Western Ghats	Eastern Ghats
	(a) They stand like a continuous wall and can be crossed through passes only. Thal Ghat provides passage to rails and roads. (b) This range is a source of many large rivers. (c) It obstructs the monsoon winds coming from the Arabian Sea which causes heavy rainfall in the Western Coastal Plain.	(a) They are discontinuous and irregular. They have been dissected by rivers which have made their passages to reach the Bay of Bengal. (b) No big river originates from this range. (c) They are almost parallel to the monsoons originating in the Bay of Bengal and do not cause much rainfall.

Q.4. Describe how the Himalayas were formed.

Ans. Geologists claim that a sea was located where the Himalayas now stand. Internal and external changes of Earth's crust occurred. It is said that one of the crustal plates, called the Indo-Australian plate, separated from the super-continent named Gondwanaland. It drifted slowly towards the north to collide with the Eurasian plate five million years ago. The northern edge of the Indo-Australian plate was pushed beneath the Eurasian plate. After the collision of these two plates, the sedimentary rocks of enclosed ocean folded to form the Himalayas.

Q.5. Which are the major physiographic divisions of India? Contrast the relief of the Himalayan region with that of the Peninsular Plateau.

Ans. The major physiographic divisions of India are :

- (i) The Great Mountains of the North.
- (ii) The North Indian Plain.
- (iii) The Peninsular Plateau
- (iv) The Coastal Plains and
- (v) The Islands.

Himalayan Region	Peninsular Plateau
(a) This region comprises greatest and highest mountain ranges of the world.	(a) Rugged and dissected terrain plateau is a remnant portion of the supercontinent the Gondwanaland.
(b) The ranges have I-shaped and U-shaped valleys.	(b) It has horsts, rift valleys and troughs.
(c) It is the origin of perennial rivers.	(c) It has rainfed, seasonal rivers.
(d) Young fold mountains made from the uplift of the strata formed by the sedimentary rocks.	(d) Created from igneous and metamorphic rocks after splitting of Gondwanaland.
(e) Parallely arranged mountain ranges are separated by valleys and plains.	(e) Rivers dissect. Faults and vertical movement of the Earth mark the plateau.

Q.6. Give an account of the Northern Plains of India.

Ans. The Northern Plains have been formed from the alluvium that the mountain rivers deposited here. This turned the soil on the surfaced land fertile for growing a rich harvest of variety of crops. This led to the development of the Indus River Valley Civilisation. The rich soil was further aided by favourable climate and constant water supply from the rivers. Between the mouths of the Indus and the Ganga-Brahmaputra, the North Indian Plain covers a distance of 3200 km. It is 300 to 150 km wide at some places. The North Indian Plains have the Indus river system in the west and the Ganga-Brahmaputra river system in the east. The first includes Jhelum, Chenab, Ravi, Beas, Satluj. The Indus flows into the Arabian Sea.

The second includes Ganga, its tributaries and the Brahmaputra which combine as Meghna as they drain into the Bay of Bengal. They form the world's largest and fastest growing delta.

The difference in relief has led the North Indian Plains to be divided into four zones :

- (i) Bhabhar,
- (ii) Tarai,
- (iii) Bangar and
- (iv) Khadar.

Q.7. Write short notes on the following.

- (i) *The Indian Desert*

Ans. Lying towards the western margins of the Aravali Hills, the Indian desert is formed of sandy plain covered with sand dunes. Receiving less than 10 mm rainfall in a year, the region has arid climate, low vegetation and streams that appear only in the rainy season. But they soon disappear into the sands, lacking enough water to reach the sea. Large areas of the deserts have crescent shaped sand dunes, i.e. barchans, while longitudinal dunes are abundant near Indo-Pakistan boundary.

- (ii) *Central Highlands.*

Ans. The northern part of the Peninsular Plateau consists of plateaus, denuded mountain ranges and low hills made of igneous rocks. In the north-west are the Aravali range, running in south-west,

north-east direction forming a discontinuous ridge. Thar Desert lies to the west of Aravali ranges. The southern boundary is demarcated by the Vindhya Range with Kaimur Hills in the eastern extent. The Malwa plateau lies between Aravalis and Vindhyas. Between the valleys of Narmada and the Son, escarpments are formed by the Vindhyan Kaimur range.

(iii) *Island groups of India.*

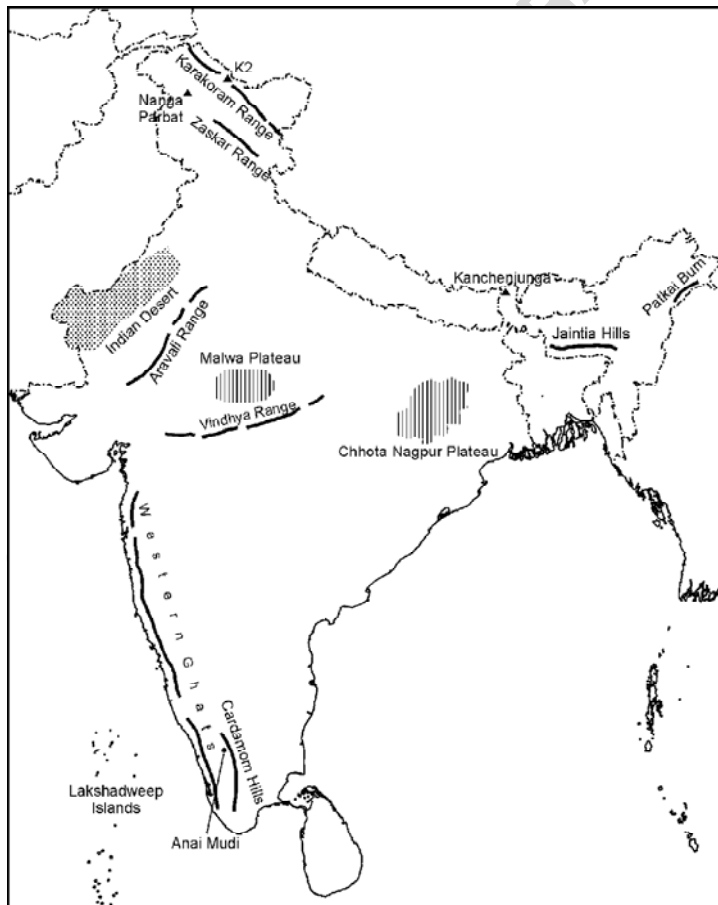
Ans. The Lakshadweep consists of many small islands located opposite the Kerala coast in the Arabian Sea. The islands of this group are formed of coral deposits called ‘atolls’ in Malayalam which refer to their ring or ‘horse-shoe’ shape. The Andaman and Nicobar Islands, on the other hand, are larger in size. They are more in number and more widely scattered. There are about 200 islands in the Andaman group and 19 islands in the Nicobar group.

MAP SKILLS

On an outline map of India show the following.

- (i) *Mountain and hill ranges — the Karakoram, the Zaskar, the Patkai Bum, the Jaintia, the Vindhya range, the Aravali, and the Cardamom hills.*
- (ii) *Peaks — K2, Kanchenjunga, Nanga parbat and the Anai Mudi.*
- (iii) *Plateaus — Chhota Nagpur and Malwa*
- (iv) *The Indian Desert, Western Ghats, Lakshadweep Islands.*

Ans.



OTHER IMPORTANT QUESTIONS (AS PER CCE PATTERN)

B. MULTIPLE CHOICE QUESTIONS (1 MARK)

Q.1. Which of the following is responsible for the variation in the colour of soil in different parts of India?

- (a) Difference in rock formations (b) Weathering
(c) Erosion and deposition (d) Landuse

Ans. (a)

Q.2. Which of the following has not been a factor in the creation and modification of India's relief features?

- (a) Geological formations (b) Population density
(c) Weathering (d) Erosion and deposition

Ans. (b)

Q.3. Which of the following is a plausible theory presented by Earth scientists to explain the formation of continents and oceans and the various landforms?

- (a) Theory of Motion (b) Theory of Plate Tectonics
(c) Theory of Evolution (d) Theory of Relativity

Ans. (b)

Q.4. According to the 'Theory of Plate Tectonics,' the earth's crust is formed of how many major plates? (Important)

- (a) Three (b) Five (c) Seven (d) Ten

Ans. (c)

Q.5. According to the 'Theory of Plate Tectonics,' the movement of the plates result in some geological activity. Which one of the following is not such a geological activity?

- (a) Volcanic activity (b) Folding
(c) Faulting (d) Glaciation

Ans. (d)

Q.6. According to the 'Theory of Plate Tectonics,' when some plates come towards each other, which of the following is formed?

- (a) Convergent boundary (b) Divergent boundary
(c) Transform boundary (d) Colliding boundary

Ans. (a)

Q.7. According to the 'Theory of Plate Tectonics,' when some plates move away from each other, which of the following is formed?

- (a) Convergent boundary (b) Divergent boundary
(c) Transform boundary (d) None of the above

Ans. (b)

Q.8. According to the 'Theory of Plate Tectonics,' in the event of two plates coming together, which of the following is not possible?

- (a) The plates may collide and crumble.

- (b) The plates may move horizontally past each other.
- (c) The plates may form divergent boundary.
- (d) One plate may slide under the other.

Ans. (c)

Q.9. According to the 'Theory of Plate Tectonics,' what have been the effects of the movement of the plates?

- (a) Change in position and size of continents.
- (b) Formation of ocean basins.
- (c) Evolution of the present landforms and relief of India.
- (d) All of the above.

Ans. (d)

Q.10. A landmass bounded by sea on three sides is referred to as _____.

- (a) Coast
- (b) Island
- (c) Peninsula
- (d) None of the above

Ans. (c)

Q.11. Which of the following divisions of India has the oldest landmass?

- (a) The Himalayas
- (b) The Northern Plains
- (c) The Peninsular Plateau
- (d) The Indian Desert

Ans. (c)

Q.12. The Peninsular Plateau of India is part of which of the following landmass?

- (a) Angaraland
- (b) Gondwanaland
- (c) Tethys
- (d) Eurasian Plate

Ans. (b)

Q.13. Which of the following countries or continents was not a part of the ancient landmass of Gondwanaland?

- (a) India
- (b) Australia
- (c) Europe
- (d) South America

Ans. (c)

OR

Which continents of today were part of the Gondwanaland ? (CBSE 2010)

- (a) Asia and Africa
- (b) Europe and Asia
- (c) Europe and Africa
- (d) Australia and South America

Ans. (d)

Q.14. The northward drift of the Indo-Australian plate resulted in its collision with the much larger Eurasian plate. Which of the following was the result of this collision?

- (a) The Gondwanaland split into a number of plates.
- (b) The continents of Europe and Asia were formed.
- (c) Sedimentary rocks accumulated in the Tethys geosyncline were folded.
- (d) India and Australia were formed.

Ans. (c)

Q.15. Which of the following physiographic divisions of India was formed out of accumulations in the Tethys geosyncline? (Important)

- (a) The Himalayas (b) The Northern Plains
(c) The Peninsular Plateau (d) The Indian Desert

Ans. (a)

Q.16. The Himalayan uplift out of the Tethys Sea and subsidence of the northern flank of the peninsular plateau resulted in the formation of a large basin. Which of the following physical divisions of India was formed due to filling up of this depression?(Important)

- (a) The Himalayas (b) The Northern Plains
(c) The Peninsular Plateau (d) The Coastal Plains

Ans. (b)

Q.17. Geologically, which of the following physiographic divisions of India is supposed to be one of the most stable land blocks?

- (a) The Himalayas (b) The Northern Plains
(c) The Peninsular Plateau (d) The Indian Desert

Ans. (c)

Q.18. From the point of view of geology, which of the following physiographic divisions of India is considered to be an unstable zone?

- (a) The Himalayan Mountains (b) The Peninsular Plateau
(c) The Indian Desert (d) The Islands

Ans. (a)

Q.19. Which of the following are young-fold mountains? (V. Important)

- (a) The Aravalis (b) The Nilgiris
(c) The Himalayas (d) The Sahyadri

Ans. (c)

Q.20. Which of the following physical features forms a natural barrier to the north of India?

- (a) Kunlun Mountains (b) Plateau of Tibet
(c) River Brahmaputra (d) The Himalayas

Ans. (d)

Q.21. The Himalayas consist of three parallel ranges in its longitudinal extent. Which of the following is the name of the northern-most range? (Important)

- (a) The Himadri (b) The Himachal
(c) The Shivaliks (d) The Purvanchal

Ans. (a)

Q.22. Which part of the Himalayas is perennially snowbound?

- (a) Great Himalayas or Himadri (b) Lesser Himalayas or Himachal
(c) Shivaliks (d) Purvanchal

Ans. (a)

Q.23. Which of the following is the highest peak in India? (V. Important)

- (a) Mt. Everest (b) Kanchenjunga (c) Nanga Parbat (d) Nandadevi

Ans. (b)

Q.24. Which of the following is not a mountain pass in the Great Himalayas?

- (a) Bara Lapcha La and Shipkila (b) Nathula
(c) Khyber pass (d) Jojila and Lipu Lekh

Ans. (c)

Q.25. What are Lesser Himalayas known as? (V. Important)

- (a) Himadri (b) Himachal (c) Shivaliks (d) Purvanchal

Ans. (a)

Q.26. Which of the following ranges are not part of the Lesser Himalayas or Himachal?

- (a) Pir Panjal (b) Dhaula Dhar
(c) Mahabharat (d) Kamet

Ans. (d)

Q.27. In which division of the Himalayas are the famous valleys of Kashmir, Kangra and Kullu located? (Important)

- (a) The Himadri (b) The Himachal
(c) The Shivaliks (d) The Duns

Ans. (b)

Q.28. Which of the following ranges of the Himalayas are composed of unconsolidated sediments brought down by rivers?

- (a) The Pir Panjal range (b) The Karakoram range
(c) The Shivaliks (d) The Ladakh range

Ans. (c)

Q.29. The longitudinal valleys lying between lesser Himalayas and Shivaliks are known as _____.

- (a) Kangra Valley (b) Patkai Bum (c) Passes (d) Duns

Ans. (d)

Q.30. From west to east, the divisions of the Himalayas are demarcated by river valleys. The part of the Himalayas lying between the Satluj and Kali rivers is known as _____.

- (a) Punjab Himalayas (b) Kumaon Himalayas
(c) Nepal Himalayas (d) Assam Himalayas

Ans. (b)

Q.31. Which two hills are located in the south-east of Eastern Ghats ? (CBSE 2010)

- (a) Mizo Hills and Naga Hills (b) Javadi Hills and Shevroy Hills
(c) Patkoi Hills and Manipuri Hills (d) Mizo Hills and Patkoi Hills

Ans. (b)

Q.32. Which islands of India are called Coral Islands? [2010 (T-1)]

- (a) Lakshdeep (b) Andman and Nikobar
(c) both (d) None of these

Ans. (a)

Q.33. A narrow gap in a mountain range providing access to the other side is : [2010 (T-1)]

- (a) Mound (b) Pass (c) Strait (d) Valley

Ans. (b)

Q.34. The wet and swampy belt of the Northern Region is known locally as : [2010 (T-1)]
(a) Bhabar (b) Terai (c) Doab (d) Bhangar

Ans. (b)

Q.35. Find the odd one out : [2010 (T-1)]

- (a) Kanchenjunga (b) Nanga Parbat
(c) Namcha Barwa (d) Anai Mudi

Ans. (d)

Q.36. The largest delta in the world is : [2010 (T-1)]

- (a) Ganga Delta (b) Mahanadi Delta
(c) Sunderban Delta (d) Godavari

Ans. (c)

C. SHORT ANSWER TYPE QUESTIONS (3 MARKS)

Q.1. Describe the Theory of Plate Tectonics.

Ans. A plausible theory presented by earth scientists to explain the formation of continents and ocean basins and the various landforms is the 'Theory of Plate Tectonics'. According to the theory, the crust of the earth has been formed out of seven major and some minor tectonic plates.

According to the earth scientists, millions of years ago, the world comprised of a super-continent 'Pangaea' surrounded by the primeval ocean 'Panthalasa'. The present continents and intervening oceans were formed due to splitting of the crust into plates due to convection currents and drifting of these plates.

Q.2. Where would one find most of the volcanoes and earthquake zones in the world and why? (Important)

Ans. Most volcanoes and earthquake zones in the world are located at plate margins.

According to the 'Theory of Plate Tectonics' presented by earth scientists, the crust of the earth has been formed out of seven major and some minor plates.

The movement of these plates due to convection currents results in the building up of stresses within the plates and continental rocks above. This leads to folding, faulting and volcanic activity along the zones of maximum stress, i.e., mostly along the margins of the plates. Earthquake and volcanic activity are maximum here.

The circum-Pacific region – popularly termed as the Pacific Ring of Fire on account of its volcanoes and frequent earthquakes – lies along the margin of tectonic plates.

Q.3. Name the different major physiographic divisions of India. Write a note on any one of the physiographic divisions of India. (Important)

Ans. The major physiographic divisions of India are as follows :

- (i) The Himalayan Mountains
- (ii) The Northern Plains
- (iii) The Peninsular Plateau
- (iv) The Indian Desert
- (v) The Coastal Plains
- (vi) The Islands

The Coastal Plains : The Peninsular Plateau of India is flanked by a stretch of narrow coastal plains to its west and east. The Western Coastal Plain is a narrow strip of plain stretching along the Arabian Sea lying to its west and flanked by the Western Ghats to its east. The northern part of the West Coast is called the Konkan (Mumbai to Goa), the central stretch is called the Kannad while the southern part is called the Malabar Coast.

The Eastern Coastal Plain is comparatively wide and level stretch running along the Bay of Bengal lying to its east with the Eastern Ghats rising to its west. It is known as Northern Circar in the north, while its southern part is referred to as the Coromandal Coast.

Q.4. How was the Great Northern Plains of India formed? Give a brief description.

Ans. The formation of the Himalayas due to upliftment of sediments out of the Tethys Sea and subsidence of the northern flank of the Peninsular Plateau resulted in the formation of a large basin.

Over millions of years this depression gradually got filled up with alluvium deposited by the three major river systems – the Indus, the Ganga and the Brahmaputra flowing from the Himalayas in the north. Sediments were also deposited by the tributaries of these rivers rising from the mountains in the north as well as the Peninsular Plateau to its south. As a result, the fertile Indo-Gangetic or Northern Plains, and the Brahmaputra Plain in the northeast, were formed.

As the Himalayas gained in height, the rivers, glaciers and other agents of denudation became increasingly active in erosion. As a result, large amount of silt got deposited in the shrinking Tethys.

Q.5. Where are the Western and the Eastern Ghats situated? Write a small note on each.

Ans. The Western and the Eastern Ghats are situated in the Peninsular Plateau region. The Western Ghats mark the western edge of the Deccan Plateau and lie parallel to the Western Coast.

The Eastern Ghats mark the eastern edge of the Deccan Plateau. They stretch from the Mahanadi Valley to the Nilgiri Hills in the south. The eastern coastal plain runs to its east.

The Western Ghats are continuous and regular and can be crossed only through passes like the Thal, Bhore and the Pal Ghats. They are comparatively high in elevation (average 900 to 1600 metres). No major river cuts across the Western Ghats.

The Eastern Ghats are discontinuous and irregular. They are of relatively lower elevation (average 600 m). They are dissected by rivers draining into the Bay of Bengal.

Q.6. Write a note on the Indian desert describing its location and relief. (V. Important)

Ans. See NCERT Q. No. 7 (i)

Q.7. Define tectonic or lithospheric plates.

Ans. Earth scientists have put forward the view that the Earth's crust or the lithosphere is not a continuous block. It consists of several large and small, rigid, irregularly shaped plates (slabs) which include continents and the ocean floor. These slabs are moving or drifting in relation to each other by about 2.5 cm to 5 cm each year. These crustal slabs are called tectonic or lithospheric plates. According to the 'Theory of Plate Tectonics' put forward by the Earth scientists, the earth's crust has been formed out of seven major and some minor tectonic plates or lithospheric plates.

Q.8. Which plateau lies between the Aravali and the Vindhya range? Write a brief note on this plateau.

Ans. The Malwa Plateau lies between the Aravali hills and the Vindhya range. The Aravali hills lie to the west of the plateau and the Vindhya range lies to its south.

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 Malwa plateau lies in Madhya Pradesh. It is composed of extensive lava flows. There are rolling plains separated by flat-topped hills. The plateau is largely broken in form of ravines near the Chambal Valley in its east.

Q.9. What do you understand by 'duns'? Where are they situated in our country? Give any two examples of duns. [2010 (T-1)]

Ans. The longitudinal valleys lying between Lesser Himalaya and the Shivaliks are known as **duns**. Dehradun and Kotli Dun are two examples of duns.

Q.10. What are corals? Name and describe the island group which is of coral origin. [2010 (T-1)]

Ans. Corals are shortlived microscopic organisms, which lives in colonies. They flourish in shallow, mud-free and warm waters. They secrete calcium carbonate. The coral secretion and their skeletons form coral deposits.

Lakshadweep islands group lying close to the Malabar Coast of Kerala is composed of small coral islands.

Q.11. Describe 'Bhabar' and 'Terai'. [2010 (T-1)]

Ans. **Bhabar** is pebble studded formation situated at the base of mountains and plains in the Himalayan region.

Terai is a sloping land at the foothills of the Nepal Himalayas. The Terai receives heavy rainfall and is densely forested.

Q.12. Name any three divisions of Himalayas on the basis of regions from West to East and also write one main feature of each. [2010 (T-1)]

Ans. The Himalayas have been divided on the basis of regions from west to east. These divisions have been demarcated by river valleys.

(i) The part of Himalayas lying between Indus and Sutlej has been traditionally known as Punjab Himalayas. It is also regionally known as Kashmir Himachal Himalaya from west to east respectively.

(ii) The part of Himalayas lying between Sutlej and Kali rivers is known as Kumaon Himalayas.

(iii) The Kali and Tista rivers demarcate the Nepal Himalayas and the part lying between Tista and Dihang rivers is known as Assam Himalayas.

Q.13. Why are the Himalayas called young fold mountains? [2010 (T-1)]

Ans. The Himalayan mountain is geologically young and structurally fold mountains stretch over the northern parts of India. It was uplifted from the 'Tethys Sea' during the Tertiary period. The whole mountain represents a very youthful topography with high peaks, deep valleys and fast flowing rivers. That is why it is called an young-fold mountain.

Q.14. The relief of India displays a great physical variation. Explain. [2010 (T-1)]

Ans. India is a vast country with varied landforms. It has high mountains, plains, plateaus, islands, deserts etc. This varied large landmass formed during different geological periods which has influenced her relief. Besides geological formations, a number of processes such as weathering, erosion and deposition have created and modified the relief to its present form. It is, therefore, India displays a great physical variation.

Q.15. What is the Great Himalaya? Write two characteristics of it. [2010 (T-1)]

Ans. The northernmost range of the Himalayas is known as the Great or Inner Himalayas or the **Himadri**.

- (i) It is the most continuous range consisting of the loftiest peaks with an average height of 6000 metres. It contains all the prominent Himalayan peaks.
- (ii) Its folds are asymmetrical in nature and its core is composed of granite rock. It is perennially snowbound and contains many glaciers.

D. LONG ANSWER TYPE QUESTIONS (4 MARKS)

Q.1. Give a brief description about how the Himalayas were formed. (V. Important)

Ans. See NCERT Q. No. 4

Q.2. Write a note on the different parts of the Great Himalayan range.

Ans. The Himalayas are the one of the loftiest and most rugged mountain systems of the world. The mountain ranges of the Himalayas run in a west-east direction from the Indus to the Brahmaputra, stretching along the entire northern boundary of India. Geologically they are young and structurally fold mountain system.

The Himalayas consists of three sections comprising parallel ranges running from west to east. The northernmost section is known as the Greater or Inner Himalayas. On account of its permanent snow cover and glaciers the section is also termed as Himadri. It is the most continuous section. The average height of these ranges is 6000 metres. All the prominent and loftiest peaks of the Himalayas are located here. Some of prominent peaks are the Everest (8848 m) in Nepal, Kanchenjunga (8598 m in Sikkim), Nanga Parbat (in Kashmir), Nanda Devi (Uttarakhand) and Namcha Barwa (in Tibet, near Arunachal Pradesh) and Dhaulagiri and Annapurna in Nepal.

To the south of Himadri lie the rugged ranges of the Lesser Himalayas or the Himachal. Their average width is 50 km. The average height ranges between 3700 and 4500 metres. The Pir Panjal range, the Dhauladhar and Mahabharat ranges are important ranges. The famous valley of Kashmir, the Kangra and the Kullu Valleys in Himachal are located in this range.

The outermost range of the Himalayas is called the Outer Himalayas or the Shivaliks. They extend over a width of 10-50 km. They are discontinuous ranges. Their average height is between 900 and 1100 metres. They are composed of unconsolidated sediments, gravel and alluvium brought down by the rivers that rise in the northern ranges. Hence, they are the youngest section of the Himalayas.

Longitudinal valleys known as duns lie between the Lesser Himalayas and Shivaliks, e.g., Dehra Dun, Kotli Dun, Patli Dun.

Q.3. Describe the formation of India from Gondwanaland.

Ans. According to the 'Theory of Plate Tectonics' presented by earth scientists, the earth's crust is composed of tectonic plates. The movement of these plates have influenced the evolution of present landforms of India.

The southern part of the ancient super-continent Pangaea is known as Gondwanaland. It included India, Australia, South Africa and South America as one single landmass.

Geologically, the Peninsular Plateau, which is one of the oldest landmasses of the earth's surface, was part of the Gondwanaland.

Tectonic forces split the crust into a number of plates. A part of the Gondwanaland, the Indo-Australian plate, drifted northwards. This resulted in the collision of this plate with the much larger Eurasian plate. The intervening portion between Angaraland in the north and Gondwanaland in the south was occupied by Tethys Sea. Due to this collision, the sediments that had accumulated in the Tethys geosyncline was uplifted and folded. This resulted in the formation of the lofty Himalayas.

The Himalayan upliftment out of the sediments of the Tethys Sea and subsidence of the northern flank of the Peninsular Plateau resulted in the formation of a large basin. Over millions of years the depression gradually got filled with deposition of sediments by the rivers flowing from the mountains in the north and the Peninsular Plateau in the south. The interplay of three major river systems – the Indus, the Ganga, the Brahmaputra and their tributaries formed a fertile, flat land of extensive alluvial deposits known as the Northern Plains.

Q.4. Distinguish between the Northern Plains and the Peninsular Plateau. (Important)

Ans.	The Northern Plains	The Peninsular Plateau
	<ol style="list-style-type: none">1. Geologically, the Northern Plains were formed in recent geological period.2. Northern Plains are the most recent landform.3. They are being formed and reshaped by the river systems.4. It is a fertile, level land.5. The Northern Plains are formed of alluvial deposits brought down by the rivers.6. The Northern Plains are divided into three sections : (i) The Punjab Plains formed by Indus and its tributaries. (ii) The Ganga Plains in North India. (iii) The Brahmaputra Plain in Assam.7. The Northern Plains are covered with rich, fertile alluvial soil, ideal for high agricultural production.	<ol style="list-style-type: none">1. Geologically, the Peninsular Plateau is part of the Gondwanaland, the southern part of ancient super-continent Pangaea.2. The Peninsular plateau is part of oldest landmass.3. It is one of the most stable land blocks.4. It is a plateau or tableland with gently rising rounded hills and wide shallow valleys.5. The Peninsular Plateau is composed of old crystalline igneous and metamorphic rocks.6. The Peninsular Plateau is divided mainly into two broad divisions : (i) the Central Highlands and (ii) the Deccan Plateau.7. A distinct feature of the Peninsular Plateau is the black soil area known as Deccan Trap. This soil is ideal for growth of cotton.

8. It is the most densely populated region of India on account of fertile soil, adequate water and favourable climate.

8. It has moderate density of population.

Q.5. Which part of the Himalayas is known as Purvanchal? Write a short note on the Purvanchal Himalayas. (Important)

Ans. The eastern hills and mountains of the Himalayas running along the eastern boundary of India are known as Purvanchal. They are located in the northeastern states of India.

The river Brahmaputra marks the easternmost boundary of the Himalayas. Beyond the Dibang gorge, the Himalayas bend sharply to the south and spread along India's eastern border. They are known as Purvanchal. They run mostly as parallel ranges with valleys in between. They are mostly composed of strong sandstone, a sedimentary rock. The Purvanchal are less spectacular than the Himalayas and are of medium height. The hills and ranges are covered with dense forests.

Some important hills of the Purvanchal are :

- (i) the Patkai Bum and Naga hills
- (ii) the Mizo hills and Manipur hills
- (iii) the Garo, Khasi and Jaintia hills along Meghalaya-Bangladesh border.
- (iv) the Dafla hills in the north.

Q.6. Describe the important features of the Peninsular Plateau.

Ans. The Peninsular Plateau of India lies to the south of the Northern Plains and extends up to the tip of the Indian peninsula. The Peninsular Plateau is a tableland with gently rising rounded hills and broad, shallow valleys. It is roughly triangular in shape. It is the oldest and the most stable landmass of India. The plateau is formed of old crystalline igneous and metamorphic rocks. The Peninsular Plateau consists of two broad divisions – the Central Highlands and the Deccan Plateau. The part of the Peninsular plateau lying to the north of the Narmada river is known as Central Highlands. It comprises of Malwa Plateau, Bundelkhand and Baghelkhand plateaus, the Vindhya Range and extends as Chhota Nagpur Plateau. The Aravalis are highly denuded old hills that lie on the western and northwestern margins of the Peninsular Plateau.

The part of the Peninsular Plateau lying to the south of river Narmada is known as Deccan Plateau. It is a triangular landmass with broad base in the north and tapers southward. It is formed due to lava flows, so a greater part of it is composed of basaltic rocks of volcanic origin. It is flanked by the Satpura range in the north. The Mahadev, the Kaimur hills and Maikal range form its eastern extensions. The Deccan Plateau is flanked by the Western Ghats in the west and Eastern Ghats in the east. The Western Ghats have comparatively higher elevation of average 900 to 1600 metres. The Eastern Ghats have an average elevation of 600 metres. So the plateau is higher in the west and slopes gently eastwards. The black soil area of the Deccan Plateau is known as Deccan Trap.

Q.7. Write a note on the Central Highlands of India. Name the various parts of the Central Highlands. (V. Important)

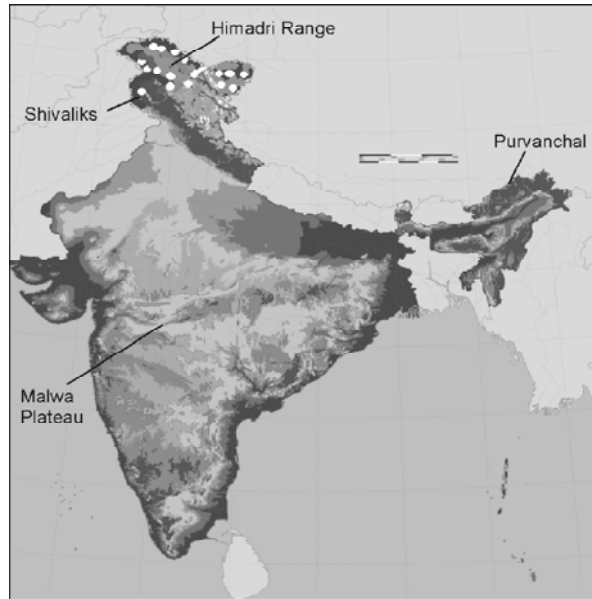
Ans. See NCERT Q. No. 7 (ii)

E. MAP WORK (4 MARKS)

Q.1. In the following map of India, mark and label the following:

- a. The Himadri range
- b. The Shivaliks
- c. The Purvanchal
- d. The Malwa Plateau

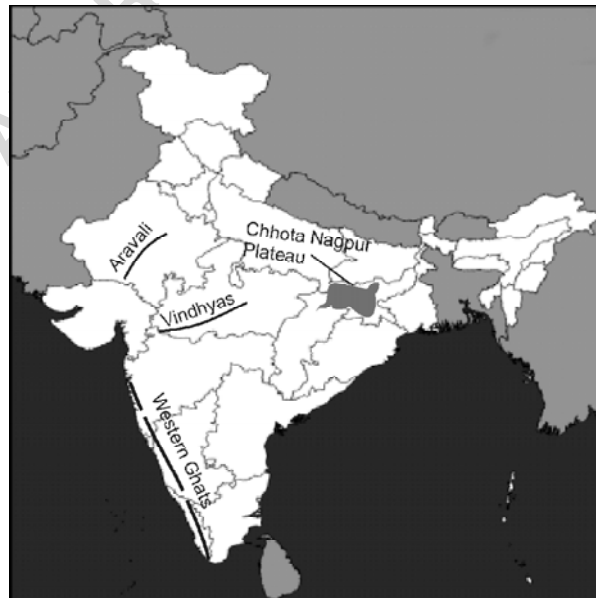
Ans.



Q.2. In the following map of India, mark and label the following:

- a. The Vindhya
- b. The Western Ghats
- c. The Chhota Nagpur Plateau
- d. The Aravalis

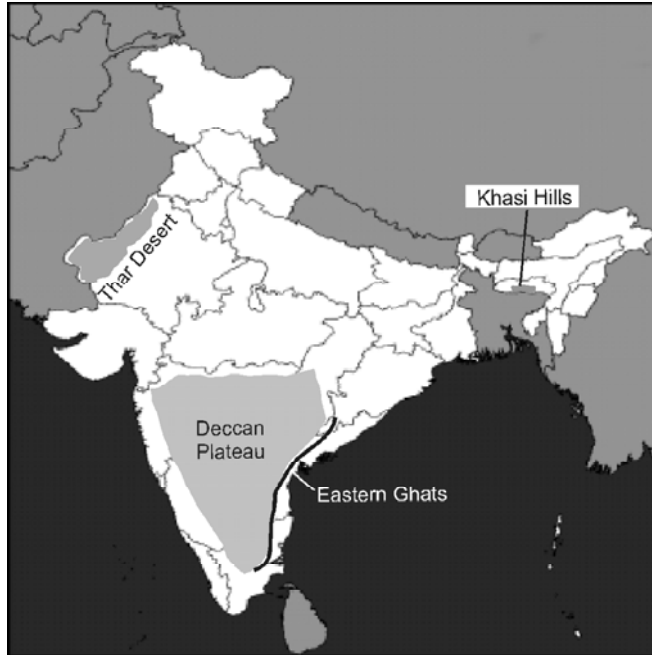
Ans.



Q.3. In the following map of India, mark and label the following:

- a. The Eastern Ghats
- b. The Khasi Hills
- c. The Thar Desert
- d. The Deccan Plateau

Ans.



II. FORMATIVE ASSESSMENT

A. PROJECT WORK

Q.1. Construct a three dimensional map of Physical India. Use the following materials.

- (a) Thermocol [1-2 kg]
- (b) Plaster of Paris [1/2 kg]
- (c) Water Colours
- (d) Wooden Tray [1 square feet]

Q.2. Detective Geologists

Many students go to different regions of India during vacation.

Ask the students to collect rock samples and soil types from different physiographic divisions of India. They can take help from relatives to acquire the samples. On the table place placards depicting the different physiographic divisions. Ask the students to place the rock or soil sample according to the division.

Next, divide the class into groups representing different physiographic divisions. Tell them to explain how and why such samples are found in the following regions :

- (i) The Himalayan Mountain
- (ii) The Northern Plain — Khadar, Bangar
- (iii) The Peninsular Plateau — Basalt rocks, Black soil, Red soil
- (iv) The Indian Desert — Sand
- (v) The Coastal Plain—Sand, rock, soil
- (vi) The Islands—Soil, rocks, seashells the four essays.

B. ASSIGNMENTS

Q.1. Location Arrangement

The following places are located in one of the Indian physiographical divisions. Put the respective places in the right column.

- | | | | |
|----------------------|---------------------------|-----------------|------------------------|
| (a) Shivaliks | (b) Chilika | (c) Himachal | (d) Brahmaputra Plains |
| (e) Bhabar belt | (f) Malwa Plateau | (g) Nilgiris | (h) Northern Circars |
| (i) Coromandel Coast | (j) Terai | (k) Konkan | (l) Anai Mudi |
| (m) Patkai Hills | (n) Chhota Nagpur Plateau | (o) Bundelkhand | (p) Satpura Range |
| (q) Malabar Coast | (r) Dhaulagiri | (s) Nathula | (t) Doab |

Ans.	Himalayas	Northern Plains	Peninsular Plateau	Coastal Plains
	Shivaliks	Brahmaputra Plains	Malwa Plateau	Chilika
	Himachal	Bhabar belt	Nilgiris	Northern Circars
	Dhaulagiri	Terai	Anai Mudi	Coromandel Coast
	Nathula	Doab	Chhota Nagpur Plateau	Konkan
	Patkai Hills		Bundelkhand	Malabar
			Satpura Range	

Q.2. Find the odd one out and circle it with red colour.

- Ans. (i) Pangaea, Angaraland, Glaciers, Gondwanaland, Tethys Sea.
 [Hint : Except one, all the others are connected with the Theory of Plate Tectonics.]
- (ii) Erosion, folding, faulting, volcanic activity.
 [Hint : Except one, all the others are result of movement of crystal plates].
- (iii) India, Eurasia, Australia, South Africa, South America.
 [Hint : Only one is part of ancient Angaraland, all others are parts of the ancient Gondwanaland.]
- (iv) Tethys Sea, young-fold mountains, Himadri, Terai, Purvanchal.
 [Hint : Only one is connected with Northern Plains, all the others are connected with the Himalayas.]
- (v) Doab, bhabar, Baghelkhand, terai, bangar, khadar,
 [Hint : Only one is part of Peninsular Plateau, all others are sections or belts of the Northern Plains]

C. GROUP DISCUSSION

Discuss with your friends in your classroom about the advantage of having the Himalayas as our natural border.

D. DEBATE

Divide the students of your classroom into two halves and debate on the advantage and disadvantage of having a long coastline.

Team A: The advantages of a long coastline

Team B: The disadvantages of a long coastline

E. PUZZLES/QUIZZES

Q.1. Word Jumble

Find the missing letters from the following words by using the hints provided :

- a. STEHYT (Ancient sea over which the present Himalayas are situated)
- b. WAGODNNA (Oldest landmass of which India was earlier a part)
- c. DMIAHIR (Northernmost part of the Himalayas)
- d. LMAJIU (Largest inhabited River Island in the world)
- e. GMAHNEDARIIR (Highest peak in the Eastern Ghats)
- f. KLHDASAEPWE (Coral Islands)

- Ans.** a. TETHYS b. GONDWANA c. HIMADRI d. MAJULI
e. MAHENDRAGIRI f. LAKSHADWEEP

Q.2. Missing Letters

Find the missing letters from the following words (take help from the hints provided)

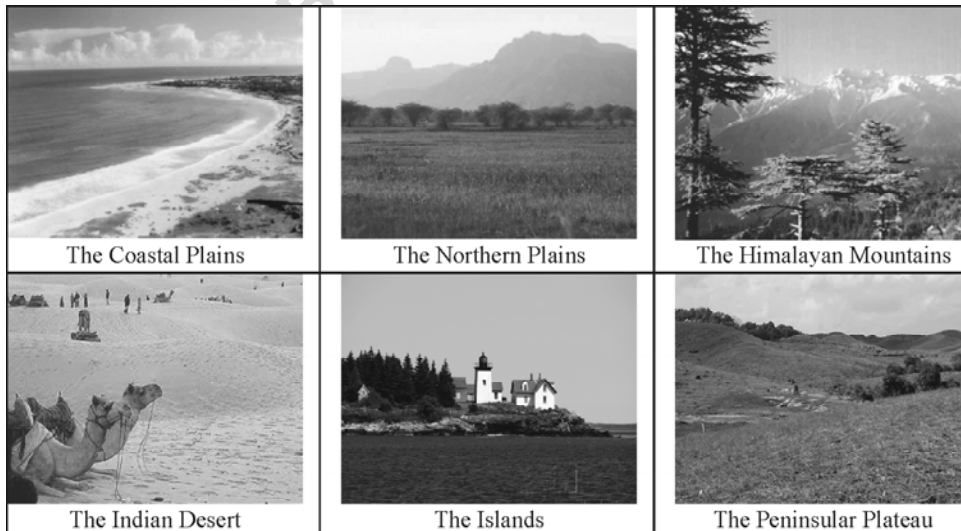
- Ans.** a. PURVANCHAL (*The eastern boundary of the Himalayas*)
b. HIMACHAL (*Lesser Himalayas*)
c. BARCHAN (*Crescent shaped sand dunes*)
d. CHILIKA (*Largest salt lake in India*)
e. MALABAR (*Coast of Kerala*)
f. BARREN ISLAND (*Only active volcano of India*)

Q.3. Picture Puzzle

The following pictures are from different Indian locations. Label them with the following physiographic divisions of India:

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

Ans.



Q.4. Word Grid :

In the word grid below are the names of at least 5 Indian rivers and 5 Indian relief features. They are located both horizontally and vertically. Can you find them?

Ans. Indian Rivers Indian Relief Features

- | | |
|---------|-------------|
| KOSI | ARAVALI |
| ZASKAR | PATKAI |
| RAVI | DECCAN |
| CHAMBAL | DEHRADUN |
| KRISHNA | DAFLA HILLS |

D	K	O	S	I	R	O	D	I	D
A	R	A	V	A	L	I	X	N	X
F	I	Z	A	S	K	A	R	D	O
L	S	V	V	R	A	V	I	U	T
A	H	G	O	B	A	R	T	S	A
H	N	C	H	A	M	B	A	L	P
I	A	B	M	P	A	T	K	A	I
L	G	D	E	C	C	A	N	O	G
L	O	O	M	P	E	D	I	G	R
S	D	E	H	R	A	D	U	N	N

Q.5. Find My Group Leader :

Given below are names of some mountains. Circle them where it belongs.

- Ans.** 1. Kanchenjunga — (Himadri), Himachal, Western Ghats.
 2. Dhaula Dhar — Himadri, (Himachal), Western Ghats, Eastern Ghats.
 3. Patkai Hills — Himachal, Shivaliks, (Purvanchal), Deccan Plateau.
 4. Aravali Hills — Purvanchal, Shivalik, (Peninsular Plateau), Western Ghats.
 5. Kaimur Hills — Purvanchal, Central Highlands, (Deccan Plateau), Chhota Nagpur.
 6. Anai Mudi — Central Highlands, Satpura range, Eastern Ghats, (Western Ghats).
 7. Mahendragiri — Purvanchal, (Eastern Ghats), Western Ghats, Central Highland.
 8. Mizo hills — Shivaliks, (Purvanchal), Central Highlands, Himachal.
 9. Satpura range — Aravali, Central Highlands, (Deccan Plateau), Western Ghats.
 10. Namceha Barwa — (Himadri), Himachal, Purvanchal, Central Highlands.