

12. Physical Format of India

Multiple Choice Questions

1. Question

Line passes through India is-

- A. Cancer Line
- B. Middle Line
- C. Capricorn Line
- D. Equator Line

Answer

India's latitudinal extent is $8^{\circ}4'$ N to $37^{\circ}6'$ N and longitudinal extent is $68^{\circ}7'$ E to $98^{\circ}25'$ E.

Option A is correct. Cancer Line passes through $23^{\circ}5'$ N and thus, passes through India dividing it into almost two equal parts.

Option B is incorrect. The middle line has a longitudinal value of 0° , is also known as Prime Meridian. This line divides the Earth vertically into Eastern and Western hemispheres. Longitudinally India lies in the Eastern Hemisphere and hence, the middle line does not pass through India.

Option C is incorrect. Capricorn Line passes through $23^{\circ}5'$ S and hence cannot be passing through India, which lies entirely in the northern hemisphere.

Option D is incorrect. Equator has a latitudinal value of 0° , India whose southernmost tip is $8^{\circ}4'$ N (mainland at Kanyakumari) and $6^{\circ}7'$ N (Indian Union at Indira Point, Nicobar Islands) lies north to the Equator. Hence, Equator does not pass through India.

A quick way to remember!

To easily identify the position of both the tropical lines (Cancer Line and Capricorn Line), it is enough to remember that the word 'Capricorn' has more alphabets and is thus heavier relative to the word 'Cancer' and we know that heavier objects sink in water. Hence, the heavier "Capricorn Line" sinks and lies south of the Equator and the lighter "Cancer Line" floats above the equator, to its north.

2. Question

Northern mountain is the part of a –

- A. Aravalli
- B. Pamir plateau
- C. Armenia plateau
- D. Kailash Parbat

Answer

Option A is incorrect. Himalayan mountains are called young fold mountains, as they were formed by the convergence of tectonic plates, and is relatively young. Aravalli mountains are called old mountains, as they were formed millions of years before Himalayas, and have gentler slopes due to erosional activities. Geographically, these two mountain ranges do not come in contact. Himalayas lie to the north of the plains, to which Delhi is a part of, and the Aravalli start from Delhi and extends south-west to Gujarat. Thus, Himalayas cannot be part of the Aravalli range, either in form or geographical location.

Option B is correct. The Northern Himalayas extend like an arc from the west to east of India forming a natural border. The western portion of the Himalayas converges with the Pamir Mountain System, originating from the Pamir Knot and extending till Arunachal Pradesh.

Option C is incorrect. Armenian Plateau lies in Central Asia and is nowhere close to the Himalayan Mountains. Hence the Himalayas cannot be said to be a part of the Armenian Plateau.

Option D is incorrect. Kailash Parbhat is a peak in the Himalayan mountain range. Therefore, Kailash Parbhat is a part of the Northern Mountains (Himalayas), and not the other way around.

3. Question

Most densely populated region of India is-

- A. Central plain
- B. Thar desert
- C. Deccan plateau
- D. None of these

Answer

Option A is correct. The northern plain is richly endowed with alluvial deposits from the rivers originating from the Himalayan mountains, hence it is highly fertile and suitable for farming. The rivers also make possible cheap transport. Thus, the presence of perennial rivers, rich fertile soil and means of cheap transport greatly increases the carrying capacity of the land. Hence, the Central plains is the most densely populated region of India.

Option B is incorrect. The Thar desert is an arid-dry region. The soil is also not as fertile as the plains, and the rivers dry up in the summer. Hence, the land is incapable of holding large population.

Option C is incorrect. The Deccan plateau is rich in mineral content, but the lack of perennial water resources makes it vulnerable to the vagaries of weather. Hence, it cannot support huge densities of population.

Option D is invalid, since there is a correct answer for the question.

4. Question

Where is Indira point located (Southern most tip of India)-

- A. Andaman
- B. Nicobar
- C. Lakshadweep
- D. Minicoy

Answer

Option A is incorrect. The Andaman Islands lie north of the Nicobar Islands. Hence, it cannot have the southernmost point of the Indian Union.

Option B is correct. Indira Point in the Nicobar Islands at 6°7' N is the southernmost point of the Indian Union.

Option C is incorrect. The Lakshadweep Islands geographically lie between 8°N to 12°3'N. Thus, these islands lie north of the Indira Point (at 6°7' N), and hence cannot include the southernmost point of the Indian Union.

Option D is incorrect. Minicoy is the southernmost Islands in the Lakshadweep archipelago.

5. Question

According to area which position Rajasthan hold in India?

- A. First
- B. Second
- C. Third
- D. Fifth

Answer

Option A is correct. Occupying a total area of 3,24,293 sq.km and comprising nearly 10,43% of the size of India, Rajasthan is the largest state in India.

Option B is incorrect. The second largest state in India is Madhya Pradesh at 3,08,245 sq.km

Option C is incorrect. The third largest state in India is Maharashtra at 3,07,713 sq.km

Option D is incorrect. The fifth largest state in India is Jammu and Kashmir at 2,22,236 sq.km.

The 5 largest states of India are:

Sl. No	State	Area (in sq.km)
1	Rajasthan	3,42,239
2	Madhya Pradesh	3,08,245
3	Maharashtra	3,07,713
4	Uttar Pradesh	2,30,928
5	Jammu & Kashmir	2,22,236

The 5 smallest states of India are:

Sl. No	State	Area (in sq.km)
1	Goa	3,701
2	Sikkim	7,096
3	Tripura	10,486
4	Nagaland	16,579
5	Mizoram	21,081

6. Question

The smallest district of Rajasthan is-

- A. Karauli
- B. Dungarpur
- C. Dholpur
- D. Sikar

Answer

Option A is incorrect. Karauli has an area of 5530 sq.km and is therefore not the smallest district in Rajasthan.

Option B is incorrect. Dungarpur with an area of 3770 sq.km is larger than Dausa and Dholpur. Hence, Dungarpur is not the smallest state in Rajasthan.

Option C is correct. Dholpur with an area of 3033 sq.km is the smallest state in Rajasthan.

Option D is incorrect. Sikar has more area than any of the available options (7732 sq.km). Thus, it is not the smallest state in Rajasthan.

The 6 largest districts of Rajasthan are:

Sl. No	District	Area (in sq.km)
1	Jaisalmer	38,401
2	Bikaner	28,466
3	Barmer	28,387
4	Jodhpur	22,850
5	Nagaur	17,718
6	Jaipur	14,068

The 6 smallest districts of Rajasthan are:

Sl.No	District	Area (in sq.km)
1	Dholpur	3,033
2	Dausa	3,432
3	Dungapur	3,770
4	Pratapgarh	4,117
5	Rajasamand	4,768
6	Banswara	5,037

Remember the district names starting with the letter 'D' are among the smallest of districts

7. Question

Highest peak between Nilgiri and Himalayas is-

- A. Gurushikhar
- B. Ser
- C. Mahabaleshwar
- D. Archalgarh

Answer

Option A is correct. Gurushikhar peak in the Aravalli ranges, standing at 1722 meters is the highest peak between the Nilgiris and the Himalayas.

Option B is incorrect. Ser Peak is the second highest peak at 1592 meters, after Gurushikar in Rajasthan.

Option C is incorrect. Mahabaleshwar is a hill station in the Western Ghats, south of Mumbai. It has an elevation of 1353 meters, i.e., lesser than Gurushikar's 1722 meters.

Option D is incorrect. Archalgarh is the 5th highest peak in Rajasthan at 1380 meters above sea level.

Top 5 Peaks of the Aravalli Hills in Rajasthan are:

Sl. No	Peak Name	Height (in meters)	District
1	Gurushikar	1732	Mount Abu, Sirohi
2	Ser Peak	1592	Sirohi
3	Delawara	1442	Sirohi
4	Jarga	1431	Udaipur
5	Kumbhalgarh	1224	Rajsamand

Very Short Answer

1. Question

What is 'Dhand'?

Answer

'Dhand' is a Sindhi word for a shallow saucer-shaped depression. This is a seasonal desert wetland, which gets swampy only during a good monsoon. Thus, these are temporary lakes that appear during the rainy season (monsoon). These are also called 'rann'.

For example, Chari-Dhand in Bhuj district of Gujarat.

2. Question

Which is the densely populated region in India?

Answer

The Northern Plains are the most densely populated region of India because -

- The perennial rivers originating from the Himalayas deposits fresh alluvial soil all through the year. Hence, the soil is very fertile for farming.
- These rivers also provide the region with enough water for irrigation and human-use and also serve as cheap means of transport.
- The flat land enables easy construction of road and railway tracks in the plains.
- The plains also have major industrial, commercial and religious cities located there, like Kanpur, Agra, Delhi, Lucknow, Varanasi, Haridwar, etc.

Thus, the perennial rivers of the Himalayas, relatively flat land and the presence of major cities enables the northern plains to provide for much large population than anywhere else in India.

3. Question

Where is Bhabar found?

Answer

Bhabar is spread between the Sutlej and the Tista rivers in the Shivalik mountain region. It forms wide strips of 8 to 16 kilometres. The rivers deposit pebbles in this strip and flows underground here.

4. Question

Where is marg found?

Answer

Marg literally means a meadow. This word is used specially to denote picturesque hill stations and famous valleys. For instance, Sonmarg means a 'meadow of gold', Gulmarg means a 'meadow of flowers'. These regions have coniferous forests in the upper slopes and grasslands in the lower slopes. These marg's are found in the Lesser Himalayas (Himachal).

5. Question

What is the total area of Rajasthan?

Answer

Rajasthan has a total area of 3,42,239 sq.km. With this size, it is the largest state in India and occupies 10.43% of the total land area of India. Rajasthan is larger than the Republic of Congo (64th largest country in the world with 3,42,000 sq.km in area).

Short Answer

1. Question

Write the name of three main region of Himalaya?

Answer

The Himalayas form an arc at the northern border of India from the east to west. It covers a distance of about 2,500 km with width varying from 250 km to 400 meters. The Himalayas consist of three parallel ranges. These are:

1. Upper Himalaya (Himadri)

- Average height is 6000 meters
- The core is composed of Granite
- It is perennially snowbound
- Eg: - Mt. Everest, Mt. Kanchenjunga

2. Lesser Himalaya (Himachal)

- Average height is 3000 meters
- Is well known for its many hill stations
- Upper slopes has coniferous mountains, lower slopes has grassland (Marg)
- Eg: - Mussoorie, Darjeeling, Dharamshala, Nainital, Kullu, etc.

3. Sub-Himalaya (Shivaliks)

- Have altitudes varying between 600 and 1500 meters.
- Has thick forest covers
- The valleys between Shivalik and Lesser Himalayas are called 'Dwar' in the west and as 'Duns' in the east.
- Eg: - Haridwar, Dehradun, Kotli Dun, etc.

2. Question

Write the importance of southern plateau?

Answer

The southern plateau is flanked by seas on either sides, and is a triangle landmass that protrudes into the Indian Ocean, hence is known as the peninsular plateau. This region is formed out of lava flows. Thus, this plateau is richly endowed with minerals, which helped in the industrialisation of the country in the late 20th century. With thick deposit of fertile black soil, this region is ideal for cotton cultivation. The thick rainy forests sustain valuable species of trees like teak, sandalwood and seesham. The deep waterfalls offer picturesque tourist destination and provides huge potential for hydro-electricity generation. In addition, this region boasts of famous hill stations like Udagamandalam (Ooty), Mahabaleshwar and Panchmarhi.

3. Question

Distinguish between eastern ghats and western ghats?

Answer

Eastern Ghats	Western Ghats
Run parallel to the eastern coast, shielding the mainland from the Bay of Bengal	Run parallel to the western coast, shielding the mainland from the Arabian Sea
Average height is 600 meters	Average height is 1000 meters
Are discontinuous and are dissected by rivers	Are continuous, and can be crossed only through passes
Develops from Mahanadi valley and extends till the Niligiri mountains in the south	Develops from Tapti valley and extends to the Kumari Strip in the south
Highest peak is Mahendragiri at 1501 meters	Highest peak is Anaimudi at 2635 meters
Many major rivers like the Godavari, Krishna, etc. originate from Western Ghats	No major rivers originate in the Eastern Ghats

4. Question

Write the name of those islands which is formed by flow?

Answer

The Andaman and Nicobar Islands located in the Bay of Bengal is formed by flow. They are believed to be an elevated portion of submarine mountains, unlike the Lakshadweep Islands group which is believed to have been formed from coral reefs. The volcanic origin of the Andaman and Nicobar Islands is

evidenced by the fact that India's only active volcano is found on Barren island in this archipelago.

5. Question

What is the main features of desert region of Rajasthan?

Answer

The Western desert region is the biggest physiographic region of Rajasthan area wise. The Aravalli mountains is the main water divide in the state and it prevents rain-bearing clouds from reaching western Rajasthan. Hence, the western region is dry and has extreme diurnal changes in temperature. From west to east, this region is divided into three parallel belts – Desert, Bangar and Rahi. Desert has the iconic sand dunes. Bangars are wide plains of sandy soils and Rahis are flood plains made by small rivers. The region has an average elevation of 300 meters. Locally, the sandy hills are called 'Ghore'. The drier western region of Rajasthan had been hugely benefited by the coming of the Indira Gandhi canal.

To remember: Sand dunes and sand hills are different things. A hill is an elevated location smaller than a mountain, and when it is covered by sand it is called a sand hill. A dune is a hill of sand piled up by the wind, and hence a sand dune is temporary sand hill as it is mobile, whereas a proper sand hill is not.

Essay Type

1. Question

What is the physical division of India? Explain one of them.

Answer

India is a vast country with varied land forms. From the mighty mountains of the Himalayas to the rolling sand dunes of Rajasthan, from the lush green forests of Western Ghats to crystal lagoons of the Lakshadweep islands, India has almost all the major physiographic features found in any other part of the world. The major physical divisions of India are: -

- A. The Himalayan Mountains
- B. The Northern Plains
- C. The Peninsular Plateau
- D. The Indian Desert
- E. The Coastal Plains
- F. The Islands

The Coastal Plains

Coastal plains include the narrow strip of plain lands, made by many rivers on both sides of the peninsular plateau. These coastal plains are divided into two regions based on location. These are:

Western Coastal Plains as the name suggests runs parallel to the Western Ghats with the Arabian Sea to the west. These plains start from the Gulf of Khambhat in Gujarat and extends till the Kumari Antareep in the Kanyakumari District of Tamil Nadu, covering 1600 km in the process. Its average width is 64 km and maximum elevation is 180 m. These plains are wider in the north than the south. Rivers mainly form estuaries in the western coast. The Northern part is called the Konkan, the central stretch is called the Kannad Plain, and the southern stretch is called as the Malabar Coast.

- Rivers flowing through the western coastal plains are: Narmada, Tapi, Mandovi, Periyar, etc
- Main ports are Kandla, Mumbai, Mormugao, Manglore, Kochin, etc

Eastern Coastal Plains is flanked by the Bay of Bengal to the east and runs parallel to the Eastern Ghats. It extends from the mouth of river Ganga in West Bengal to Kumari Antreep, covering a distance of 1500 in the process. Its width varies between 16 to 480 kms and hence is wider than the western coastal plains. Rivers mainly form deltas in the eastern coast. The northern part of this plain is known as 'Circar' and the southern part 'Coromandel' coast.

- Rivers flowing through the eastern coastal plains are: Mahanadi, Krishna, Godavari, Kaveri, etc.
- Main ports are Visakhapatnam, Paradip, Chennai, Tutricorin, etc.

2. Question

Explain in detail about northern mountain region.

Answer

The Northern Mountain Region forms a natural barrier for India in the North and the North-East. It is the highest mountain region in the world, with mountains occasionally crossing the 8000 meters mark. The mountain range also boasts the highest peak in the world, the Mt. Everest. Thus, it represents the loftiest and one of the most rugged mountain barriers of the world.

The Himalayan mountains are spread from the west to east of northern India in the form of a large arc from Kashmir to Arunachal Pradesh, covering a distance of 2500 kms and spread over an area of 5 lakh sq.km. Its width varies from 250 km to 400 m, and the width declines eastwards. Like other mountain ranges of Central Asia, like Karakoram, Tian Shan, Hindu Kush, Sulaiman, the Himalayan mountain range is also a part of the Pamir mountain system. Geologically, Himalayan mountains range was formed from the collision of the Indo-Australian plate with the Eurasian plate, and in the

process the Tethys seabed were pushed up to form the Himalayas. Hence, the Himalayas are defined as young fold mountains.

The Himalayas consist of three parallel ranges:

1. Upper Himalaya or Himadri
2. Lesser Himalaya or Himachal
3. Sub-Himalaya or Shivaliks

1. Upper Himalaya (Himadri)

Average height is 6000 meters

The core is composed of Granite

It is perennially snowbound

Eg: - Mt. Everest, Mt. Kanchenjunga

2. Lesser Himalaya (Himachal)

Average height is 3000 meters

Is well known for its many hill stations

Upper slopes has coniferous mountains, lower slopes has grassland (Marg)

Eg: - Mussoorie, Darjeeling, Dharamshala, Nainital, Kullu, etc.

3. Sub-Himalaya (Shivaliks)

Have altitudes varying between 600 and 1500 meters.

Has thick forest covers

The valleys between Shivalik and Lesser Himalayas are called 'Dwar' in the west and as 'Duns' in the east.

Eg: - Haridwar, Dehradun, Kotli Dun, etc.

3. Question

Write the importance of southern plateau and explain main features.

Answer

The Southern plateau or Deccan plateau is the triangular shaped southern portion of the Indian mainland, which is covered by seas on all three sides. Hence, it is also called as the peninsular plateau. Starting from Vindhya range in the north, this plateau extends 1800 kilometres to reach Kanyakumari in the south, spreading over 5 lakh sq.km. The plateau is separated from the coastal plains by the Western and Eastern Ghats, respectively.

Geologically, due to its origin from igneous rocks (which is formed through the cooling and solidification of magma or lava), this region has black fertile soil, which is ideal for the cultivation of cotton. Moreover, the region is richly endowed with minerals, which had a crucial role in the industrialisation of the country. In addition, this region offers valuable rain forest with teak, sandalwood and seesham. Deep waterfalls are useful for hydro-electricity, and the famous hill stations like Udagamandalam (Ooty), Mahabaleshwar and Panchmarhi ensures huge tourism potential as well.

4. Question

Write the Physical division of Rajasthan and explain one of them.

Answer

Rajasthan is shaped like a string or quadrangular and is diverse in geographically, historically and economically. With 3,42,239 sq.km, it is the largest state of India comprising 10.43% of the Indian landmass. It shares international border of 1070 km with Pakistan (Redcliff Line). The state of Rajasthan was formed in 1956, and at present is divided into 7 territories, 33 districts and 244 tehsils.

The main physical divisions of Rajasthan are:

- A. Western Desert Region
- B. Semi-arid Region
- C. Aravali Region
- D. Eastern Plains
- E. Southern-Eastern Plateau Region

The Aravalli Region

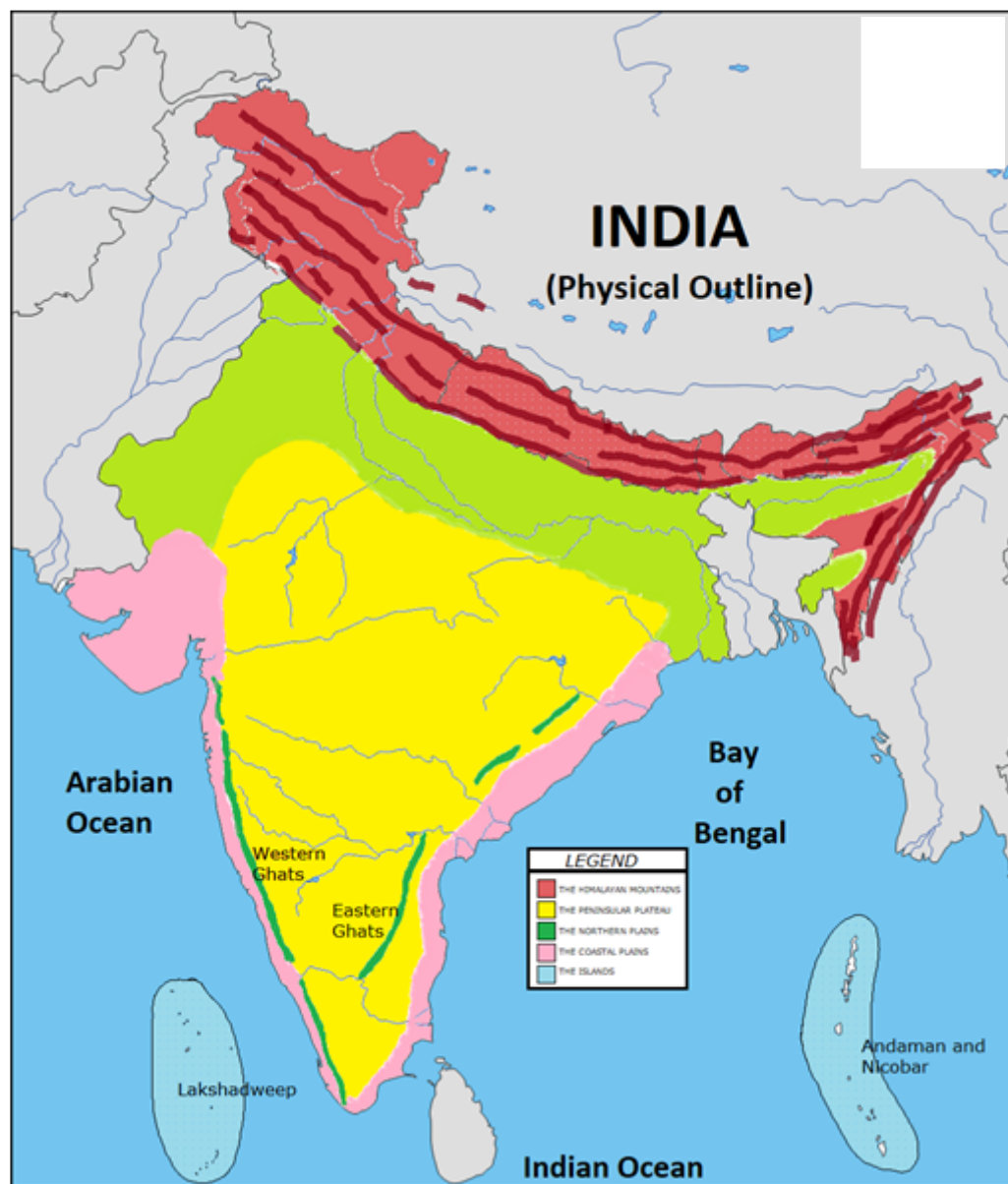
This mountain region has particular importance for the geography of Rajasthan. It is one of the oldest mountain regions in the world, hence there are highly eroded and are found as broken hills. Also known as 'Aadawala' mountain, it extends in a south-west to north-east direction from Delhi to Gujarat. It is 692 km long and has the highest peak between Himalaya and Nilgiri, the Gurushikar peak at 1722 m.

Locat on Map

1. Question

Locate the physical region of India on India's Physical map.

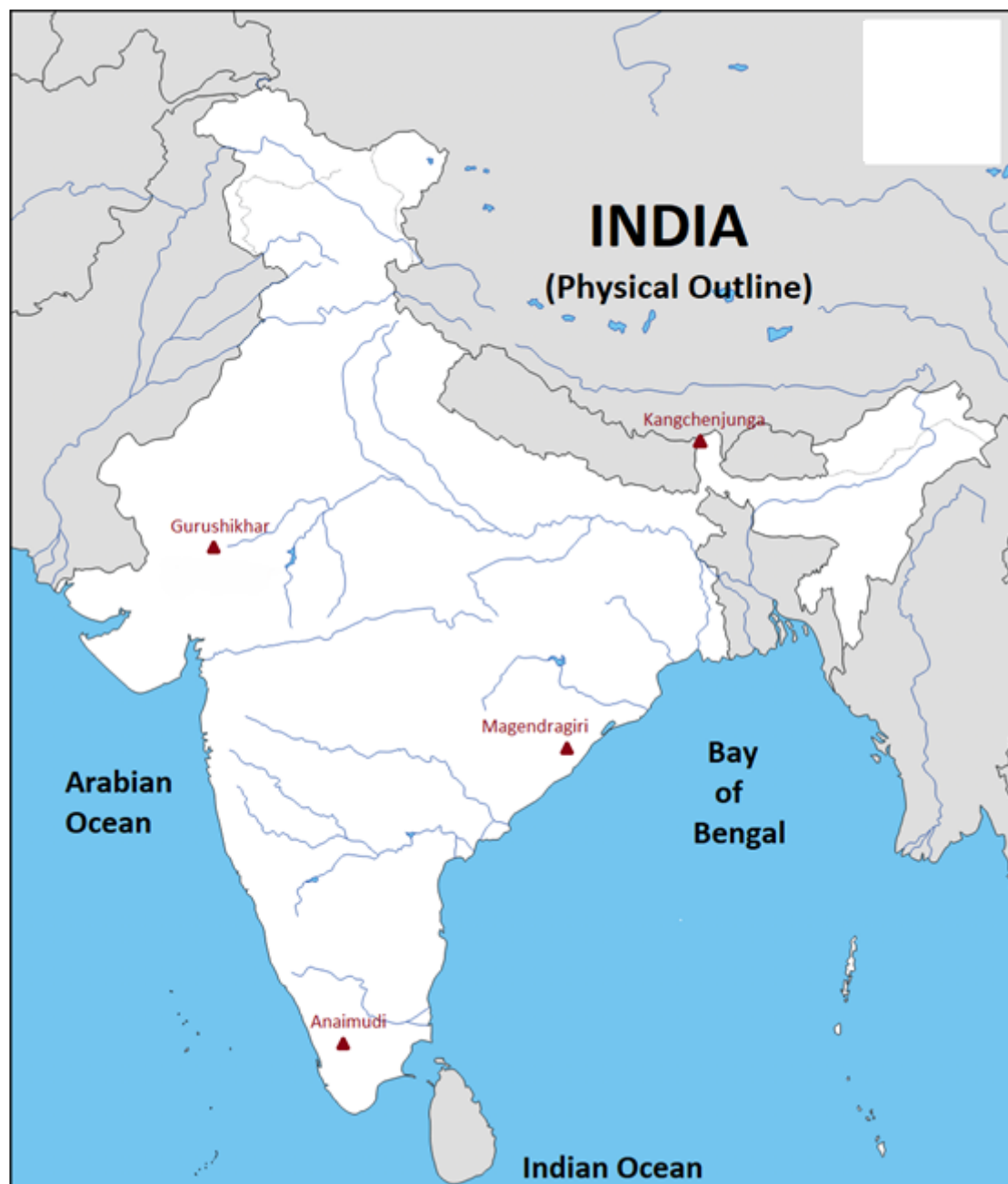
Answer



2. Question

Locate the main high mountain peaks of India on map.

Answer



3. Question

Draw the, physical region of Rajasthan on Rajasthan's map.

Answer

