

1. A narrow channel of sea which separates two land masses is known as:

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

2. China is the largest country in the world?

- (a) Second
- (b) Fourth**
- (c) Third
- (d) Seventh

3. The sun rays fall vertically on the Tropic of Cancer on:

- (a) 21 June**
- (b) 22 December
- (c) 21 March
- (d) 22 July

4. Which of the following is the southernmost latitude of the Indian mainland?

- (a) 8° 4' North**
- (b) 8° 4' South
- (c) 6° 4' South
- (d) 6° 4' North

5. When was Indira-Point submerged under water?

- (a) 2005
- (b) 2004**
- (c) 2007
- (d) 2002

6. From Gujarat to Arunachal Pradesh the time lag is?

- (a) 2 hrs 35 min.
- (b) 2 hrs 10 min.
- (c) 2 hrs**
- (d) 2 hrs 15 min.

7. What is the North-South extent of India?

- (a) 3214 kms**
- (b) 2933 kms
- (c) 3241 kms
- (d) 3213 kms

8. The land mass of India has an area of Million square kms.

- (a) 7.68
- (b) 8.54
- (c) 3.28**
- (d) 9.59

9. What is the Standard Meridian of India?

- (a) 82° 30' West
- (b) 82° 30' South
- (c) 82° 30' East**
- (d) 82° 30' North

10. What is the latitudinal extent of India?

- (a) 8° 4' N to 37° 6' N**
- (b) 6° 4' N to 37° 6' N
- (c) 7° 4' N to 36° 7' N
- (d) 8° 4' N to 39° 6' N

11. The Southernmost point of Indian mainland is?

- (a) Kavarati
- (b) Lakshadweep
- (c) Kanyakumari**
- (d) Indira Point

12. Which country shares land boundaries with India in the west?

- (a) China
- (b) Nepal
- (c) Bhutan
- (d) Pakistan**

13. What is IST?

- (a) Indian Stretchable Time
- (b) International Standard Time
- (c) Indian Stabilized Time
- (d) Indian Standard Time**

14. Which is the capital of Andaman and Nicobar Islands?

- (a) Kavaratti
- (b) Pondicherry
- (c) Port Blair**
- (d) Diu and Daman

15. The east-west extent of India is

- (a) 3000 kms
- (b) 2933 kms**
- (c) 3010 kms
- (d) 2910 kms

16. India lies in which of the hemisphere?

- (a) Southern & Eastern
- (b) Northern & Eastern**
- (c) Northern & Western
- (d) Southern & Western

17. Tropic of Cancer does not pass through?

- (a) Rajasthan
- (b) Chhattisgarh
- (c) Orissa**
- (d) Tripura

18. The westernmost longitude of India is?

- (a) 82° 30' East
- (b) 68° 7' West
- (c) 68° 7' East**
- (d) 97° 25' East

19. Indian state with the longest coastline on the eastern coast:

- (a) Tamil Nadu
- (b) Andhra Pradesh**
- (c) Orissa
- (d) Jharkhand

20. Latitudinal and longitudinal extent of India is?

- (a) 33°
- (b) 35°
- (c) 30°**
- (d) 32°

21. Kavarati is situated in?

- (a) Pondicherry
- (b) Diu and Daman
- (c) Andaman and Nicobar Islands
- (d) Lakshadweep**

22. India is the largest country in the world.

- (a) Fifth
- (b) Sixth
- (c) Seventh**
- (d) Eighth

23. Suez Canal was opened in the year

- (a) 1869**
- (b) 1969
- (c) 1769
- (d) 1896

24. Total length of the coast line of the Indian mainland including Andaman and Nicobar and Lakshadweep is?

- (a) 7156.6 kms
- (b) 7516.6 kms**
- (c) 7651.6 kms
- (d) 7566.6 kms

25. India has got no. of states and no. of union territories?

- (a) 28 States 5 union territories
- (b) 27 States 7 union territories
- (c) 28 States 8 Union Territories**
- (d) 27 States 5 union territories

CH1 - INDIA – SIZE AND LOCATION

Q1. The sun rises two hours earlier in Arunachal Pradesh as compared to Gujarat in the west but the watches show the same time. How does this happen?

Answer: The earth in its rotation covers a distance of 1° longitude in 4 minutes. The places located on different longitudes have different local times. To keep uniform system of time, the world has been divided into 24 time zones.

India has a longitudinal extent of 30° from Arunachal (east) Pradesh to Western Gujarat. It accounts for a time difference of 2 hours. However to keep standard time across the country, $82\frac{1}{2}^\circ$ E, central longitude of India, is selected as standard meridian and local time is IST of whole country.

Q2: Why is Indian sub-continent so called?

Answer: India and her adjoining countries constitutes a sub-continent as it comprises of all the characteristics of a continent.

Indian sub-continent encompasses vast areas of diverse landmasses. Indian sub-continent comprises of high mountains, fertile plains, deserts and plateau, rivers and ocean.

It is full of diversities in terms of climate, natural vegetation, wildlife and other resources.

The vivid characteristics of culture and tradition among the people make it a subcontinent.

Q3 : The central location of India at the head of the Indian Ocean is considered of great significance. Why?

OR

How does India occupy an important strategic position in South Asia? Illustrate your answer by explaining three suitable points.

Answer: The central location of India at the head of the Indian Ocean is considered of great significance because of the following reasons:

The Trans Indian Ocean routes which connect the countries of Europe in the West and the countries of East Asia provide a strategic central location to India.

The Deccan Peninsula protrudes into the Indian Ocean, help India establish a close contact with West Asia, Africa and Europe from the western coast and with Southeast and East Asia from the eastern coast.

India has a long coastline on the Indian Ocean which becomes favourable trading ports and commerce hubs for other countries.

The coastal regions of India are famous for agriculture, trade & industrial centres, tourist centres, fishing and salt making. They provide important hinterlands for the ports.

Opening of Suez Canal in 1869 reduced the distance between India and Europe by 7000 kms.

Q4: Why is the difference between the durations of day and night hardly felt

at Kanyakumari but not so in Kashmir?
Answer: The difference in the durations of day and night at Kanyakumari and Kashmir are respectively due to their latitudinal locations. Kanyakumari is located closer to the equator i.e. 8° away from the equator. It receives maximum sunlight and experiences a minimum gap between day and night. On the other hand Kashmir lies further away from the equator and experiences a significant gap between the duration of day and night.

Q5: How can you say that the land routes of India with other countries are older than her maritime routes?

Or

How have the land routes benefitted India in the exchange of ideas and commodities?

Answer: The various passes (Khyber Pass, Silk Route etc.) across the mountains in the north were the routes for the traders while the oceans restricted such interaction for a long time.

These routes contributed in the exchange of ideas and commodities in the ancient times like the ideas of the Upanishads, Ramayana, the Indian numerals and the decimal system.

The influence of Greek sculpture and the architectural styles of domes and minarets can be seen in the different parts of our country.

Based on the above mentioned points, we can conclude that the land routes of India with other countries are older than her maritime routes.

Q.6. "India lies to the North-eastern Hemisphere." Justify the given statement.

Answer 1. India lies to the east of Prime meridian between the longitudes $68^\circ 7'E$ to $97^\circ 25'E$.

2. Also, India lies to the North of equator between the latitudes $8^\circ 4'N$ to $37^\circ 6'N$.

3. Important lines like Tropic of Cancer, $23^\circ 30'N$ and Indian Standard Meridian, $82^\circ 30'E$ pass through India.

Hence, all this proves that India lies in the North-eastern hemisphere.

Q.7. How do we calculate the time difference from Arunachal Pradesh to Gujarat?

Answer: Sun rays take 4 minutes to cover one longitude.

From Arunachal Pradesh to Gujarat there are 30 longitudes ($68^\circ 7'E$ to $97^\circ 25'E$)

Calculation

Time taken by light to cross a longitude = 4 min

Time taken by light to cross 30 longitudes = $4 \times 30 = 120$ min or 2 hours.

Hence, we can say that the time difference of 2 hours exists from Arunachal Pradesh to Gujarat.

Q.8. Explain why Ahmedabad and Kolkata are able to see the noon sun exactly overhead twice a year but not Delhi.

Answer: 1. The sun's apparent movement towards north and south of the equator is within the two tropics. Thus, all the places located within the two tropics have overhead sun twice a year.

2. Both Ahmedabad and Kolkata to the south of the Tropic of Cancer. That is why two stations see noon sun over head twice a year.

3. Delhi is located at 29° North latitude much to the north of tropic of cancer

4. Rays of sun are never overhead in sub tropical zone. It will never see noon sun overhead at any time of the year.

Q.9. How has the opening of the Suez Canal in 1869 benefitted India?

Answer: Since the opening of the Suez Canal in 1869, India's distance from Europe has been reduced by 7,000 km.

Q A. Answer the following questions either in one word or in one sentence.

Name the parallel of latitude that divides India into almost two equal parts.

/ At which parallel of latitude does India begin to taper towards south?

Also state through which states does it pass through.

Ans. The Tropic of Cancer ($23^{\circ}30'N$) almost divides India into two equal parts. India begins to taper down at 22° .

The Tropic of Cancer passes through Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura and Mizoram.

Where is Indira point located?

Ans. It is located at the southernmost tip of the Indian Union in the Andaman & Nicobar Islands. It got submerged in 2004 Tsunami.

What is the southernmost point of the Indian landmass known as?

Ans. Kanyakumari.

What is the southernmost tip/point of the Indian union known as?

Ans. Indira Point

State the position of India in the world in terms of its area.

Ans. India is 7th largest country in the world and has an area of 3.28 million sq km.

With which country / countries does India share its land boundaries in the east? Ans. With Bangladesh and Myanmar.

What is the Standard Meridian of India? From where does it pass through? Ans. The 82°30'N Latitude is known as the Standard meridian of India.

It passes through Mirzapur in UP.

Write the neighbouring countries of India in respect to their directions.

Ans. In North-West – Pakistan and Afghanistan ; In North and North-East – China, Nepal and Bhutan ; In East – Bangladesh and Myanmar; In South-East – Sri Lanka and in South-West – Maldives.

What is the westernmost longitude of India?

Ans. 68°7' E

Name the island groups towards the south-west of India. / Lakshadweep islands lie in which direction with respect to the mainland of India?

Ans. Lakshadweep islands are in the south-west to India.

It is in south-west direction with respect to the mainland of India.

Write the latitudinal extent of India.

Ans. 8°4'N to 37°6'N latitude.

Write the longitudinal extent of India.

Ans. 68°7'E to 97°25'E longitude.

Name the group of islands lying in the Bay of Bengal. / Name the group of islands lying in the south-east of India. / Andaman and Nicobar islands lie in which direction to the mainland of India?

Ans. Andaman & Nicobar islands lie in Bay of Bengal. Andaman & Nicobar islands lie in the south-east to India.

Name the hemisphere wherein India lies.

Ans. Northern hemisphere

What has shortened / reduced the marine distance between India and Europe? Also by what extent the distance has been reduced? Write the year when did so happen.

Ans. The opening of Suez Canal in 1869 had reduced the distance by 7000km.

Name the place in India that is situated on the three seas. Also name the seas on which it is situated.

Ans. Kanyakumari on Arabian Sea, Indian Ocean and Bay of Bengal.

State the geographical area of India. How it is related to the world's area?

Ans. The geographical area of India is 3.28 million sq kms. It is 2.4 % of the world's landmass.

Which countries together make the Indian subcontinent? Also state the geographical feature that separates the Indian sub-continent from the rest of the main continent – Asia. Ans. Pakistan, India, Nepal, Bhutan and Bangladesh together make the Indian subcontinent.

It is Himalayas that separate the sub-continent from the rest of the world.

What is SAARC? State the countries that are the members of the SAARC.

Ans. The South Asian Association for Regional Co-operation is known as SAARC.

Its member countries are – Pakistan, India, Nepal, Bhutan, Bangladesh, Sri Lanka and Maldives.

What helped India to establish close contact with west Asia, Africa and Europe from the west coast and with south-east Asia from the east coast?

Ans. The strategic position of India in the Indian Ocean.

Why is there a time lag of two hours between Gujarat and Arunachal Pradesh?

Ans. There is a time lag of two hours between Gujarat and Arunachal Pradesh due to the longitudinal difference of about 30° .

22. What is the length of the coastline of India?

Ans. The coastline of the Indian mainland including the islands is about 7,500 km.

What is the length of the land boundaries of India?

Ans. The land boundary of India is about 15,200 km.

Where is the westernmost point of India located?

Ans. It is in Kutch in Gujarat at $68^\circ 7'$ E longitude.

Where is the northernmost point of India located?

Ans. It is in Jammu & Kashmir at $37^\circ 6'$ N latitude.

How much time does the earth take to rotate through 1° of longitude?

Ans. 4 minutes

What is the area or region lying between $23^\circ 30'$ N and $23^\circ 30'$ S latitudes known as?

Ans. Tropical Region

Why the easternmost state of India has been christened / named as Arunachal Pradesh?

Ans. It has been named so as it is the land of India where the sun rises first. / It is the land of rising sun in India, so it has been named so.

In which direction does the latitudinal extent influence the duration of day and night? Ans. The latitudinal extent influences the duration of day and night as one moves from south to north in the Northern Hemisphere and vice versa.

Which neighbouring island country lies to the South East of India? Name the water bodies that separate this island from India.

Ans. Sri Lanka and it is separated from India by a narrow channel of sea formed by the Palk Strait and the Gulf of Mannar.

What is the narrow channel of sea that separates two land masses (India and Sri Lanka) known as?

Ans. The Palk Strait and the Gulf of Mannar.

The Maldives islands are situated to the south of which group of islands?

Ans. Lakshadweep islands.

33. What is a land locked country?

Ans. A land locked country is a country which is surrounded by land from all sides. Eg.

Afghanistan, Nepal, Bhutan, Tajikistan, etc.

What is Greenwich Meridian?

Ans.

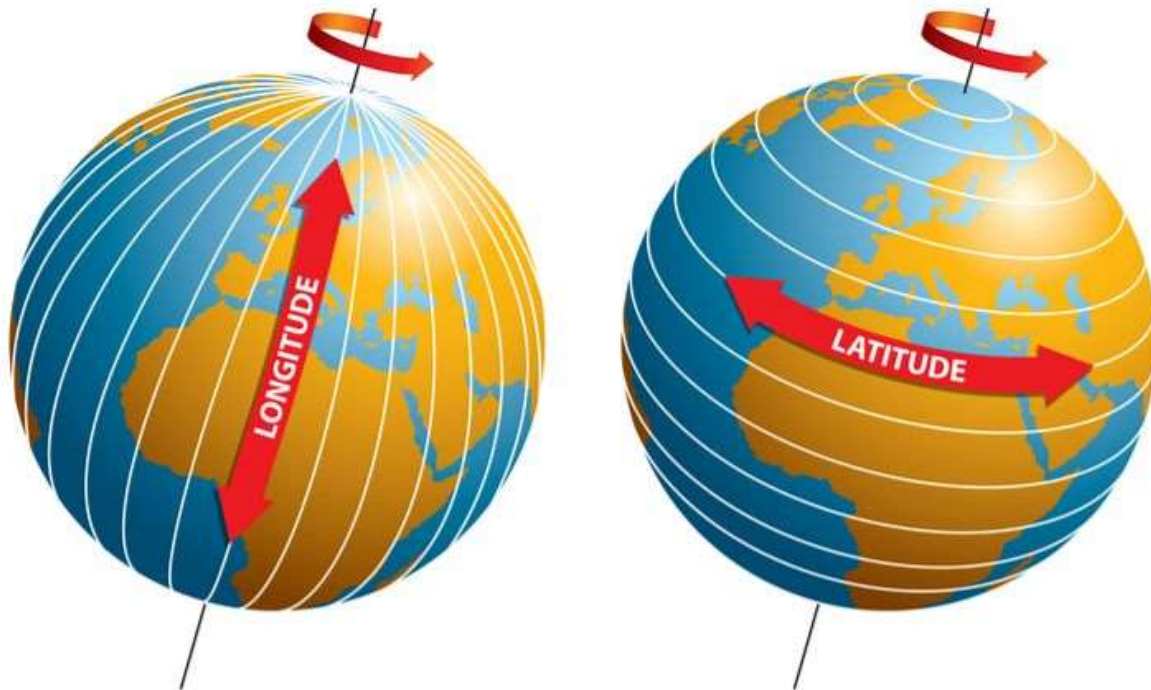
- The 0° longitude that passes through the Greenwich Observatory situated at London is known as the Greenwich Meridian.
- It is considered as the centre of the earth.
- The area to its right is known as the eastern hemisphere whereas to its left is the western hemisphere.
- The time of the Greenwich Meridian is taken as the International Standard Time (IST) and the world's clocks are set accordingly.

Q B. Answer the following questions.

1. 'A' place is located at 70° E and its local time is 2 PM. What would be the local time of 'B' located at 90° E?

Ans. The difference in latitude = $90^\circ - 70^\circ = 20^\circ$

Now, difference in time for $1^\circ = 4$ min.



[Total longitudes = $360 = 360^\circ$

Earth takes 24 hrs(approx.) to complete one rotation.

Therefore to cover 360 latitudes Earth takes 24 hours = $24 \times 60 = 1440$ min

Therefore to cover 1 latitude or $1^\circ = 1440/360 = 4$ minutes]

Therefore, $20^\circ = 4 \times 20 = 80$ min. = 1 hr 20 min

So the time at 90°E will be 2pm + 1 hr 20 min = 3:20 pm

2. Why while the sun has already risen in Arunachal Pradesh, it is still dark in Gujarat and Rajasthan?

Ans. The sun has already risen in Arunachal Pradesh but it is still dark in Gujarat and Rajasthan due to the time lag of 2 hours due to the longitudinal difference of about 30° .

Difference in longitude = 30°

Time taken to rotate by $1^\circ = 4$ min.

Time taken to rotate by $30^\circ = 4 \times 30 = 120$ min = 2 hrs

It means sun will rise in Gujarat and Rajasthan 2 hrs after it rises in Arunachal Pradesh.

3. The sun rises two hours earlier in the eastern state - Arunachal Pradesh than Jaisalmer in the west but the watches show the same time. Comment on the statement.

Ans.

- The sun rises two hours earlier in the eastern state - Arunachal Pradesh than Jaisalmer in the west but the watches show the same time. It is because of the Indian Standard Time which is commonly followed throughout India.
- India being a large country has a longitudinal extent of around 30° .
- It suggests that time differs by 4 min at every longitude.
- Considering different time at different longitudes may create a chaos.
- To avoid the same a Standard Time for every country is chosen which is of the Standard Meridian (the central longitude) passing through the country.
- In India, the time along the Standard Meridian ($82^\circ 30'E$) that passes through Mirzapur in Uttar Pradesh is taken as the Standard time.

4. Why does Ahmedabad and Kolkata see the sun overhead twice a year while Delhi not? / Why do the places located north to the Tropic of Cancer never see the sun overhead? Ans.

- The Tropic of Cancer passes through almost middle of India.
- It divides India into two parts : The northern part and the southern part.
- In the southern part the sun shines perpendicular twice a year being closer to equator.
- In the northern part the sun never shines straight on any place.
- It implies that the places in the southern part see the sun overhead twice a year whereas that in the northern part will never see the sun overhead.
- Ahmedabad and Kolkata lie in the southern part of India whereas Delhi is in the northern part of India.

5. State the effects of the latitudinal extent of India over the country.

- The latitudinal extent of India is from $8^\circ 4'N$ to $37^\circ 6'N$ latitude.
- Also, the Tropic of Cancer ($23^\circ 30'N$ latitude) passes through the middle of India. The region north to the Tropic of Cancer is temperate zone where as the region south to the Tropic of Cancer is tropical zone. This has resulted in climatic contrasts.
- The northern India the sun rays fall slantly and the sun is never the overhead whereas in the southern India the sun rays fall directly and the sun is overhead twice a year.
- In northern India we see the temperature difference where as in southern India the temperatures are high throughout the year.
- In northern India the duration of the day and night differs almost by 5 hours where as the duration of day and night differs by just 45 minutes in the southern India.

6. State the effects of the longitudinal extent of India over the country.

The longitudinal extent of India is from $68^\circ 7'E$ to $97^\circ 25'E$ longitude.

- Thus, there is almost the difference of 30° . We know that the earth takes 4 min to rotate by 1° . Therefore $30^\circ \times 4 = 120 \text{ min.} = 2 \text{ hrs.}$
- So there is almost the time lag of 2 hrs. between Gujarat and Arunachal Pradesh.
- In order to avoid the confusion, the time of $82^\circ 30' \text{ E}$ longitude is taken as Standard time and is known as the Standard Time (IST).
- All the clocks and watches, even the radio and television follow the IST.

7. How did India's land and maritime contact with the world contribute to its trade and culture?

Ans.

- India's contacts with the world are centuries old.
- Her relationships with the rest of the World through land are much older than her maritime contacts.
- The various passes across the mountains in the north have provided passages to the ancient travelers, while the oceans restricted such interaction for a long time.
- With the advent of Europeans the ocean routes had become the lifeline for the trade.
- These routes have contributed in the exchange of ideas and commodities since ancient times.
- The ideas of the Upanishads and the Ramayana, the stories of Panchtantra, the Indian numerals and the decimal system could reach many parts of the world.
- The spices, muslin and the other commodities were traded from India.
- On the other hand, the influence of Greek culture, the architectural styles of domes and minarets from West Asia and the commodities of West or East were seen in India.

8. How has the mountain passes been helpful to India since historic time?

Ans.

- India's relationships with the rest of the World through land are much older than her maritime contacts.
- The various passes across the mountains in the north have provided passages to the ancient travelers.
- These routes have contributed in the exchange of ideas and commodities since ancient times.
- The ideas of the Upanishads and the Ramayana, the stories of Panchtantra, the Indian numerals and the decimal system could reach many parts of the world.
- The spices, muslin and the other commodities were traded from India.

- On the other hand, the influence of Greek culture, the architectural styles of domes and minarets from West Asia and the commodities of West or East were seen in India.

9. What were the three main contributions of land routes to India in ancient times?

Ans. Following are the main contributions of land routes to India in ancient times:

- These routes have contributed in the exchange of ideas and commodities since ancient times.
- The ideas of the Upanishads and the Ramayana, the stories of Panchtantra, the Indian numerals and the decimal system could reach many parts of the world.
- The spices, muslin and the other commodities were traded from India.
- On the other hand, the influence of Greek culture, the architectural styles of domes and minarets from West Asia and the commodities of West or East were seen in India.

10. You live in Lucknow (India) located at 82° E. Your pen-friend lives in London, located at 0° (Greenwich Meridian). If it is 12.00 noon at Lucknow, what will be the local time in London? Explain with calculations.

Ans.

The difference of longitude $= 82^\circ - 0^\circ = 82^\circ$

Now the time difference for $1^\circ = 4 \text{ min.}$

Therefore, the time difference for $82^\circ = 4 \times 82^\circ = 328 \text{ min} = 5 \text{ hrs } 28 \text{ min.}$

So, the time at Greenwich Meridian $= 17:28 = 5:28\text{pm.}$

11. Why the east-west extent of India is lesser than its north-south extent even though both extents are almost of 30°?

- The average distance between two longitudes is more at equator while, it decreases as one move towards the poles.
- But, the average distance between two latitudes is almost same (111 kms), even though one moves towards North Pole or South pole.
- That's why the east-west extent seems shorter than the north-south extent even though both are of almost 30°.

12. Differentiate between the Local Time and the Standard Time.

Ans.

Local Time	Standard Time
1. The Local time depends on the longitude through the place.	The Standard time depends on the passing Standard meridian of a country.

2. The Local time varies from place to place.

The Standard Time for an entire country is fixed.

3. The Local time in Gujarat is 2 hrs slow than That of Arunachal Pradesh.

The time along the $82^{\circ} 30' E$ – the Standard Meridian of India is considered as common time for the entire country.