

UNIT 1 SEASONS AND TIME

1.What are the reasons for the different seasons?

- *Revolution of the Earth
- *Tilt of the Earth's axis
- * The parallelism of the Earth's axis
- *Apparent movement of the sun

2.What is revolution of the Earth?

The Earth revolves around the Sun in an elliptical orbit.
This is known as revolution.

3.What is the parallelism of the Earth's axis?

- *The axis of the Earth is tilted at an angle of $66\frac{1}{2}^{\circ}$ from the orbital plane and $23\frac{1}{2}^{\circ}$ from the vertical plane.
- *The Earth maintains this tilt throughout its revolution.
This is known as parallelism of the Earth's axis.

4.What is the apparent movement of the sun?

Parallelism is maintained same throughout the revolution.
So the position of the Sun in relation to the Earth varies apparently between Tropic of Cancer ($23\frac{1}{2}^{\circ}$ North) and Tropic of Capricorn($23\frac{1}{2}^{\circ}$ South).
This is known as the apparent movement of the Sun.

5. Which are the important seasons on earth?

Spring, Summer, Autumn and Winter

6.Different seasons are get repeated in a cyclic manner.Why?

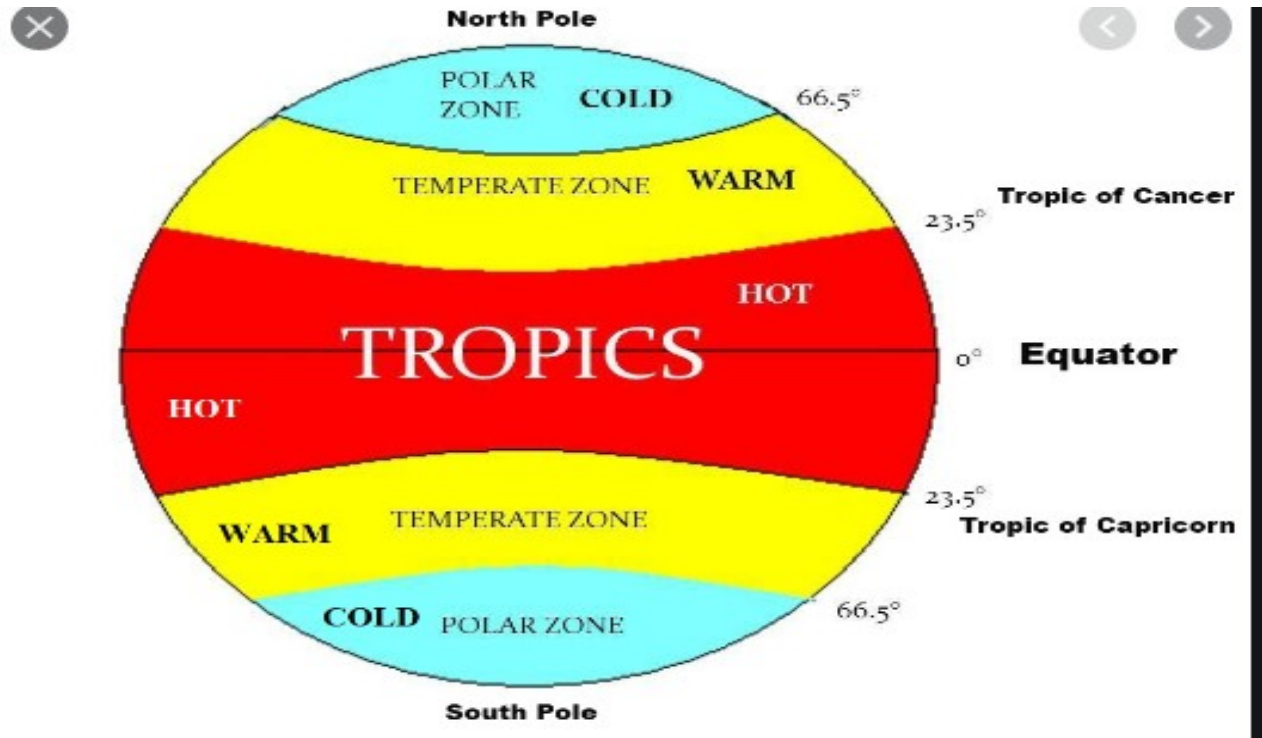
Because of the apparent movement of the sun between Tropic of Cancer ($23\frac{1}{2}^{\circ}$ N) and Tropic of Capricorn ($23\frac{1}{2}^{\circ}$ S)

7.Seasonal changes are not very obvious in the tropical regions .Why?

Because of the incidence of large amount of Sun's rays throughout the year.

8.Seasonal changes are obvious in which zones?

In the mid latitudinal or temperate zones.



9.Explain equinoxes.

The apparent position of the Sun during the Earth's revolution will be over the Equator on March 21 and September 23.

Hence the length of day and night will be equal during these days on both the hemispheres .

These days are called equinoxes.

10.Compare the Summer Solstice and Winter Solstice in the Northern Hemisphere.

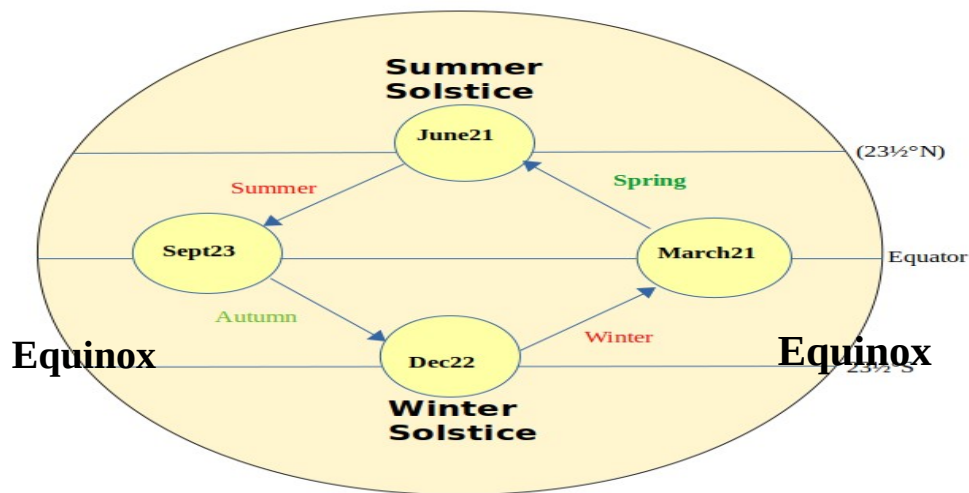
Summer Solstice	Winter Solstice
The Sun vertically over the Tropic of Cancer ($23\frac{1}{2}^\circ$ N)	The Sun vertically over the Tropic of Capricorn ($23\frac{1}{2}^\circ$ S)
On June21	On December22
Experiences the longest day and shortest night.	experiences the longest night and shortest day.

11.Compare the spring season and autumn season .

spring season	autumn season
between March21 and June21	Between September 23 and December22
the season of transition from winter to summer	the season of transition from summer to winter
the atmospheric temperature increases	the atmospheric temperature decreases

considerably.	considerably.
There is lengthening of day and shortening of night	There is shortening of day and lengthening of night
Sprouting of plants , blooming of mango trees and bearing buds on jackfruit trees	Trees shed their leaves.

12. Diagram that shows the apparent movement of the sun and Seasons



Months	The apparent movement of the sun	Seasons	
		Northern hemisphere	Southern hemisphere
From March 21 to June 21	From the Equator to Tropic of Cancer	Spring	Autumn
From June 21 to September 23	From Tropic of Cancer to the Equator	Summer	Winter
From September 23 to December 22	From the Equator to Tropic of Capricorn	Autumn	Spring
From December 22 to March 21	From Tropic of Capricorn to the Equator	Winter	Summer

13. What is Utharayanam?

The northward apparent movement of the Sun from Tropic of Capricorn to Tropic of Cancer is termed as 'Utharayanam'.

The duration of day in the northern hemisphere gradually increases during this period.

14. What is 'Dakshinayanam'?

The southward apparent movement of the Sun from Tropic of Cancer to Tropic of Capricorn is termed as 'Dakshinayanam'.

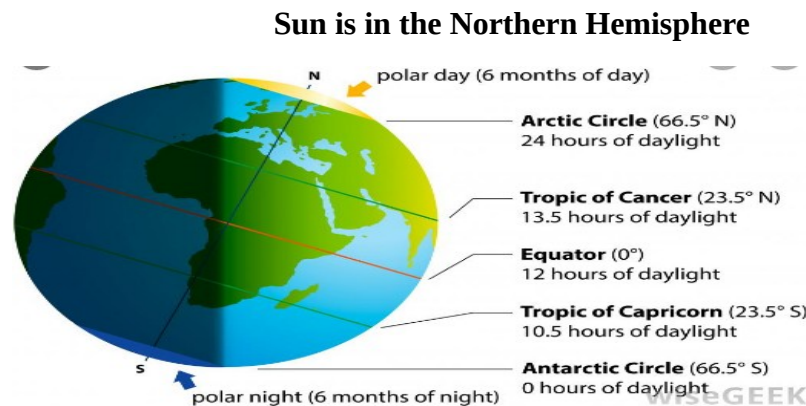
The duration of day in the southern hemisphere gradually increases during this period.

15. What is the duration of day and night in the south polar regions, when the Sun is respectively over the Northern Hemisphere and Southern Hemisphere?

When the Sun is over the Northern Hemisphere, the south polar regions experience continuous night for six months.

When the Sun is in the Southern Hemisphere, the south polar regions experience continuous daylight for six months.

16.



17. The people of which Indian State can see the Sun rise first?

*Arunachal Pradesh

18. Local time

*The time estimated at each place based on the position of the sun is Local time.

19. How is time calculated?

The angular distance of the Earth is = 360°

The time required to complete the 360° rotation = 24 hrs

= 24×60 minutes

= 1440 minutes

Therefore the time required for the Earth

to complete the rotation of 1° longitude = $1440 \div 360$

= 4 minutes

So in 4 minutes the Earth completes 1° rotation.

Therefore in 60 minutes the Earth completes 15° rotation.

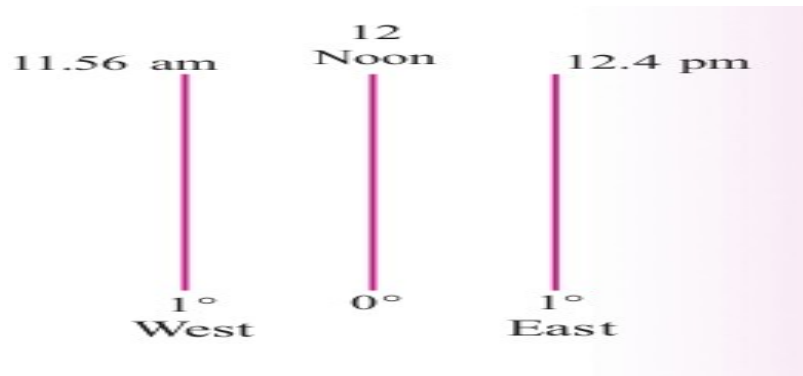
That is, with 1 hour, the Earth rotates 15° .

So for every 15° changes, the time change is 1 hour.

20.As the Earth rotates from West to East time advances towards the east and recedes towards the west.

When 1° change towards the East the time increases by 4 minutes.

When 1° change towards the west the time decreases by 4 minutes.



21.Greenwich time (GMT)

*The **zero** degree longitude.

***Time is calculated worldwide** based on this longitude.

*Hence this line is also known as the **prime meridian**.

***The local time at the prime meridian** is known as the Greenwich Mean Time (GMT).

26.Time zones

*Based on the Greenwich Meridian, the world is divided into 24 zones, each with a time difference of one hour.

These are known as time zones.

27.Standard time

*Each country considers the longitude that passes through its middle as the standard meridian.

*The local time at the standard meridian is the standard time of that country.

27.Indian Standard Time (IST)

*The $82\frac{1}{2}^\circ$ E longitude is the standard meridian of India.

*The local time along this longitude is the Indian Standard time.

28.International Date Line

* **180°** longitude

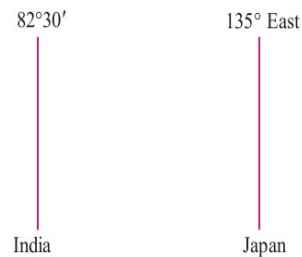
*Used to **determine day**

***Not a straight line**

*passes through sea Bering strait in Pacific Ocean

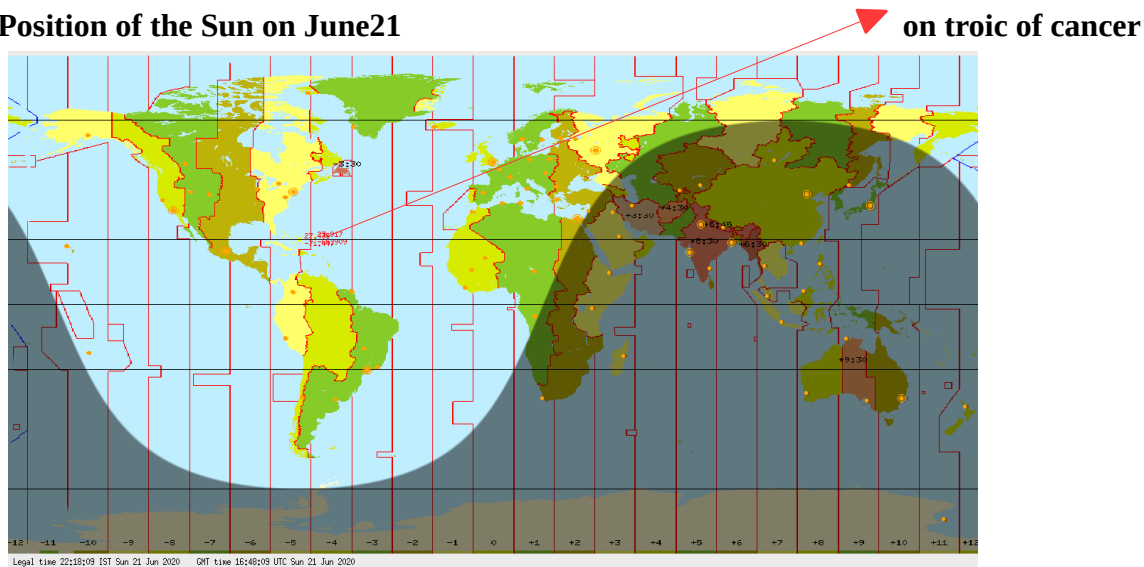
29. The travellers who cross International Date Line from the east calculate the time by advancing it by one day and those who cross the line from the west deduct one day.
While crossing from the east,time will be a day ahead.
While crossing from the west,time will be a day behind.

30.What will be the time in Japan (135° East) when it is 11 pm on Monday in India?



- The longitudinal difference between India and Japan = $135^\circ - 82^\circ 30'$
= $52^\circ 30'$
- Time difference for 1° longitude is 4 minutes.
- Time difference for $52^\circ 30'$ longitude = $52 \frac{1}{2} \times 4$
= 210 minutes
= 3 hours 30 minutes
- As Japan is situated at the east of India, the time in Japan would be 3 hours and 30 minutes ahead of that time in India.
- When it is 11 pm on Monday in India, the time in Japan = 11 pm Monday + 3 hours 30 minutes = Tuesday 2.30 am

31.Position of the Sun on June 21



UNIT3

Human resource development in India

1.Human resource

*The manpower which can be utilised in the production sector.

2.Human resource development is the **development of man's physical and mental abilities through education, health care, and training.**

3.Different levels of human resource development.

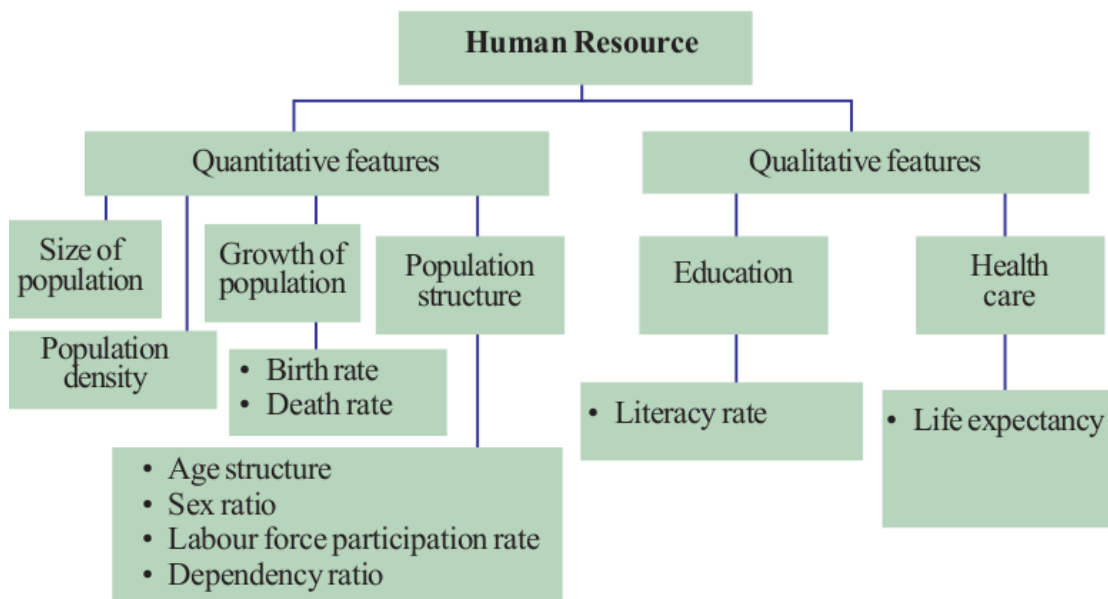
***Individuals**-take effort to develop their own skills

***Family**-creates an environment for the development of the potential of the individuals.

***Various institutions and agencies**-provide facilities for education and training.

***Nation**-provides the necessary facilities to develop the skills.

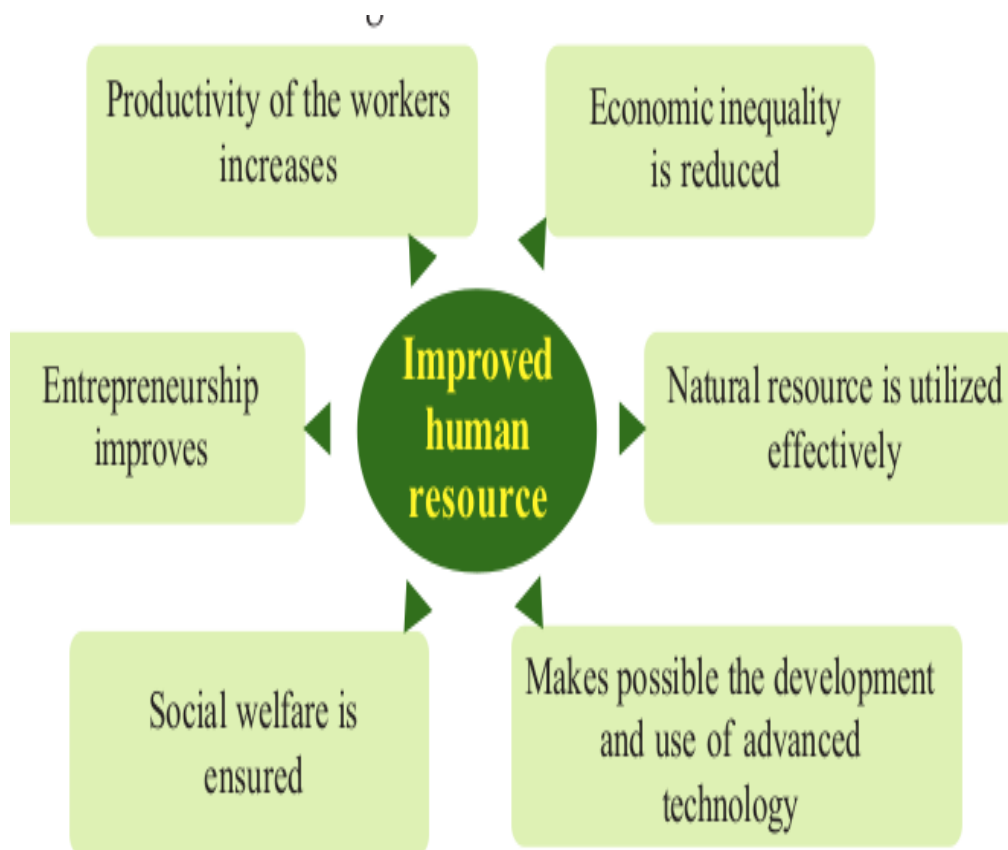
4.Features of human resource



5.What are the qualitative factors that improve the labour potential?

- **Education**
- **Healthcare**
- **Training**
- **Social capital**

Social capital is important because it represents the productive benefits of sociability. ... This is because social capital is the shared values, norms, trust, and belonging that make social exchange possible. Our society, economy, institutions, and political system could not exist without social capital.

6.What are the advantages in developing human resource?

7.How education helps in the development of a country?



8. ***Literacy rate** refers to the percentage of population that can read and write with comprehension.

9. **RTE Act2009**

Our country has made education a fundamental right and has passed the Right to Education Act (RTE Act) in 2009.

The constitution ensures the goal of "**elementary education for all**" through RTE.

10.What are the problems still exist in the education sector of India which need to be solved?

- **drop out** from schools without completing primary education.
- There is a lack of availability of **basic facilities**.
- **Quality** of education has to be improved.

11. What are the projects implemented in India to develop education and skills?

Projects	Goals
Integrated Child Development Scheme (ICDS)	<ul style="list-style-type: none"> To ensure integrated development of children upto 6 years To provide healthcare for pregnant and lactating women
Samagra Shiksha Abhiyan (SSA)	<ul style="list-style-type: none"> To ensure universal education to all up to higher secondary level To ensure quality and equity To promote the vocational education strenthen
Samagra Shiksha was formed by integrating Sarva Shiksha Abihyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA)	<ul style="list-style-type: none"> To the teacher training institutes like SCERT/DIET
Rashtriya Uchthal Shiksha Abhiyan (RUSA)	<ul style="list-style-type: none"> To increase the access to higher education To improve the quality of higher education
National Skill Development and Monetary Reward Scheme	<ul style="list-style-type: none"> To improve the working skills of the youth To ensure the availability of people with employable skills

12. How healthy persons can participate in the progress of a country?

- **Production increases** with the increase in efficiency and the number of working days.
- **Natural resources** can be utilised properly.
- **Medical expense** can be reduced, thereby reducing the government's expenditure.
- **Economic development** is possible through increase in production

13.List the facilities to be ensured for healthcare

- Availability of nutritious food
- Preventive measures
- Medical facilities
- Healthy environment
- Availability of clean water
- Cleanliness
- Ensuring of leisure and entertainment

14.The governmental institutions in the medical sector.

Medical Colleges

District Hospitals

Community Health Centres

Primary Health Centres

Health Sub Centres

15.The following institutions function to make available quality health services to all.

NRHM-National Rural Health Mission	NUHM-National Urban Health Mission
operates in the rural sector	operates in the urban slums and other marginalised people in towns with a population of more than 50,000.

16.natural resources+human resource=economic development of a country

UNIT 07

India: The Land of Diversities



Location of India

Latitude : 8°4' to 37°6' North

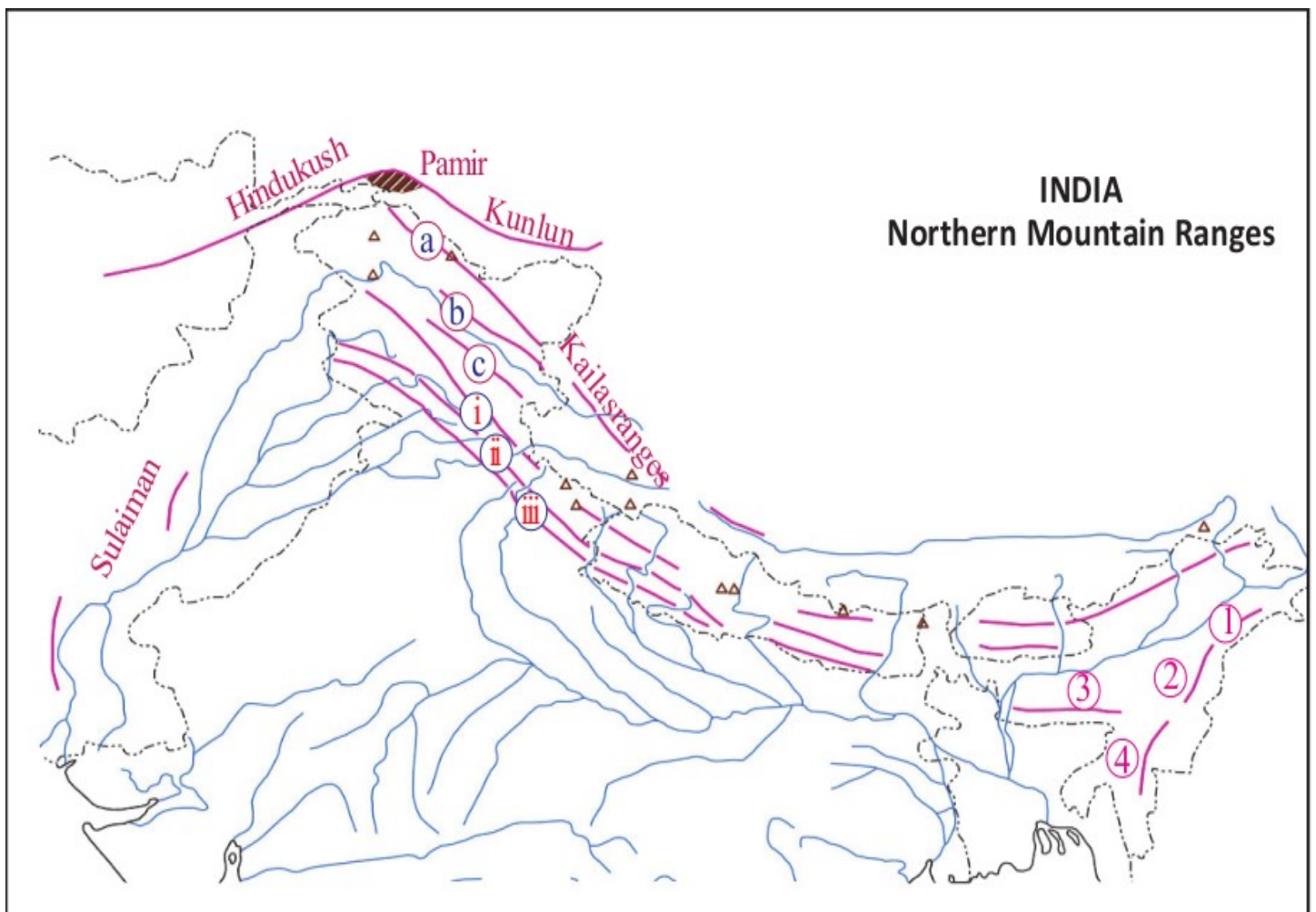
Longitude : 68°7' to 97°25' East

1.Physical divisions of India

- *Northern Mountain Ranges
- * Northern plain
- *The Peninsular Plateau
- *coastal plains and islands

2.Northern Mountain Ranges

- *The mountain ranges starting from the north west of Kashmir and extending up to the eastern boundary of India
- *function as a great wall



3.

Northern Mountain Ranges

Trans Himalayas	Himalayas	Eastern Highlands
(a) Karakoram (b) Ladakh (c) Zaskar	(i) Himadri (ii)Himachal (iii)Siwaliks	1.Patkai Bum 2.Naga hills 3.Garo, Khasi, and Jaintia hills 4.Mizo hills

4. Trans Himalayas

*The average height is 6000 metres.

*the highest peak in India-Mount K2 (8661m) OR Godwin Austin is in the Karakoram range.

5. Himalayas

*between trans himalayas and eastern highlands

*about 2400 kilometres length

*Many of the world's highest peaks situated

* The height tend to decrease towards the east.

*The width is about 150 kilometre in Arunachal Pradesh and about 400 kilometre in the Kashmir region.

*extending over 5 lakh square kilometres

*comprises of three parallel mountain ranges

*Oak, chestnut, maple etc. are seen at an altitude of 1000 to 2000 metres and above this are the coniferous trees such as deodar, spruce, etc.

Himadri	Himachal	Siwaliks
<p>*The highest mountain range.</p> <p>*Average altitude is 6000 metres.</p> <p>*Origin of the rivers Ganga and Brahmaputra.</p> <p>*Has a number of peaks above 8000 metres (Eg:Kanchenjunga, Nandadevi)</p>	<p>*Situated to the south of the Himadri</p> <p>*Average altitude is 3000 metres</p> <p>*The hill stations like Shimla, Darjeeling,etc. are situated in the southern slopes of this range.</p>	<p>*Situated to the south of the Himachal.</p> <p>*Average altitude is 1220 metres.</p> <p>* As the Himalayan rivers cut across this range, its continuity breaks at many places.</p> <p>• Broad flat valleys seen along these ranges are called Duns.eg- Dehradun</p>

6.Eastern Highlands

- *at an altitude of 500 to 3000 metres
- *also known as **Purvachal**
- ***Cherrapunji**, the place receiving the highest rainfall in the world is situated here.
- *covered by dense **tropical rainforests**.

7. The soil generally found in the northern mountain region is fertile **mountain soil**.

8.Significance of the Northern Mountains

- ***protect us from foreign invasions** from the north since ancient times.
- ***Block the monsoon winds** and cause rainfall throughout North India.
- ***Prevent the dry cold winds** blowing from the north from entering India during winter.
- *Caused the emergence of diverse **flora and fauna**.
- ***Source region** of rivers.
- *rich sources of **fresh water**
- *rich forest resources

9.Himalayan rivers

Himalayan rivers	Origin	Length	Tributaries	States through which it flows	Sea which it joins
Indus	Manasarovar lake in Tibet	About 2880 Km (Only 709 Km of this river flows through India)	<ul style="list-style-type: none"> • Jhelum •chenab •Ravi •Beas •Sutlej 	<ul style="list-style-type: none"> •Jammu and kashmir •Himachal pradesh • Punjab 	Arabian Sea
Ganga	Gaumugh caves in the Gangothri glacier	About 2500 Km	<ul style="list-style-type: none"> .Yamuna .Son •Ghaghara •kosi • Gandak 	<ul style="list-style-type: none"> •Uttarakhand •Uttarpradesh • Rajasthan .Madhyapradesh .Bihar .West Bengal .Chhattisgarh .Jharkhand 	Bay of Bengal
Brahmaputra	Chema-yung-dung glacier in Tibet	About 2900 Km(Only 725 Km in India)	<ul style="list-style-type: none"> .Tista .Manas .Subansiri .Luhith 	<ul style="list-style-type: none"> •Arunachal Pradesh •Assam • Sikkim .West Bengal 	Bay of Bengal

10.The Peninsular Plateau

Entire portions of 1.Madhya Pradesh 2.Jharkhand 3.Chhattisgarh as well as parts of 4.Maharashtra 5. Karnataka 6. Tamil Nadu 7.Telengana 8. Odisha and 9.West Bengal together form a plateau known as the peninsular plateau.

11.The peninsular plateau which is **made of hard crystalline rocks** forms the **oldest and the most extensive** physical division of India.

12. Major features of the peninsular plateau

Mountains

1. Aravalli ranges
2. Vindhya Range
3. Satpura Range
4. Western ghats
5. Eastern ghats

Plateaus

1. Malwa Plateau
2. Chota Nagapur Plateau
3. Deccan plateau

Peninsulas

1. Kachchh
2. Kathiawar

13. Other features

- *The **undulating** physical division of India
- *Extends about 15 lakh square kilometres
- *It includes varied topography such as mountains, plateaus, and valleys.
- *The highest peak is the **Anamudi** (2695 m) situated in the Idukki district of Kerala.
- ***The store house of minerals**-it holds numerous deposits of diverse minerals
- *Black soil (black cotton soil)
- Red soil** (soil formed by the weathering of igneous and metamorphic rocks is comparatively less fertile . The presence of iron gives red colour to this soil)
- Laterite soil** (formed in the regions with monsoon rains and intermittent hot seasons.)
- *This region is mainly made of igneous rocks, named **basalt**
- *The peninsular plateau is also the source region of many rivers

14.

West flowing rivers	East flowing rivers
<ol style="list-style-type: none"> 1. Narmada 2. Tapi 	<ol style="list-style-type: none"> 1. Mahanadi 2. Godavari 3. Krishna 4. Cauvery

15. Name the peninsular rivers which are tributaries of Ganga and Yamuna.

Yamuna

*Chambal

*Bettuva

*Ken

Ganga

*son

16.Length, and tributaries of major peninsular rivers

River	Origin	Approximate length	Major tributaries	States through which it flows	Sea which it joins
Mahanadi	Maikala Ranges (Madhya Pradesh)	857 Km	Ib, Tel	•	•
Godavari	Western Ghats (Nasik district of Maharashtra)	1465 Km	Indravathi, Sabari	•	•
Krishna	Western Ghats (Mahabaleswar in Maharashtra)	1400 Km	Bhima, Thungabhadra	•	•
Kaveri	Brahmagiri Ranges in Western Ghats (Karnataka)	800 Km	Kabani, Amaravathi	•	•
Narmada	Maikala Ranges (Chhattisgarh)	1312 Km	Hiran, Banjar	•	•
Tapti	Muntai Plateau (Baitul district in Maharashtra)	724 Km	Anar, Gima	•	•

17.**Godavari** is the longest among the peninsular rivers.

18.The highest Waterfalls is the Jog Falls (225metres) in the **Sharavathi** River in Karnataka.

19. Most of the peninsular rivers enter the plains by forming waterfalls. Why is it so?

- *Peninsular rivers flow through peninsular plateau.**
- *Sides of plateaus are comparatively higher than the plains around it.**
- *When the rivers flow from plateaus to plains they make waterfalls.**

20. Compare the characteristics of the Himalayan and Peninsular rivers.

Himalayan rivers	Peninsular rivers
<ul style="list-style-type: none"> • Originate from the Himalayan mountain ranges • Extensive catchment area • Intensive erosion • Create gorges in the mountain region and meander in plains • High irrigation potential • Navigable along the plains 	<ul style="list-style-type: none"> • Originate from the mountain ranges in the peninsular plateau. • Comparatively smaller catchment area • Intensity of erosion is less • Do not create deep valleys as they flow through hard and resistant rocks • Less irrigation potential • Potential for inland navigation is low

21. coastal plains

- *Coast line is 6100 kilometres extending from the Rann of Kutchh in Gujarat to the Ganga-Brahmaputra delta**
- *The coastal plain of India can be divided into two.**

Western coastal plain	Eastern coastal plain
<ul style="list-style-type: none"> • Between the Arabian Sea and the Western Ghats • From the Rann of Kutchh to Kanyakumari • Comparatively narrow • Can be divided into Gujarat coast, Konkan coast, and Malabar coast • Backwaters and estuaries are seen • 	<ul style="list-style-type: none"> • Between the Bay of Bengal and the Eastern Ghats • From the Sundarban delta region to Kanyakumari • Comparatively wide • Can be divided into north Zircar plain and Coromandal coast • Delta formation takes place •

