

STD X UNIT 2 CLIMATE AND VEGETATION PARAGRAPH

Describe the forests In the India.

INTRODUCTION :

Natural vegetation refers to a plant community unaffected by man either directly or indirectly.

TYPES OF FOREST :

TROPICAL EVERGREEN FOREST :

- These forests are found in areas with 200 cm or more annual rainfall.
- The annual temperature is about more than 22°C .
- The annual humidity exceeds 70 percent in this region.
- Western Ghats in Maharashtra, Karnataka, Kerala, Andaman-Nicobar Islands Assam, West Bengal, Nagaland, Tripura, Mizoram Manipur and Meghalaya.
- The most important trees are rubber, mahogany, ebony, rosewood, coconut, bamboo, cinchona, candel, palm, iron wood and cedar.

TROPICAL DECIDUOUS FOREST :

- These are found in the areas with 100 to 200cm. annual rainfall.
- These are called '**Monsoon Forests**'.
- The mean annual temperature of this region is about 27°C
- The average annual relative humidity is 60 to 70 percent.
- The trees of these forests drop their leaves during the spring and early summer.
- (Sub Himalayan - Region from Punjab to Assam, Great Plains- Punjab, Haryana, Uttar Pradesh, Bihar, West Bengal, Central India - Jharkhand, Madhya Pradesh, Chattisgarh, South India - Maharashtra, Karnataka, Telangana, Andhra Pradesh, Tamilnadu and Kerala.)
- Teak and sal are the most important trees.
- Sandalwood, rosewood, kusum, mahua, palas, haldu, amla, padauk, bamboo and tendu are the other trees of economic importance.

TROPICAL DRY FOREST :

- These are found in the areas with 50 to 100 cm. annual rainfall.
- They represent a transitional type of forests.

- These are found in east Rajasthan, Haryana, Punjab, Western Uttar Pradesh, Madhya Pradesh, Eastern Maharashtra, Telangana, West Karnataka and East Tamilnadu.
- The important species are mahua, banyan, amaltas, palas, haldu, kikar, bamboo, babool, khair etc.,

DESERT AND SEMI DESERT VEGETATION:

- These are also called as 'Tropical thorn forests'.
- These are found in the areas having annual rainfall of less than 50 cm.
- They have low humidity and high temperature.
- These forests are found in north-west India which includes west Rajasthan, south-west Haryana, north Gujarat and south-west Punjab.
- They are also found in the very dry parts of the Deccan plateau in Karnataka, Maharashtra and Andhra Pradesh.
- Babul, kikar and wild palms are common trees found here.

MOUNTAIN OR MONTANE FOREST :

- These forests are classified on the basis of altitude and amount of rainfall.
- These are found on the slopes of the mountains in north-east states.
- These forests found in the altitude of 1200-2400m.
- Sal, Oak, Laurel, Amura, Chestnut, Cinnamon are the main trees found here.
- Oak, birch, silver, fir, pine, spruce and juniper are the major trees found at the altitude of 2400 to 3600m.
- ii. The rainfall of this region is moderate
- . These forests are found in Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- Upto 900 m altitude semi desert vegetation is found and it is known for bushes and small trees.
- In altitude from 900 to 1800m, chir is the most common tree.
- From 1800 to 3000m is covered with semi temperate coniferous forests.

ALPINE FOREST :

- It occurs all along the Himalayas with above 2400 m altitude
- . These are purely having coniferous trees. Oak, silver fir, pine and juniper are the main trees of these forests.
- The eastern parts of Himalayas has large extent of these forests.

TIDAL FOREST:

- These forests occur in and around the deltas, estuaries and creeks prone to tidal influences and as such are also known as delta or swamp forests.
- The delta of the Ganga- Brahmaputra has the largest tidal forest.
- The deltas of Mahanadi, Godavari and Krishna rivers are also known for **tidal forests**.
- These are also known as **mangrove forest**.

CONCLUSION :

Natural vegetation includes all plant life forms that grow naturally in an area and have been left undisturbed.

: Write about south west monsoon

INTRODUCTION:

- The word 'monsoon' has been derived from the Arabic word 'Mausim' which means 'season'.
- The southwest monsoon is the most significant feature of the Indian climate.

SOUTH WEST MONSOON

ONSET OF WIND

- The onset of the southwest monsoon takes place normally over the southern tip of the country by the first week of June, advances along the Konkan coast in early June and covers the whole country by 15th July.
- The monsoon is influenced by global phenomenon like El Niño.

- The temperature in north India reaches upto 46°C.
- The sudden approach of monsoon wind over south India with lightning and thunder is termed as the 'break' or 'burst of monsoon'.
- It lowers the temperature of India to a large extent.
The monsoon wind strikes against the southern tip of Indian land mass and gets divided into two branches.
- One branch starts from Arabian Sea and the other from Bay of Bengal.

ARABIAN SEA BRANCH

- The Arabian sea branch of southwest monsoon gives heavy rainfall to the west coast of India as it is located in the windward side of the Western Ghats.
- The other part which advances towards north is obstructed by Himalayan Mountains and results in heavy rainfall in north.
- As Aravalli Mountain is located parallel to the wind direction, Rajasthan and western part do not get much rainfall from this branch.

BAY OF BENGAL

- The wind from Bay of Bengal branch moves towards northeast India and Myanmar.
- This wind is trapped by a chain of mountains namely Garo, Khasi and Jaintia are mainly responsible for the heaviest rainfall caused at Mawsynram located in Meghalaya.
- Later on, this wind travel towards west which results in decrease in rainfall from east to west.

Conclusion:

- Over all about 75% of Indian rainfall is received from this monsoon. Tamil nadu which is located in the leeward side receives only a meagre rainfall.

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### SHORT ANSWER

1. List the factors affecting the climate of India: (pg no 144)
  - Climate of India is affected by the factors of
  - latitude,
  - altitude,
  - distance from the sea,
  - monsoon wind,
  - relief features and
  - jet stream.
2. What is meant by 'normal lapse rate'? (pg no 144)
  - When the altitude increases, the temperature decreases at the rate of  $6.5^{\circ}\text{C}$  for every 1000mts. of ascent. It is called normal lapse rate.
3. What are 'Jet streams'? (pg no 145)
  - Jet streams are the fast moving winds blowing in a narrow zone in the upper atmosphere.
4. Write a short note on 'Monsoon wind'. (pg no 145)
  - The most dominant factor which affects the climate of India is the monsoon winds.
  - These are seasonal reversal winds.
  - India remains in the influence of these winds for a considerable part of a year.
  - Though, the sun's rays are vertical over the central part of India during the mid- June, the summer season ends in India by the end of May.
  - It is because the onset of southwest monsoon brings down the temperature of the entire India and causes moderate to heavy rainfall in many parts of the country.
  - Similarly, the climate of southeast India is also influenced by northeast monsoon.

5. Name the four distinct seasons of India: (pg no 146)

- The four distinct seasons in India are;
- Winter season (January - February).
- Summer season (March - May).
- Southwest monsoon or Rainy season (June - September).
- Northeast monsoon season (October - December)

6. What is 'burst of monsoon'? (pg no 147)

- Prior to the onset of the southwest monsoon, the temperature in north India reaches upto 46°C.
- The sudden approach of the onset of the south west monsoon wind over South India (Kerala) with lightning and thunder is termed as the 'burst of monsoon'.

7. Name the areas which receive heavy rainfall: (pg no 148)

- The Western coast, Assam, South Meghalaya, Tripura, Nagaland and Arunachal Pradesh are the areas of heavy rainfall.

8. State the places of Mangrove forests in India: (pg no 151)

- The delta of the Ganga-Brahmaputra, Mahanadi, Godavari and Krishna rivers are known for tidal forests or mangrove forest.

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#### GIVE REASONS

1. Western coastal plain is narrow .

- Western coastal plain lies between the Western Ghats and the Arabian Sea with an average width of 10 to 80 km.
- Hence, Western coastal plain is narrow.

2. India has a tropical monsoon climate.

- India has a tropical monsoon climate because most of India lies in the tropical belt and it is influenced by monsoon winds.

3. Mountains are cooler than the plains.

- When the altitude increases, the temperature decreases at the rate of 6.5 degree Celsius for every 1000 metres of ascent.
- Hence Mountains are cooler than the plains.

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## DISTINGUISH BETWEEN

| WEATHER                                                          | CLIMATE                                                                           |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| It refers to the state of atmosphere for a short period of time. | It refers to the average of weather condition over a long time for a larger area. |
| Weather of a place may change daily.                             | Climate of a place remains constant for a long period.                            |
| The study of weather is known as Meteorology.                    | The study of climate is known as climatology.                                     |

| TROPICAL EVERGREEN FOREST                                          | DECIDUOUS FOREST                                                           |
|--------------------------------------------------------------------|----------------------------------------------------------------------------|
| These forests are found where the annual rainfall is above 200 cm. | These forests are found where the annual rainfall is between 100—200 cm .  |
| The trees of this forest do not shed their leaves.                 | The trees of this forest shed their leaves during spring and early summer. |
| Rubber, rosewood, Ebony etc. are the trees found here.             | Teak, sal, Amla etc are the trees found here.                              |

| NORTH EAST MONSOON                                       | SOUTH WEST MONSOON                                        |
|----------------------------------------------------------|-----------------------------------------------------------|
| India experiences this monsoon from October to December. | India experiences this monsoon from June to September.    |
| The wind blows from land to sea.                         | The wind blows from sea to land.                          |
| It is also called as post monsoon or retreating monsoon. | It is also called as advancing monsoon or summer monsoon. |

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