

Introduction :-

Climate is the average weather conditions prevailing over an area for a certain span of time, periodically. India, due to its structural and physical attributes experiences a vast range of climates, which can be categorised into following four seasons :-

- a) Winter Season
- b) Summer Season
- c) Rainy Season
- d) Retreating of Monsoons

Specifically, Climate of India is termed as Tropical Monsoonal Climate.
Explanation :-

A) Winter Season :-

It expands from November to March. Clear sky, pleasant weather, low temperature and humidity and cool and slow northern winds are it's chief features.

Chief Characteristics :-

- 1) Temperature - Mean temperature during this season is 5°C of North-West India and 10°C of Ganga Plain. Minimum temperature is experienced in Dras Valley of Kashmir. Temperature increases towards south due to moderating effect of sea. High Diurnal range of temperature is high in interior parts. January is the coldest month.

2) Pressure and Winds - High pressure prevail in north-west and decreases towards south. It varies between 1015-1020 mb.

Winds blow from North-west to south-east. Wind velocity is low due to low pressure gradients.

3) Rainfall - Retreating winter monsoon cause winter rainfall in Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and western disturbances cause rainfall in north-west India.

4) Special features of this season:-

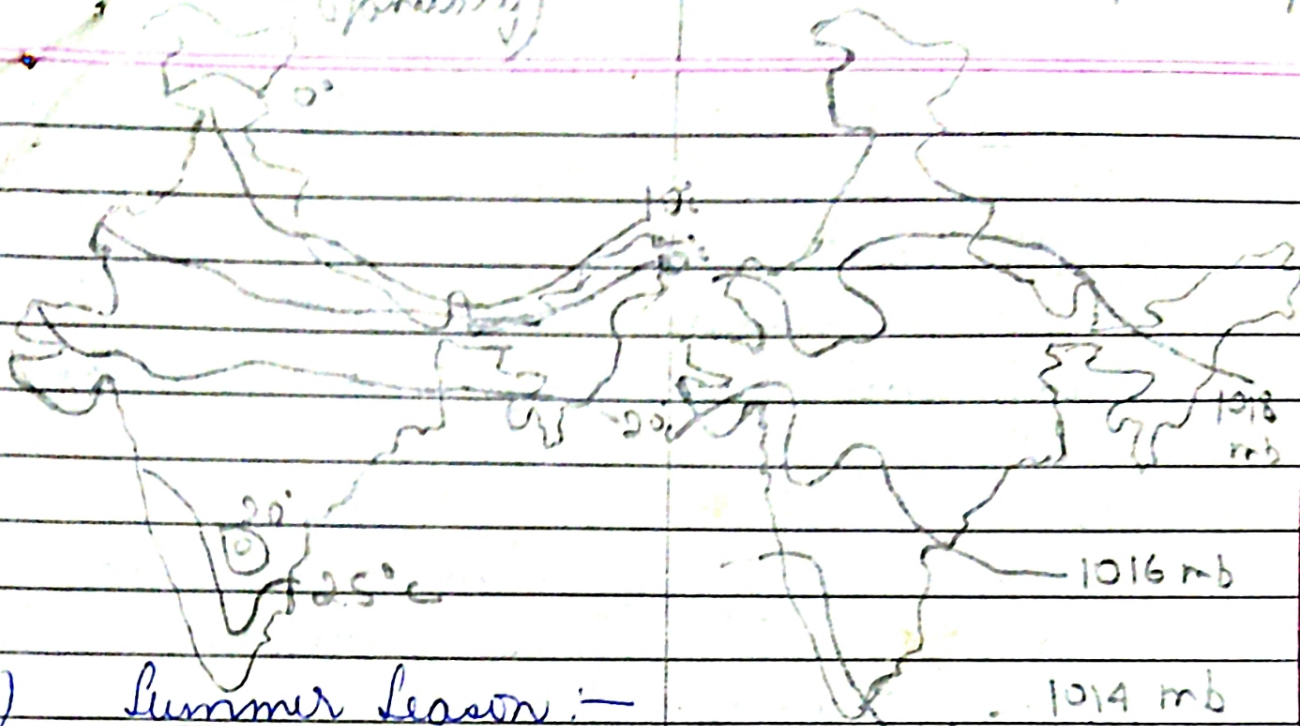
a) Western disturbances - These are low pressure disturbances originating in Mediterranean sea and brought by jet streams to India. They are followed by fog, cold waves and haze.

b) Tropical cyclones - This is the season of least cyclonic activities.

The following map clearly shows these features:-

South West Monsoon (Summer)

South East Monsoon (Winter)



B) Summer Season :-

It extends from March to Mid June and is characterised by High temperature and low humidity.

Main features :-

- 1) Temperature - In north and north-west India average temperature is in between 40°C - 45°C while in south India it is between 26° - 30°C due to moderating sea effect. Diurnal range of temperature is high. Closely packed isotherms running parallel to coast clearly show large temperature contrast between land and sea.

2) Pressure and winds -

Due to low pressure gradient, pressure difference doesn't exceed $3-4\text{ mb}$.

In May-June steep gradient occurs i.e. of $1.0-1.5\text{ mb}$ per degree latitude leading to high wind velocity.

These are followed by squall and showers, while westerly disturbances lead to thunderstorms.