

12. ATMOSPHERIC PRESSURE

- Air pressure or atmospheric pressure is defined as total weight of a mass of column of air above per unit area at sea level.
- The atmosphere is held on the earth surface due to the gravitational force of the earth.
- The atmospheric pressure is measured with the help of an instrument called Barometer.
- Atmospheric Pressures unit is milibars.
- Rapid decrease in the Barometer reading indicates towards a stormy weather.
- When Barometer reading first decreases and then increases slowly, it shows that the rains are approaching.
- Continuous increase in the barometer reading indicates towards anti-cyclonic condition and a clear weather.

Isobar

- Distribution of atmospheric pressure over the globe is shown with the help of imaginary lines are called isobars.
- Isobars are the imaginary lines.
- Isobar joins the places of equal pressure at the sea level.

Distribution of atmospheric pressure-

1. Equatorial low pressure belt (5°N–5°S)–

- This is a belt of very low atmospheric pressure.

- The equatorial low pressure belt is thermally induced.

- In this zone, there is almost no horizontal movement of air.

- The air in this Belt rises up.

- This belt is called a "**Belt of Calm**"

- Its other name is "**Doldrum**".

2. Sub-Tropical High Pressure Belt (30–40° N&S)–

- These winds get deflected towards east due to rotation of the earth.

- This phenomenon was first discovered by the french scientist Coriolis, hence this force exerted by the rotation of the earth is called coriolis force.

- The quantity of the force keeps increasing with increasing distances from the equatorial belt.

- This zone of high pressure is called '**Horse Latitude**'(40°N).

3. Sub-Polar Low Pressure Belt (60–65° N&S)–

- Low pressure is found in this belt.

- In this belt air rise up.

- This zone is characterized by cyclonic storms.

4. Polar High Pressure Belt (90° N-S)–

- Low Temperature found in this belt

- High pressure found in this belt