

3. MOTIONS OF EARTH

Rotation

- The rotation of Earth on its own axis is called rotation.
- The Earth rotates on its axis from west to east.
- Rotation of the Earth is responsible for the cycle of day and night on.
- Therefore this motion is also called 'Daily Motion'.
- The Earth completed his rotation approx in 24 hours.

Revolution

- Earth revolves around the sun in an elliptical path is called revolution.
- The elliptical path traced by the earth is called its orbit.
- Revolution of the Earth is responsible for the seasons.
- The Earth Completes one revolution around the sun approx in 365-1/4 days.
- This motion is also called annual motion of the earth.

Positions of Earth in accordance with Sun

Perihelion

- When the earth is at the minimum distance from the sun the position is called perihelion.
- The earth attains this position on the 3rd January.
- The minimum distance between sun and earth is approx 14.70 Cr. Km.

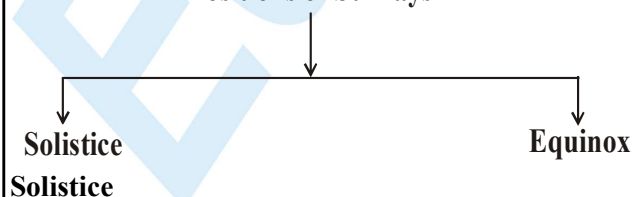
Aphelion

- When the earth is at the maximum distance from the sun the position is known as aphelion.
- The earth attains this position on 4th July.
- The maximum distance between sun and earth is approx 15.21 Cr Km.

Positions of Sunrays :

- There are two positions of sunrays on the Earth-
 - (a) Solistice
 - (b) Equinox

Positions of Sunrays



- It's of two type-

- (a) summer solistice
- (b) Winter solistice

(a) Summer Solstice

- In this position sunrays are perpendicularly over the Tropic of Cancer.
- This position is called the Summer Solstice.
- These Position Comes on 21st June.
- The day in the northern hemisphere is longest on 21st June.

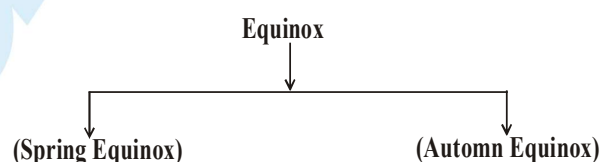
(b) Winter Solstice

- In this position the Sunrays are perpendicularly over the Tropic of Capricorn.
- This position is called Winter Solstice.
- These Position Comes on 22nd December.
- During this period days are longest and nights are shortest in the southern hemisphere.

Equinox

- It is also of two types-

- (a) Spring Equinox
- (b) Autumn Equinox



- In these two positions the Sunrays are perpendicular over the Equator.
- Hence everywhere the duration of day and night is equal.
- These two positions are referred to as Equinox.

A Spring Equinox

- Spring Equinox comes on 21st March.
- Spring Equinox is also called Vernal Equinox.

B Autumn Equinox

- Autumn Equinox comes on 23rd September.

