Chapter – 03 Geography

Motions of the Earth

- The Earth has two types of motions namely, rotation and revolution.
- Rotation is the movement of the earth on its axis. Days and Nights take place because of rotation.
- Revolution is the movement of the earth around the Sun in a fixed path or orbit. Revolution causes the change of seasons.
- The axis of the earth which is an imaginary line, has an angle of $66\frac{1}{2}^{\circ}$ with its orbital plane.
- The circle that divides the day from night on the globe is called the circle of illumination.
- **Revolution:**
  - (i) The second motion of the earth around the sun in its orbit is called revolution.
  - (ii) It takes 365 days and 6 hours (one year) to revolve around the sun.
  - (iii) We consider a year as consisting of 365 days only and ignore six hours for the sake of convenience.
  - (iv) Six hours saved every year are likely to make one day (24 hours) over a span of four years.
  - (v) This surplus day is added to the month of February.
  - (vi) Every fourth year, February is of 29 days instead of 28 days. This year with 366 days is called a leap year.
  - (vii) The earth goes around the sun in an elliptical orbit.
  - (viii) The nights are longer than the days in winter season. This position of the earth is called as summer solstice.
  - (ix) On 22nd December the Tropic of Capricorn gets direct rays of the sun as the South Pole tilts towards it. It is summer in Southern hemisphere and winter in Northern hemisphere. This is called winter solstice.
  - (x) On 21st March and 23rd September, direct rays of the sun fall directly on the equator. During this period, the whole earth experiences equal days and equal nights. This is called an equinox.