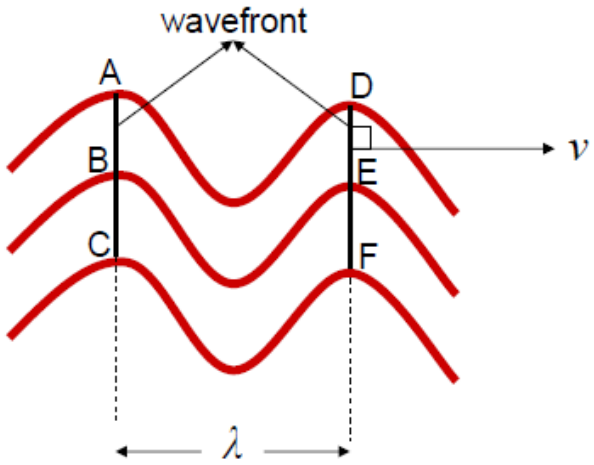
1.1.Wavefronts

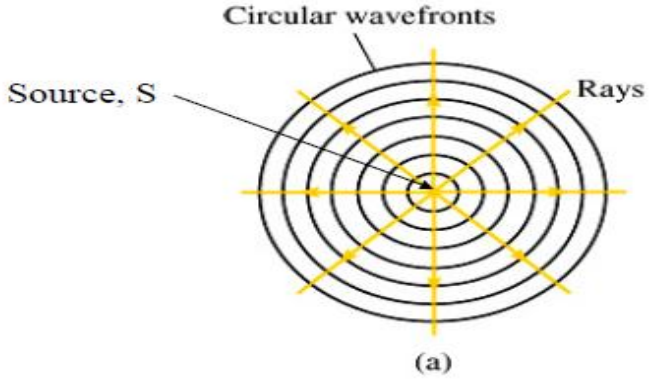
- Definition – is defined as *a line or surface, in the path of a wave motion, on which the disturbances at every point have the same phase.*
- Figure below shows the wavefront of the sinusoidal waves.



- Line joining all point of adjacent wave, e.g. A, B and C or D,E and F are in phase
- Wavefront always perpendicular to the direction of wave propagation.

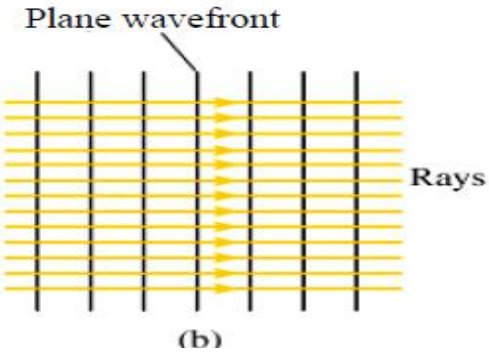
- Type of wavefronts

(a) Circular Wavefront



(a)

(b) Plane wavefront

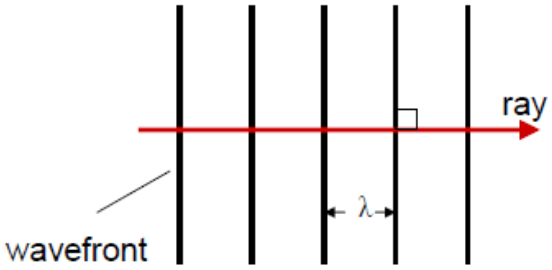


(b)

- **Ray**

  Definition - *A ray is a line represents the direction of travel of a wave.*

  It is at right angle to the wavefronts

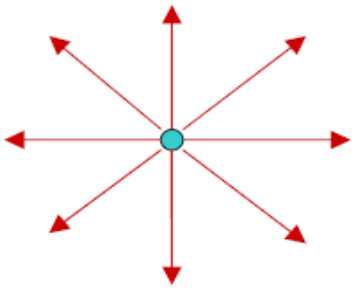


- **Beam of light**

  A collection of rays or a column of light

  (a) parallel beam, e.g. a laser beam

(b) divergent beam, e.g. a lamp near you



(c) convergent beam