

Date
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MTC-II

Unit III Sp.

Type of Wave front.

- ① Spherical wavefront \rightarrow
- ② Cylindrical wave front \rightarrow
- ③ plane wave front \rightarrow

① Spherical wave front \rightarrow When the point source is an isotropic medium, sending out waves in three dimensions, the wavefronts are spheres centered on the source, such as this fig. wavefront is called a spherical wavefront. or Each point emits a wavelet. ~~By Huy~~ Huygens wave theory (laws of refraction of light) is based on this.

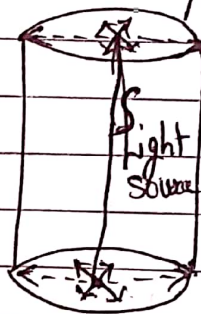


② In this wavefront all the points equidistant from the linear source lie on the ~~source~~ ^{surface} of a cylinder such as this fig.

The cylindrical wavefront appears like a cylinder.

or,

A wavefront is a line or surface in the path of wave motion.



③ Plane wave front \rightarrow The wavefront will appear as a plane when viewed from a considerable distance from a



a source of any kind; the plane wavefront is obtained when the small part of the spherical or cylindrical wavefront originates from a distant source like infinity.