



INTERMEDIATE

Wave Nature of Life

Hand Notes For JEE Mains, Advance, NEET UG, Class 11 & 12 etc...

Hand Notes

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'WAVE NATURE OF LIGHT'

Hygen Theory of Light

Light is a mechanical wave which requires medium to propagate. Just like sound wave, water ripples wave.

In universe or in space a medium is not named ether, in which light propagates.

Hygen Explanation of Wave propagation

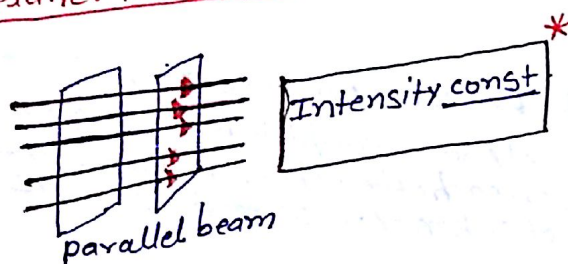
- * It is said light propagates in the same way as water waves propagate.
- * Light travels in the direction \perp to the wave front.

Wave Front \rightarrow Surface over which all disturbances are in the same phase known as wave front.

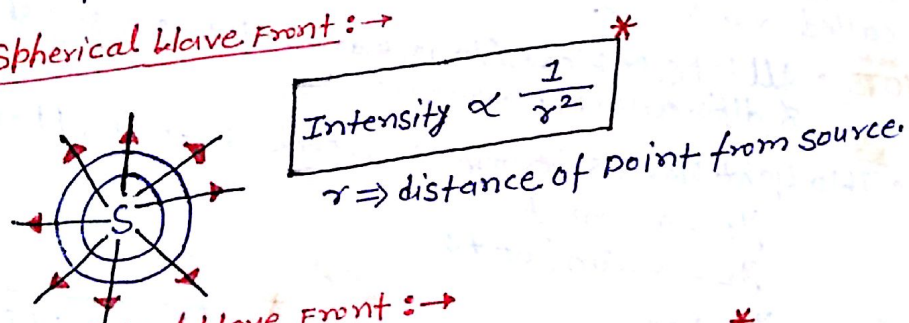
Each point on a wave front acts as a source which produces tiny wavelets & surface tangent over these wavelets gives as a new position of wave front.

Type of Wave Front

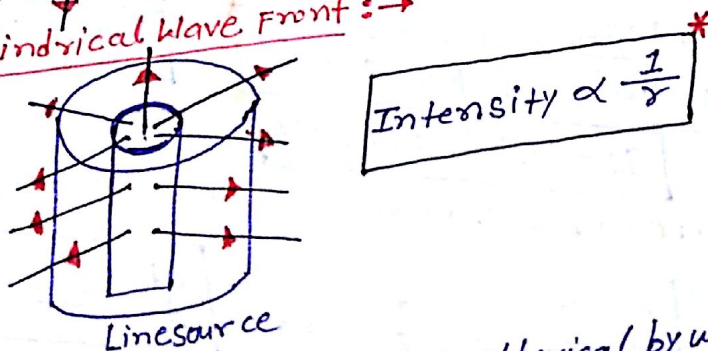
1a) Planar Wave Front \rightarrow



1b) Spherical Wave Front \rightarrow



1c) Cylindrical Wave Front \rightarrow



NOTE \rightarrow

- * Planar wave front into spherical by using screen with pinhole.
- * Spherical into planar by using converging lens.