

LECTURE LII.

Interference and Diffraction of Light.

1. Resultant of two superposed wave motions. Interference and Reinforcement.
2. Interference phenomena in thin films; two sets of waves coming respectively from front and back surface of film.
Experiments: bright and dark fringes in sodium light; colours of soap films in white light.
3. *Diffraction phenomena.* Light bending into shadow; interference in free space.
Illustrations:—
 - (a) Shadows of small openings and small obstacles in light from point source.
 - (b) Character of image of point source formed by lenses of small or peculiar aperture. Resolving power of lenses: the diffraction grating.
4. Wave length of light measured by a study of interference and diffraction phenomena.

LECTURE LIII.

Electromagnetic waves:

1. Electric waves—wireless telegraphy and telephony.
2. Electric waves may be screened, reflected, refracted and polarised.
3. Light waves may be affected by electric and magnetic forces. Zeeman effect.
4. Electromagnetic theory of light.