

## CHAPTER OVERVIEW

### 11: Physical Optics

The most certain indication of a wave is interference. This wave characteristic is most prominent when the wave interacts with an object that is not large compared with the wavelength. Interference is observed for water waves, sound waves, light waves, and, in fact, all types of waves.

- 11.1: Introduction to Interference
- 11.2: Wave Interference
- 11.3: The Wave Aspect of Light- Interference
- 11.4: Polarization
- 11.5: Young's Double-Slit Interference
- 11.6: Mathematics of Interference
- 11.7: Single-Slit Diffraction
- 11.8: Double-Slit Diffraction
- 11.9: Multiple-Slit Interference
- 11.10: Diffraction Gratings
- 11.11: Huygens's Principle - Diffraction
- 11.12: Circular Apertures and Resolution
- 11.13: Interference in Thin Films
- 11.14: Thin Film Interference
- 11.15: X-Ray Diffraction
- 11.16: Holography
- 11.17: The Michelson Interferometer
- 11.18: Interference (Answers)
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- 11.E: Interference (Exercises)
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- 11.S: Interference (Summary)
  - 1.S: Diffraction (Summary)

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