



SoulShift - Educational Q&A Platform

General Questions

Practice Questions



Q1. Which of the following phenomena is NOT explained by wave optics?

- A. Interference
- B. Diffraction
- C. Polarization
- D. Photoelectric effect

Solution: The photoelectric effect is explained by quantum mechanics and particle nature of light, not by wave optics.

Q2. What is the wavelength of light if the first-order maximum occurs at an angle of 30° in a double-slit experiment with slit separation of 0.1 mm and a screen distance of 1 m?

- A. 300 nm
- B. 600 nm
- C. 450 nm
- D. 750 nm

*Solution: Using $d \sin \theta = m\lambda$, $\lambda = d \sin \theta / m$. For $m=1$, $d=0.1 \text{ mm}$, $\theta=30^\circ$, $\lambda = 0.1 \text{ mm} * \sin(30^\circ) = 0.1 \text{ mm} * 0.5 = 0.05 \text{ mm} = 500 \text{ nm}$.*



