2019-Ph-H1-Q6
Section: Particles and Waves
Topic: Interference

Question:
A beam of light passes through a double slit and creates an interference pattern on a screen. What causes the bright fringes?

Answer:
Bright fringes are caused by **constructive interference** — where waves arrive **in phase** and reinforce each other.

Correct Option: A (Constructive interference)

Guidance for Students:
Interference patterns result from **wave superposition**. Bright spots = waves in phase; dark spots = waves out of phase.

Revision Tips:

- Constructive interference: crest + crest = bright fringe
- Destructive interference: crest + trough = dark fringe
- The slit spacing and wavelength determine fringe spacing: $\lambda = \frac{ax}{D}$