

Assignment (CBCS)

2nd Semester Physics (Honours)

Paper: PHY-HC-2026 (Waves and Optics)

Full marks: 30

- 1) What is interference of light? Find out the condition for constructive and destructive interference. Why coherent source is required for observing interference of light? Describe how Young was able to produce interference pattern in his double slit experiment.

1+6+2+6 = 15

- 2) Define a stationary wave. Show that the direction of acceleration and force are opposite to the direction of motion of the vibrating particle in simple harmonic motion. Calculate the total energy of a particle doing a simple harmonic motion and distinguish between phase velocity and group velocity.

1+4+5+5 = 15