

PHSA SEM 2 CC4 (Waves and Optics) Practical

Answer any one question

Full Marks - 1×30

1. (i) What is the definition of Longitudinal and Transverse Waves? (ii) Write down the formulas used in Melde's experiment. (iii) Make a necessary table to note down the transverse mode of vibration. (iv) Make a necessary table to note down the longitudinal mode of vibration. (v) Suppose in transverse arrangement, a string vibrates in one segment with a load of 1 kg. To make the string vibrate in two segments, how much load needs to be applied? (6+6+6+6+6)

2. (i) What is Interference of light? (ii) What is the difference between interference and diffraction? (iii) What is biprism? (iv) Write down the theory to determine the wavelength of monochromatic light using Fresnel's biprism and optical bench? (v) Why is it necessary to use narrow source in Fresnel's biprism experiment? (3+6+3+12+6)

3. (i) What is Interference of light? (ii) What is the difference between interference and diffraction? (iii) What is Plano-convex lens? (iv) Write down the theory to determine the wavelength of monochromatic light using Newton's ring apparatus. (v) Make a necessary table to determine the diameter of rings. (3+6+3+12+6)