

Department of Physics, IIT Delhi

PHL110: Fields and Waves

Quiz

II Semester 2009-10

Please answer all questions.

Time: 10 Minutes

Max Marks: 5

Answer the quiz in the space provided and turn it over when asked to stop.

Name:

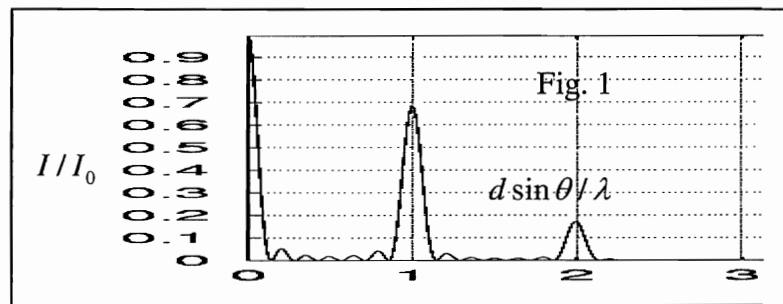
Entry No:

Group:

- The displacement current occurring in Ampere's Law is the source of the magnetic field, which is: [1]
 - dominant at no frequency
 - dominant at low frequencies
 - dominant at high frequencies
 - dominant at all frequencies

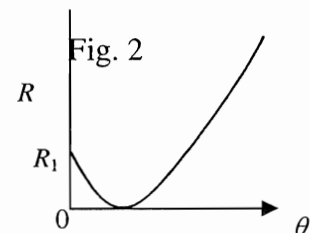
Your Answer:

- An aperture contains a certain number of identical and parallel long narrow slits each of width a separated by a distance d . The Fraunhofer diffraction pattern of this aperture is shown in Fig 1. What is the number of slits? [1]



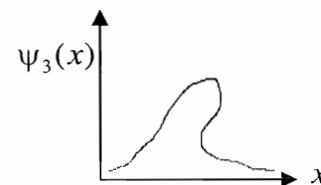
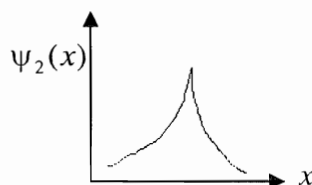
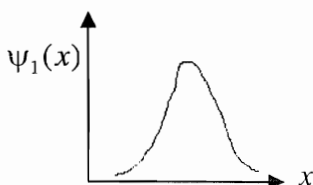
Your Answer:

- The reflectivity, R , of a plane-polarized wave in air reflected from a plane surface ($n = 2$) is shown in Fig. 2. What is the polarization of the incident wave and what is the value of R_1 ? [1]



Your Answer:

- State, giving brief reasons, which of the following functions represents a valid wave function of particle moving along x -axis: [2]



Your Answer: