Physics ECAT Pre Engineering Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	The superposition of the two waves of same frequency and amplitude travelling in the same direction gives to an effect called	A. Diffraction B. Interference C. Polarization D. Dispersion
2	To sources are said to be coherent if they have:	A. Same amplitude B. Same wavelength C. Definite phase relation with each other D. None of them
3	If the object and its image are located at a distance of 5 cm from the focus of a convex lens, the focus length of the lens will be:	A. 5 cm B. 10 cm C. 20 cm D. 25 cm
4	The magnifier forms a virtual image of the object at:	A. None of these B. Both A and B are correct C. Much farther than the least distance D. Least distance of distinct vision
5	Resolving power in mth order diffraction for grating is given by:	A. R = N/m B. R = m/N C. R = N x m D. None of these
6	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
7	If the object is placed at 12 cm distance from a convex lens of focal length 6 cm, then we get an image of ____ as that of object:	A. Double the size B. Same size C. Half the size D. None of these
8	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
9	In order to get interference using two light rays	A. The sources should be monochromatic and coherent B. The sources should have the same frequency C. Superposition should be linear D. All of these
10	Which one of the following phenomenon cannot be explained on the bases of Huygen's theory	A. Refraction B. Reflection C. Diffraction D. Formation of spectrum
11	To observe interference of light, the condition, which must be met with is that the sources must be:	A. Monochromatic B. Phase coherent C. Both of above D. None of above
12	The ratio of the diameter of two convex lenses is _____-the ratio of their focal lengths:	A. Greater than B. Less than C. Equal to D. None of these
13	In case of destructive interference of two waves, the amplitude of the resultant wave will be ____ either of the waves:	A. Greater than B. Smaller than C. Equal to D. None of these
14	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these

15	A prism splits a beam of white light into seven component colors. This is so because	A. Phase of different colors is different B. Amplitude of different colors is different C. Wavelength of different colors is different D. Velocity of different colors is different
16	The contrast in the fringes in an interference pattern depends upon	A. Fringe width B. Relative difference intensities of the two sources C. Distance between the slits D. Wavelength
17	Least distance of distinct vision of an old man possibly becomes:	A. A little less than 25 cm B. A little more than 25 cm C. Much less than 25 cm D. None of these
18	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
19	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
20	In case of constructive interference of two waves, the amplitude of the resultant wave is _____ either of the waves:	A. Greater than B. Equal to C. Smaller than D. None of these