

ECAT Physics Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	To see the minor details of the object by microscope, it should have:	A. High magnifying power B. High resolving power C. An objective of larger focal length D. None of these
2	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
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. Least distance of distinct vision C. Much farther than the least distance D. Both A and B are correct
5	Light appears to travel in straight line because	A. It is not absorbed by the atmosphere B. It is refracted by the atmosphere C. Its wavelength is very small D. Its velocity is very large
6	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
7	The locus of all the points in the same phase of vibration is called:	A. Wave packet B. Wave front C. Wave number D. None of them
8	Two 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
9	For the virtual image, option _____ is not correct:	A. $1/p = 1/f - 1/q$ B. $1/f = 1/p - 1/q$ C. $1/p = 1/p - 1/f$ D. $1/p = 1/f + 1/q$
10	According to Huygen's principle	A. Light travels in straight line B. Light is a transvers wave C. Light has dual nature D. All points on the primary wavefront are the sources of secondary wavelets
11	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
12	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
13	Resolving power in mth order diffraction for grating is given by:	A. $R = N \times m$ B. None of these C. $R = m/N$ D. $R = N/m$
		A. Bright fringes are wider than dark fringes B. Dark fringes are wider than bright fringes

14	In an interference pattern of Young's double slit(YDS) experiment:	tringes C. Both dark and bright fringes are of equal width D. Central fringes are wider than the outer fringes
15	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
16	Angle between the ray of light and the corresponding wavefront is:	A. 0° B. 60° C. 90° D. 120°
17	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
18	Which one the following gives three regions of electromagnetic spectrum in order of increasing wavelength?	A. Gamma rays, micro waves, visible light B. Radio waves, ultraviolet waves, X-rays C. Ultraviolet rays, infrared rays, micro waves D. Visible light, gamma rays, radio waves
19	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
20	In the formula $R = N \times m$ for diffraction grating, N denotes:	A. No. of lines/cm B. No. of lines/meter C. Total number of lines D. None of above