

## Physics ECAT Pre Engineering Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	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
2	When a source of light isat very large distance, the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
3	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
4	The ratio of the diameter of two convex lenses isthe ratio of their focal lengths:	A. Greater than B. Less than C. Equal to D. None of these
5	A grating with high resolving power can distinguish difference in wavelengths :	A. Larger B. Zero C. None of these D. Smaller
6	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
7	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
8	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
9	The velocity of light in vacuum can be changed by changing	A. Frequency B. Amplitude C. Wavelength D. None of these
10	A line which represents the direction of travel of a wave is known as:	A. Spherical Wavefront B. Locus C. Ray D. Either B or C
11	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 wave- front are the sources of secondary wavelets
12	The speed of the secondary wavelets as mentioned in Huygen's principle is the speed of propagation of the wave itself.	A. Equal to B. Greater than C. Smaller than D. None of these
13	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
14	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
15	Monochromatic light means waves of:	A. Same frequency     B. Same colour     C. Same wavelength

		D. All of them
16	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
17	The property of light which does not change with the nature of the medium is:	A. Frequency B. Amplitude C. Wavelength D. None of these
18	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
19	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
20	The focal length of convex lens having magnifying power of 5.55 is:	A. 5.5 cm B. 5 cm C. 4.5 cm D. 6 cm