

ECAT Physics Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	The image of an object 5 mm length is only 1 cm high. The magnification produced by lens is:	A. 1 B. 0.2 C. 2 D. 0.1
2	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
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	Conventionally, all the distance p, q, f are measured from _____ of the lens:	A. Focus B. Optical center C. Edges D. None of these
5	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
6	When a source of light is at very large distance, the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
7	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
8	In an interference pattern of Young's double slit (YDS) experiment:	A. Bright fringes are wider than dark fringes B. Dark fringes are wider than bright fringes C. Both dark and bright fringes are of equal width D. Central fringes are wider than the outer fringes
9	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
10	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
11	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
12	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
13	A ray passing through optical center of a lens, after refraction:	A. Passes through focus B. Go deviated C. Retraces its path D. Both B and C
14	If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by blue light of the same intensity	A. Fringe width will decrease B. Fringe width will increase C. Fringe width will remain unchanged

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- 15 The cause of mirage observed in deserts in bright sunlight is due to
A. Refraction of light
B. Reflection of light
C. Scattering of light
D. Total internal reflection of light
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- 16 A convex lens acts as diverging lens when the object is placed:
A. Beyond 2F
B. At 2F
C. With focal length
D. Between F and 2F
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- 17 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. $1/p = 1/f + 1/q$
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- 18 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
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- 19 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
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- 20 Speed of light in vacuum depends upon:
A. Frequency
B. Wavelength
C. Amplitude
D. None of these
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