

ECAT Pre General Science Physics Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	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
2	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
3	Certain light of wavelength 600 nm is used to view an object under the microscope. If the aperture of its objective is 1.22 cm, then the limiting angle of resolution will be:	A. 6×10^{-5} rad B. 7×10^{-5} rad C. 8×10^{-5} rad D. None of these
4	When the object lies between F and 2F, the image formed by is formed at:	A. Real B. Virtual C. Diminished D. Erect
5	Huygen principle is used to determine:	A. Speed of light B. Location of wavefront C. About polarized or unpolarized light D. None of them
6	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
7	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
8	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
9	A convex lens acts as diverging lens when the object is placed:	A. Between F and 2F B. At 2F C. With focal length D. Beyond 2F
10	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
11	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. $R = Nm$
12	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
13	Light has:	A. Wave nature B. Particle nature C. Dual nature D. None of these
		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:	<p>tringes</p> <p>C. Both dark and bright fringes are of equal width</p> <p>D. Central fringes are wider than the outer fringes</p>
15	Stars twinkle due to	<p>A. The fact that they do not emit light continuously</p> <p>B. The refractive index of earth's atmosphere fluctuates</p> <p>C. The Star's atmosphere absorbs its light intermittently</p> <p>D. None of these</p>
16	To observe interference of light, the condition, which must be met with is that the sources must be:	<p>A. Monochromatic</p> <p>B. Phase coherent</p> <p>C. Both of above</p> <p>D. None of above</p>
17	The ratio of the size of the image to that of object is called:	<p>A. Focal length</p> <p>B. Aperture</p> <p>C. Linear magnification</p> <p>D. Principal axis</p>
18	Least distance of distinct vision of an old man possibly becomes:	<p>A. A little less than 25 cm</p> <p>B. A little more than 25 cm</p> <p>C. Much less than 25 cm</p> <p>D. None of these</p>
19	A virtual image is formed when object is placed:	<p>A. Within focal length of a convex lens</p> <p>B. Near the focal point of a concave lens</p> <p>C. Both A and B</p> <p>D. Away from 2F of a convex lens</p>
20	A magnifier gives an image which is:	<p>A. Virtual, inverted</p> <p>B. Real, erect</p> <p>C. Virtual, erect</p> <p>D. Real, inverted</p>