

## Physics ECAT Pre Engineering Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	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
2	A virtual image is formed when object is placed:	A. Within focal length of a convex lens B. Near the focal point of a concave lens C. Both A and B D. Away from 2F of a convex lens
3	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
4	In YDS experiment, fringe spacing means the distance between two consecutivefringes.	A. Bright B. Dark C. Any of A and B D. None of these
5	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 D. Fringe will become less intense
6	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
7	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
8	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
9	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
10	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
11	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
12	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
13	Huygen principle is used to determine:	A. Speed of light     B. Location of wavefront     C. About polarized or unpolarized light     D. None of them
		A. R = N x m

14	Resolving power in mth order diffraction for grating is given by:	B. None of these C. R = m/N D. R = N/m
15	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
16	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
17	A ray passing through optical center of a lens, after refraction:	<ul><li>A. Passes through focus</li><li>B. Go deviated</li><li>C. Retraces its path</li><li>D. Both B and C</li></ul>
18	With age, least distance of distinct vision:	A. Increases B. Decreases C. Is not affected D. None is correct
19	A magnifier gives an image which is:	A. Virtual, inverted B. Real, erect C. Virtual, erect D. Real, inverted
20	When a source of light isat very large distance, the shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these