

ECAT Physics Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	The velocity of light in vacuum can be changed by changing	A. Frequency B. Amplitude C. Wavelength D. None of these
2	Wave length of light, on the average, is given by:	A. 10^{14} m B. 10^{10} m C. 10^6 m D. 10^4 m
3	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
4	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
5	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
6	According to Huygen's principle	A. light travels in straight line B. Light is a transverse wave C. Light has dual nature D. All points on the primary wave-front are the sources of secondary wavelets
7	Huygen principle is used to determine:	A. Speed of light B. Location of wavefront C. About polarized or unpolarized light D. None of them
8	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. $6 \times 10^{-5} \text{ rad}$ B. $7 \times 10^{-5} \text{ rad}$ C. $8 \times 10^{-5} \text{ rad}$ D. None of these
9	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
10	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
11	When the object lies between F and 2F, the image formed by is formed at:	A. Virtual B. Diminished C. Erect D. Real
12	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
13	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
14	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
15	The locus of all points in a medium having same phase of vibration is called	A. Crest B. Trough C. Wavelength D. Wave-front
16	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
17	The distance from eye to near point is taken as:	A. 10 cm B. 15 cm C. 20 cm D. 25 cm
18	To 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
19	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
20	A magnifier gives an image which is:	A. Virtual, inverted B. Real, erect C. Virtual, erect D. Real, inverted