Physics ECAT Pre Engineering Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	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
2	Electromagnetic waves transport:	A. Energy only B. Momentum only C. Both A and B are correct D. None of is correct
3	Speed of light in vacuum depends upon:	A. Frequency B. Wavelength C. Amplitude D. None of these
4	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
5	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
6	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
7	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
8	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
9	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
10	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straigth line
11	Resolving power in mth order diffraction for grating is given by:	A. R = N x m B. None of these C. R = m/N D. R = N/m
12	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
13	The least distance of distinct vision is:	A. 10 cm B. 25 cm C. 50 cm D. 100 cm
14	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
		A. Bright fringesare wider than dark fringes B. Dark fringes are wider than bright

15	In an interference pattern of Young's double slit(YDS) experiment:	fringes C. Both dark and bright fringes are of equal width D. Central fringes are wider than the outer fringes
16	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
17	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
18	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
19	The velocity of light in vacuum can be changed by changing	A. Frequency B. Amplitude C. Wavelength D. None of these
20	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