Physics ECAT Pre Engineering Chapter 10 Optical Instruments

Sr	Questions	Answers Choice
1	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
2	The property of light which does not change with the nature of the medium is	A. Frequency B. Amplitude C. Wavelength D. None of these
3	Frequency of red colour as compared to that of violet colour is	A. Equal B. Smaller C. Greater D. None of these
4	Monochromatic light means wave of	A. Same frequency B. Same colour C. Same Wavelength D. All of them
5	Speed of light in vacuum depends upon	A. Frequency B. Wavelength C. Amplitude D. None of these
6	The wave nature of light was proposed by	A. Newton B. Thomas Young C. Huygen D. None of these
7	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
8	In case of point source of light, shape of wavefront is	A. Spherical B. Cylindrical C. Plane D. None of above
9	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
10	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
11	Angle between ray of light and the corresponding wavefront is	A. 0⁰ B. 60⁰ C. 90⁰ D. 120⁰
12	Wavelength of red colour as compared to that of violet colour is	A. Smaller B. Longer C. Equal D. None of these
13	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
14	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

15	Light has	A. Wave nature B. Dual nature C. Particle nature D. None of them
16	Two 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
17	Which one of the followings can act approximately as a source of monochromatic light	A. Neon lamp B. Fluorescent tube C. Sodium lamp D. None of these
18	Laws of reflection and refraction can also be explained by	A. Particle nature of light B. Quantum nature of light C. Wave nature of light D. Complex nature of light
19	The terms phase difference and path difference are	A. Same B. Different C. Equal D. none of these
20	Electromagnetic waves transport	A. Energy only B. Momentum only C. Both A and B D. None is correct