ECAT Physics Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	Huygen's principles states that:	A. Light has dual nature B. Either of these C. None of these D. Light travels in straigth line
2	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
3	The locus of all points in a medium having same phase of vibration is called	A. Crest B. Trough C. Wavelength D. Wave-front
4	The ratio of the size of the image to that of object is called:	A. Focal length B. Aperture C. Linear magnification D. Principal axis
5	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
6	If the object and its image are located at a distance of 5 cm from the focus of a convex lens, the focus length of the lens will be:	A. 5 cm B. 10 cm C. 20 cm D. 25 cm
7	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
8	To see the minor details of the object by microscope, it should have:	A. High magnifying power B. High resolving power C. Am objective of larger focal length D. None of these
9	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
10	Stars twinkle due to	A. The fact that they do not emit light continuously B. The refractive index of earth's atmosphere fluctuates C. The Star's atmosphere absorbs its light intermittently D. None of these
11	In an interference pattern of Young's double slit(YDS) experiment:	A. Bright fringesare 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
12	Resolving power in mth order diffraction for grating is given by:	A. R = N/m B. R = m/N C. R = N x m D. None of these
13	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

14	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these
15	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
16	Conventionally, all the distance p, q, f are measured from _____ of the lens:	A. Focus B. Optical center C. Edges D. None of these
17	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 x 10⁻⁵rad B. 7 x 10⁻⁵rad C. 8 x 10⁻⁵rad D. None of these
18	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
19	Light waves are:	A. Transverse wave B. Longitudinal wave C. Compressional wave D. None of them
20	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