

Physics ECAT Pre Engineering Chapter 9 Physical Optics

0	Overtions	Assumes Obsides
Sr	Questions	Answers Choice
1	If the object is situated at focus of a convex lens, then its image is formed at:	A. F B. 2F C. Infinity D. None of these
2	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
3	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
4	The wave nature of light was proposed by:	A. Newton B. Thomas Young C. Huygen D. None of these
5	A grating with high resolving power can distinguish difference in wavelengths :	A. Larger B. Zero C. None of these D. Smaller
6	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
7	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
8	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. <div> </div> <div><central are="" div="" fringes="" fringes<="" outer="" than="" the="" wider=""></central></div>
9	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
10	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
11	The appearance of the colour in the soap (oil) film results from:	A. Dispersion B. Interference C. Reflection D. Refraction
12	In order to get interference using two light rays	A. The sources should be monochromatic and coherent B. The sources should have the same frequency C. Superposition should be linear D. All of these
13	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

14	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
15	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
16	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
17	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
18	The size of the image is maximum when its distance from the magnifying glass is:	A. 0.10 m B. 0.15 m C. 0.20 m D. 0.25 m
19	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 ⁻⁵ rad B. 7 x 10 ⁻⁵ rad C. 8 x 10 ⁻⁵ rad D. None of these
20	In case of point, source of light shape of wavefront is:	A. Spherical B. Cylindrical C. Plane D. None of these