

## ECAT Physics Chapter 9 Physical Optics

Sr	Questions	Answers Choice
1	Resolving power in $m$ th order diffraction for grating is given by:	A. $R = N/m$ B. $R = m/N$ C. $R = N \times m$ 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	Frequency of red color as compared to that of violet color is:	A. Equal B. Smaller C. Greater D. None of these
4	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
5	Conventionally, all the distance $p$ , $q$ , $f$ are measured from _____ of the lens:	A. Focus B. Optical center C. Edges D. None of these
6	The terms phase difference and path difference are:	A. Same B. Different C. Equal D. None of these
7	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
8	Resolving power in $m$ th order diffraction for grating is given by:	A. $R = N \times m$ B. None of these C. $R = m/N$ D. $R = N/m$
9	Wave length of that color as compared to that of violet color is:	A. Smaller B. Longer C. Equal D. None of these
10	Monochromatic light means waves of:	A. Same frequency B. Same colour C. Same wavelength D. All of them
11	The image of the tip of a needle is never sharp because of	A. Polarization of light B. Interference of light C. Diffraction of light D. Reflection of light
12	A grating with high resolving power can distinguish _____ difference in wavelengths :	A. Smaller B. Larger C. Zero D. None of these
13	Huygen's theory cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
14	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

15	Light waves are:	<p>A. Transverse wave</p> <p>B. Longitudinal wave</p> <p>C. Compressional wave</p> <p>D. None of them</p>
16	To see the minor details of the object by microscope, it should have:	<p>A. High magnifying power</p> <p>B. High resolving power</p> <p>C. An objective of larger focal length</p> <p>D. None of these</p>
17	Two sources are said to be coherent if they have:	<p>A. Same amplitude</p> <p>B. Same wavelength</p> <p>C. Definite phase relation with each other</p> <p>D. None of them</p>
18	When the object lies between F and 2F, the image formed by is formed at:	<p>A. Real</p> <p>B. Virtual</p> <p>C. Diminished</p> <p>D. Erect</p>
19	Wave length of light, on the average, is given by:	<p>A. <math>10^{-14}</math> m</p> <p>B. <math>10^{-10}</math> m</p> <p>C. <math>10^{-6}</math> m</p> <p>D. <math>10^{-4}</math> m</p>
20	If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by blue light of the same intensity	<p>A. Fringe width will decrease</p> <p>B. Fringe width will increase</p> <p>C. Fringe width will remain unchanged</p> <p>D. Fringe will become less intense</p>