

MDCAT Physics Chapter 7 Light Online Test

Sr	Questions	Answers Choice
1	$2d \sin \theta = n\lambda$ can be used to determine the	A. Inter planar spacing B. Wavelength C. Incident angle D. All of these
2	In Bragg's Equation $2d \sin \theta = n\lambda$, where 'n' is	A. Order of spectrum B. Number of reflections C. Order of reflection D. None of these
3	In Bragg's formula, the path difference should be integral multiple of the wavelengths	A. $d \sin \theta = n\lambda$ B. $d \sin 2\theta = n\lambda$ C. $2d \sin \theta = n\lambda$ D. None of these
4	According to WH Bragg and WL Bragg monochromatic beam of X-rays was reflected from a crystal plane is like a	A. Smooth and regular B. Mirror C. Thin film D. None of these
5	The study of atomic structure of crystals by X-rays was initiated by W.H. Bragg and W.L. Bragg in	A. 1920 B. 1926 C. 1910 D. 1914
6	The scattering of X-rays from atoms in a crystalline lattice gives rise to	A. Interference B. Diffraction C. Reflection D. None of these
7	The regular array of atoms in a crystal forms a natural diffraction grating of spacing typically	A. $\approx 10^{-10}$ m B. $\approx 10^{-12}$ m C. $\approx 10^{-8}$ m D. $\approx 10^{-9}$ m
8	X-rays are a type of electromagnetic radiations of much shorter wavelengths of the order of	A. 10^{-8} m B. 10^{-9} m C. 10^{-10} m D. 10^{-12} m
9	The fine rulings on a compact disc act as a diffraction grating but each line is wide like	A. $0.01 \mu\text{m}$ B. $0.5 \mu\text{m}$ C. $0.05 \mu\text{m}$ D. $0.6 \mu\text{m}$
10	In the relation $d \sin \theta = n\lambda$, shows that the value of θ depends upon 'n' so the images of different colours are much separated in	A. Low orders B. Middle orders C. High order D. None of these
11	The relation $d \sin \theta = n\lambda$, where 'n' is the	A. Number of bright fringes B. Number of dark fringes C. Order of the spectrum D. None of these
12	Zero order image formed by the grating when the angle is along the direction of normal to grating is	A. Zero B. 90° C. 180° D. None of these
13	When $\theta = 0$ in relation $d \sin \theta = \lambda$, the path difference between the rays coming out from the slits of the grating will be zero. So the image in this direction is	A. Dark B. Bright C. No image formed D. None of these
14	If the incident light contains different wavelengths the images of each wavelength for a certain value is diffracted in the	A. Same directions B. Different direction C. Opposite direction D. None of these
15	The diffraction grating is used to determine	A. Intensity of light B. Wavelength of light C. Refractive index of prism D. None of these

16	The distance between the two adjacent slits is called	A. Thickness of the slit B. Distance between and two slits C. Grating element D. None of these
17	In diffraction grating has feature/features like	A. A glass plate B. A large numbers of lines are ruled C. Spacing between two lines acts as a slit D. All of these
18	A typical diffraction grating has lines per centimeter is about	A. 500 to 6000 B. 400 to 5000 C. 450 to 5500 D. 425 to 5670
19	The diffraction of light occurs, due to interference, of	A. Obstructed portion B. Unobstructed portion C. Both obstructed and unobstructed light D. None of these
20	The property of bending of light around the obstacle is known is	A. Interference B. Polarization C. Diffraction D. None of these