

MDCAT Physics Chapter 7 Light Online Test

Sr	Questions	Answers Choice
1	One angstrom is equal to?	A. 10^{-8} cm B. 10^{-6} m C. 10^{-10} nm D. 10^{-8} nm
2	Wavelength of X-rays falling at glancing angle 30° on crystal with atomic spacing 2×10^{-9} m for the first order diffraction is	A. 4×10^{-6} m B. 2×10^{-10} m C. 0.2×10^{-10} m D. 20×10^{-10} m
3	When a mirror of a Michelson's interferometer is moved a distance of 0.5 mm, 2000 fringes are observed, the wavelength of the light used is	A. 5000 mm B. 5000×10^{-10} m C. 500 cm D. 2000×10^{-10} m
4	For the monochromatic beam of X-rays, the crystal planes in a lattice act like a	A. perfect absorbers B. boundary C. mirror D. none of them
5	The study of atomic structures of crystals by X-rays was started in	A. 1890 B. 1905 C. 1914 D. 1944
6	The regular array of atoms in a crystal has spacing of the order of	A. 10^{-16} m B. 10^{-14} m C. 10^{-10} m D. 10^{-6} m
7	We can observe only when the grating spacing is	A. of the order of the wavelength used B. greater than the wavelength used C. less than the wavelength used D. any one of them
8	The wavelength of X-rays is about	A. 10^{-14} m B. 10^{-10} m C. 10^{-6} m D. 10^{-4} m
9	A diffraction grating has 500 lines per mm. its slit spacing or grating element will	A. 500 mm B. 5×10^{-3} mm C. 2×10^{-5} mm D. 2×10^{-3} mm
10	If 5000 lines per cm are ruled on a diffraction grating then the slit spacing will be	A. 5×10^{-3} m B. 2×10^{-4} m C. 5×10^{-5} m D. 2×10^{-4} m
11	A diffraction grating contains 5000 lines per centimeter, its grating element will be	A. 1×10^{-4} nm B. 1×10^{-14} m C. 1×10^{-14} cm D. 1×10^{-4} cm
12	The diffraction grating is used to measure	A. wavelength of light B. focal length of a lens C. refractive index of prism D. none of these

		D. polarization of light
13	The spacing between the parallel lines are served as	A. slits B. source of light C. opaque lines D. fringes
14	A glass plate on which a large number of very fine equidistant parallel lines are drawn is called	A. convex lens B. thin film C. diffraction grating D. interferometer
15	The distance between the top adjacent slits on diffraction grating is called	A. element B. grating element C. aperture D. slit
16	A typical diffraction grating has lines per centimeter	A. 10 to 100 B. 100 to 1000 C. 1000 to 5000 D. 400 to 5000
17	On a diffraction grating which thing acts as a slit	A. the lines which are ruled on it B. the spacing between the lines C. either of them D. none of them
18	On a diffraction grating a large number of close parallel equidistant slits are ruled on it	A. By hand B. electronically C. mechanically D. none of them
19	Diffraction is concerned with the superposition of	A. very large number of secondary wavelets B. a few secondary wavelets C. two secondary wavelets D. no secondary
20	The diffraction is found to be prominent when the wavelength of light is	A. small as compared with the size of obstacle B. large as compared with the size of obstacle C. equal as compared with the size of obstacle D. Very small as compared with the size of the obstacle