

MDCAT Physics Chapter 7 Light Online Test

Sr	Questions	Answers Choice
1	In a spectrometer experiment monochromatic light is incident normally on a diffraction grating having 4.5×10^5 lines per meter. The second order line is seen at an angle of 30° to the normal what is the wavelength of the light?	A. 200 nm B. 430 nm C. 500 nm D. 556 nm
2	In young's slit experiment on interference the ratio of the intensities of a bright band and a dark band is 6 : 1 the ratio of the amplitudes of the interfering waves is	A. 16 B. 5/3 C. 4 D. 1/4
3	Signal from a remote control to the device operated by it travels with the speed of:	A. Sound B. Light C. Ultrasonics D. Supersonics
4	When the light is incident on polarizing angle which of the following is completely polarized?	A. Reflected light B. Refracted light C. Both reflected and refracted light D. Neither reflected nor refracted light
5	In the Young's double slit experiment the separation between the slits is halved and the distance between the slits and the screen is doubled the fringe width is	A. Halved B. Unchanged C. Doubled D. Quadrupled
6	For the sustained interference of light the necessary condition is that the two sources should	A. Have constant phase difference B. Be narrow C. Be close to each other D. Of same amplitude
7	If a source of light is moving away from stationary observer then frequency of light wave appears to change because of	A. Doppler's effect B. Interference C. Diffraction D. None of the above
8	When seen in green light the saffron and green portions of our National Flag will appear to be	A. Black B. Black and green respectively C. Green D. Green and yellow respectively
9	Ray optics is valid, when characteristic dimensions are	A. Of the same order as the wavelength of light B. Much smaller than the wavelength of light C. Of the order of one millimeter D. Much larger than the wavelength of light
10	When light travels from one medium to another which are separated by a sharp boundary the characteristic which does not change is	A. Velocity B. Wavelength C. Frequency D. Amplitude
11	Fraunhofer spectrum is a	A. Line absorption spectrum B. Band absorption spectrum C. Line emission spectrum D. Band emission spectrum
12	The sky appears blue because	A. Red light is absorbed B. Blue light is scattered the most C. Blue light is absorbed D. It is its natural color
13	Huygen's wave theory of light cannot explain	A. Diffraction B. Interference C. Polarization D. Photoelectric effect
14	The contrast in the fringes in any interference pattern depends on	A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength

15	Which one of the following phenomena is not explained by Huygen's construction of wavefront?	A. Retraction B. Reflection C. Diffraction D. Origin of spectra
16	Light appears to travels in straight lines since	A. It is not absorbed by the atmosphere B. It is reflected by the atmosphere C. Its wavelength is very small D. Its velocity is very large
17	The twinkling of stars is due to	A. The fact that stars do not emit light continuously B. The refractive index of the earth's atmosphere fluctuate C. Intermittent absorption of star light by its own atmosphere D. None of these
18	A prism splits a beam of white light into its seven constituent colors.This is so because	A. Phase of different colors is diferent B. Amplitude of different colors is different C. Energy of different colors is different D. Velocity of different colors if different
19	A sun rise or sun set the sun looks reddish because	A. The sun is coldest at these times B. Of the effects of reflection and refraction C. The sun is hottest at these times D. Of the scattering of light
20	One cannot see through fog because	A. Fog absorbs light B. The refractive index of fog is infinity C. Light suffers total reflection at the droplet in a fog D. Light is scattered by the droplets in fog