MDCAT Physics Chapter 12 Atomic spectra Induction Online Test

Sr	Questions	Answers Choice
1	Light of frequency 2 times the threshold frequency is incident on the metalsurface. Ifthe frequency is by quartered and intensity is doubled, the photoelectric becomes	A. Quadrupled B. Zero C. Doubled D. Halved
2	In electron microscope, we use high speed electrons because them	A. Penetration power is higher B. Wavelength is smaller C. Frequency is smaller D. K.E is smaller
3	In photoelectric effect experiment, stopping potential depend upon	A. Intensity of light B. Frequency of light C. Photoelectric current D. Both A and B
4	de-Broglie wavelength associated with an electron moving at a speed of 1×10^6 ms-1 is	A. 4×10^{-10} ms-1 B. 5×10^{-10} m C. 6×10^{-10} m D. 7×10^{-10} m
5	If an electron is accelerated such that its K.E is 4 times of its rest mass energythen thetotal relativistic energy of electrons is about	A. 5×10^{-12} J B. 4×10^{-13} J C. 3×10^{-13} J D. 6×10^{-12} J
6	Temperature of black body radiating at 270c is increased to 327oc, then emittedenergywill increase by	A. 2 times B. 12 times C. 16 times D. 4 times
7	A photo cell receives light from a source at 50 cm away and produces 40mAcurrent inthe circuit. When the same source at is at distance 1 m from photo cell,current in the circuit will be	A. 20 mA B. 80mA C. 60 mA D. 10 mA
8	Work function of all metals varies from 2 eV to 4eV. It is 4.2 eV for Aluminum and2eV for Sodium. If these two metals are illuminated by same light, the thresholdfrequency ofAluminum is	A. Less than Sodium B. Equal to that of Sodium C. Grater than Sodium D. Can't be decided
9	Choose incorrect about properties of photon	A. Rest mass of photon is zero B. A photon is never at rest C. Photon is not deflected by electric field not by magnetic field D. The velocity of photon is different in different media
10	In photo electric cell, the photo electric current	A. Decreases with increase in frequency of light B. Depends on intensity and frequency of light C. Does not depend upon the frequency of light and but depends upon intensity of light D. Increases with increase in frequency of light
11	Intensity of light from a point source at the edge of unit sphere will be:	A. □ B. □ C. P(4π) D. 4□
12	Monochromatic light of wavelength 300 nm is incident normally on a surface of area 4 cm2. If the intensity of light is 150 mW/m2; the rate at which photon strike the surface:	A. 2.53×10^{19} B. 7.5×10^{19} C. 9.1×10^{13} D. 2.53×10^{13}
13	How many photons per second does a one-watt bulb emit if its efficiency is 10% and the wavelength of light is 500 nm:	A. 2.53×10^{17} B. 2.53×10^{19} C. 7.5×10^{19} D. 7.5×10^{17}
14	What will be the number of photons emitted per second by 25 W source of monochromatic light of wavelength 600 nm:	A. 7.5×10^{17} B. 7.5×10^{19} C. 5.5×10^{19}

	light of wavelength 500 nm..	C. 5.5 × 1016 D. 5.5 × 1017
15	What is the momentum of a photon of light of wavelength 500 nm in kgm/s:	A. 1.32 × 10−21 B. 1.32 × 10−23 C. 1.32 × 10−25 D. 1.32 × 10−27
16	Which one is the correct express of de-Broglie equation for the length of atoms of mass m at temp? T(k=Boltzmann's constant):	A.
17	The Balmer series is found in the spectrum of:	A. Hydrogen B. Nitrogen C. Oxygen D. All
18	When an electron in an atom goes from a lower to higher its:	A. K.E. increases, P.E. decreases B. K.E. increases C. P.E increases D. K.E. decrease, P.E. increases
19	The shortest wavelength of X-rays emitted from an X-rays tube depends on the:	A. Current in the tube B. Voltage applied to the tube C. Nature of gas in the tube D. Nature of material of tube
20	For X-rays which of the following is not correct:	A. Cause of ionization in air when they pass through it B. Can be deflected by electric and magnetic fields C. Can be used to detect flaws in metal casting D. Travel with the speed of light