MDCAT Physics Chapter 12 Atomic spectra MCQ's Test

Sr	Questions	Answers Choice
1	The potential difference applied to an X-rays tube is increased. As a result, in the emitted radiation	A. The intensity increases B. The minimum wavelength decrease C. The intensity remains unchanged D. Both B & C
2	The de-Broglie wavelength of the particle of mass m and energy E is:	B. I C. □ = I√2□□ D. □ = 1
3	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
4	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
5	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
6	Which of the following statement is true about soft X-rays?	A. They have large wavelength B. They have high energy C. They have low energy D. Both A and C
7	What will be the number of photons emitted per second by 25 W source of monochromatic light of wavelength 600 nm:	A. 7.5 × 1017 B. 7.5 × 1019 C. 5.5 × 1019 D. 5.5 × 1017
8	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
9	A proton and an □ − □□□□□□□□ are accelerated through same voltage, the ratio of their de- Broglie wavelength will be:	A. 1:2 B. √2: 1 C. 2√2: 1 D. 2:1
10	Light elements do not emit X-rays because	A. Electrons in it have high binding energy B. These materials are non- material C. There is a small difference in their energy shells D. Electrons in it require very large energy to remove from these materials
11	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
12	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
13	Of electron of 50 keV strike a heavy target. Then radiation emitted by target will be	A. Visible light B. Radio waves C. Ultraviolet D. None of these
14	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.

15	A proton, accelerated through a p.d V has a certain de Broglie wavelength. In order to have the same de Broglie wavelength, an □ −particles must be accelerated through a potential difference:	A. 4V B. 8V C. V/4 D. V/8
16	In photoelectric effect experiment, stopping potential depend upon	A. Intensity of light B. Frequency of light C. Photoelectric current D. Both A and B
17	To find longest wavelength radiation in Ballmer series, the value of n used is:	A. 2 B. 3 C. 4 D. ∞
18	The threshold frequency depends on the nature on:	A. Natural frequency B. Photosensitive anode C. Photosensitive cathode D. Photon
19	The Balmer series is found in the spectrum of:	A. Hydrogen B. Nitrogen C. Oxygen D. All
20	Threshold wavelength for metal having work function □ is □. What is the threshold wavelength for metal having work function 2 □□:	A. /□ B. 2 C. 4 D. □/□