MDCAT Physics Chapter 12 Atomic spectra MCQ's 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	Continuous spectrum of X-rays id due to an effect known as	A. Photoelectric effect B. Compton effect C. Heisenberg effect D. Bremsstrahlung
3	de-Broglie wavelength associated with an electron moving at a speed of 1x106 ms-1 is	A. 4x10-10 ms-1 B. 5x10-10 m C. 6x10-10 m D. 7x10-10 m
4	An electron and a proton are accelerated through the same potential. If their masses are me and mp respectively, then the ratio of their de-Broglie wavelength is:	A. 1 B. mp/me C. me/mp
5	In which region of the electromagnetic spectrum does the Lyman series of hydrogen atom lie?	A. Infrared B. Visible C. Ultraviolet D. X-rays
6	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
7	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
8	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
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	As the intensity of incident light increases:	A. Photoelectric current increases B. Photoelectric current decreases C. Kinetic energy of emitted photoelectrons increases D. Kinetic energy of emitted photoelectrons decreases
11	The maximum energy of the electrons released in a photo cell is independent of:	A. Frequency of incident light B. Intensity of incident light C. Nature of cathode rays D. None of these
12	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
13	The ratio of the longest and shortest wavelength of the Lyman series is approximately:	A. 4/3 B. 9/4 C. 9/5 D. 16/7
14	The momentum of the moving photon is:	A. Zero B. I C. □

		D. I□
15	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
16	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
17	The de-Broglie wavelength of the particle of mass m and energy E is:	B. I C. □ = I√2□□ D. □ = 1
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	To find longest wavelength radiation in Ballmer series, the value of n used is:	A. 2 B. 3 C. 4 D. ∞
20	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 × 1019 B. 7.5 × 1019 C. 9.1 × 1013 D. 2.53 × 1013