MDCAT Physics Chapter 12 Atomic spectra MCQ's Test

Sr	Questions	Answers Choice
1	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
2	According to Bohr's theory, a line in the Ballmer series arises when the electron jumps from any of the higher orbits to the orbit with quantum number:	A. 1 B. 2 C. 3 D. 4
3	When ultraviolet rays are incident in metal plate, then photoelectric effect does not occur. It occurs by the incidence of:	A. x-rays B. Infrared rays C. Radio wave D. Greenhouse effect
4	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
5	The threshold frequency depends on the nature on:	A. Natural frequency B. Photosensitive anode C. Photosensitive cathode D. Photon
6	The de-Broglie wavelength of the particle of mass m and energy E is:	B. I C. □ = I√2□□ D. □ = 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	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
9	The Balmer series is found in the spectrum of:	A. Hydrogen B. Nitrogen C. Oxygen D. All
10	Light of frequency 4f0 is incident on the metal of the threshold frequency f0. The maximum kinetic energy of the emitted photoelectrons is	A. 3h f0 B. 3/2h f0 C. 2h f0 D. 1/2h f0
11	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
12	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
13	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. □/□
14	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

15	The momentum of the moving photon is:	A. Zero B. I C. □ D. I□
16	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
17	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
18	Maximum speed of electrons in X-rays tube which is producing X-rays photons of frequency f is	
19	The frequency and work function of an incident photon are n and□□. If f0 is the threshold frequency, then necessary condition for the emission of photo electron is:	A. < □0 B. □ ≥ □0 C. f = □0/2 D. None of these
20	To find longest wavelength radiation in Ballmer series, the value of n used is:	A. 2 B. 3 C. 4 D. ∞