ECAT Pre General Science Physics Chapter 20 Atomic Spectra Online Test

Sr	Questions	Answers Choice
1	The lasing or active medium in He-Ne laser discharge tube is:	A. Nitrogen B. Helium C. Hydrogen D. Neon E. None of these
2	The spectrum emitted from hydrogen filled discharge tube is:	A. Line spectrum B. Discrete spectrum C. And spectrum D. Absorption spectrum E. Both (A) and (B)
3	The He-Ne laser discharge tube is filled with:	A. 85% He B. 15% He C. 50% He D. 60% He E. 85% Ne
4	A metastable stae:	A. Is an excited state B. Is that in which excited electron is stable C. Is that in which excited electron is usually unstable D. Means a time interval of 10^{-8} second E. Both (A) and (C)
5	Laser is a beam of:	A. Visible light B. Infra red light C. Ultra violet light D. Violet light only E. yellow light only
6	By CAT scans, we can detect the density difference of the order of:	A. 1% B. 20% C. 30% D. 50% E. 70%
7	The shell closer to the nucleus is called:	A. N shell B. L shell C. K shell D. M shell E. O shell
8	An compared to solid matter, a crack or an air bubble allows:	A. Great amount of X-rays to pass B. Smallast amount of X-rays to pass C. Very samall amount of X-rays to pass D. Any of these E. None of these
9	X-rays can penetrate in a solid matte through a distance of several:	A. Kilo metres B. Metres C. Centimeters D. A few angstroms E. One micrometer
10	In case of braking radiations, when the rate of deceleration is very large, the emitted radiation corresponds to:	A. Short wavelength B. Large wavelength C. Very large wavelenth D. Low frequency E. Both (B) and (C)
11	Braking radiation causes:	A. Continuous spectrum B. Line Spectrum C. Band spectrum D. Discrete specturm E. All of these
12	The holes created in the L and M shells are occupied by transitions of:	A. Electrons from lower states B. Electrons from higher state C. Positrons from higher states D. Electrons from K shell E. Both (A) and (B)

#	Question	Options
13	The transitions of electrons in the hydrogen atom result in the emission of spectral lies in the:	A. Ultra red region B. Visible region C. Ultraviolet region D. Any of these E. None of these
14	Energy required by an electron revolving in certain orbit to jump to an excited state is called:	A. Ionization energy B. Ionization potential C. Excitation energy D. Excitation potential E. None of these
15	An electron of the hydrogen atom in the second orbit is called its:	A. Ground state B. Excited state C. Ionized state D. Any of these E. None of these
16	The formula of Brackett series can be obtained by putting in the general formula, the value of n equal to:	A. one B. two C. three D. four E. five
17	Lyman series in the spectrum of hydrogen exists in the :	A. Infra-red region B. Visible region C. Ultraviolet region D. Both(A) and (B) E. None of these
18	Tick the series which lie/s in. the infra-red region.	A. Pfund series B. Brackett series C. Paschen series D. All of these E. None of these
19	Tick the series which lies in the visible region:	A. Lyman series B. Balmer series C. Paschen series D. Brackett series E. P fund series
20	Spectrum represents the number of component colours present in certain light in terms of:	A. Wavelength B. Frequency C. Energy D. Both (A) and (B) E. All of these
21	The process of formation of spectrum is called:	A. Interference B. Spectroscopy C. Dispersion D. Reflection E. Botha (A) and (D)
22	The results of spectra obtained by Balmer were expressed in 1896 by:	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb
23	The natural arrangement of colours in the spectrum of white light spectrum is	A. VIBGYOR B. ROYBGIV C. ROYBIGV D. BIGROYV E. None of these
24	Balmer series lies in that region of electromagnetic wave spectrum which is called:	A. Visible region B. Invisible region C. Infra-red region D. ultraviolet region E. None of these
25	Balmer series was identified in:	A. 1685 B. 1785 C. 1885 D. 1985 E. 1585
26	The first series which was identified in the spectrum of hydrogen is called:	A. Lyman series B. Balmer series C. Paschen series D. Brackett series E. Pfund series
27	The results of spectra obtained by Blamer were expressed in 1896 by	A. Bohr B. Rydberg C. Planck D. Rutherford E. Coulomb

28	The range of wavelengths of colurs in the visible colours is	A. 140 nm to 456 nm B. 10 nm to 56 nm C. 410 nm to 656 nm D. 910 nm to 956 nm E. None of these
29	Atoms of hydrogen gas can be excited by passing electric current through it when the gas is filled into the discharge tube at a pressure which is	A. Less than atmospheric pressure B. Much less than atmospheric pressure C. Greater than atmospheric pressure D. Much greater than atmospheric pressure E. Both C and D
30	Consider a photon of continuous X-ray and a photon of characteristics X-ray of same wavelength. Which of the following is/are different for the two photons	A. Frequency B. Penetrating power C. Energy D. Method of creation