

## Physics ECAT Pre Engineering Chapter 20 Atomic Spectra

Sr	Questions	Answers Choice
1	X-rays produced in a tube operating at $10^5$ V. The speed of X-rays produced is	A. $3 \times 10^8$ m/s B. $3.1 \times 10^8$ m/s C. $2.8 \times 10^8$ m/s D. $1.88 \times 10^8$ m/s
2	The range of wavelengths of colours 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
3	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
4	The electric field lines start from:	A. Positive charge B. Negative charge C. Either A and B D. Neutron E. An atom
5	In helium Neon Laser Neon = 15% and Helium = 85% used. The lasing gas this unit is	A. Helium B. Neon C. Both D. None of these
6	The lasing or active medium in He-Ne laser discharge tube is:	A. Nitrogen B. Helium C. Hydrogen D. Neon E. None of these
7	The value of the metastable state for Neon is	A. 20.66eV B. 20.61eV C. 19.23eV D. 18.70eV
8	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
9	Gaussian surface is always:	A. Rectangular B. Spherical C. Cylinder D. Box shape E. Any of these
10	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
11	Static electricity is produced by the transfer of:	A. Electrons B. Protons C. One fluid D. Two fluid E. None of these
12	We can excite an atom by	A. Bombardment of particles B. Radiating photons C. Providing potential difference D. All answer are true
13	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)
		A. Electrons from lower states

14	The holes created in the L and M shells are occupied by transitions of:	<p>B. Electrons from higher state</p> <p>C. Positrons from higher states</p> <p>D. Electrons from K shell</p> <p>E. Both (A) and (B)</p>
15	The results of spectra obtained by Blamer were expressed in 1896 by	<p>A. Bohr</p> <p>B. Rydberg</p> <p>C. Planck</p> <p>D. Rutherford</p> <p>E. Coulomb</p>
16	The results of spectra obtained by Balmer were expressed in 1896 by:	<p>A. Bohr</p> <p>B. Rydberg</p> <p>C. Planck</p> <p>D. Rutherford</p> <p>E. Coulomb</p>
17	Photons must have energy equal to	<p>A. <math>ev</math></p> <p>B. <math>E_n</math></p> <p>C. <math>hf</math></p> <p>D. None of these</p>
18	By CAT scans, we can detect the density difference of the order of:	<p>A. 1%</p> <p>B. 20%</p> <p>C. 30%</p> <p>D. 50%</p> <p>E. 70%</p>
19	Balmer series was identified in:	<p>A. 1685</p> <p>B. 1785</p> <p>C. 1885</p> <p>D. 1985</p> <p>E. 1585</p>
20	Spectrum represents the number of component colours present in certain light in terms of:	<p>A. Wavelength</p> <p>B. Frequency</p> <p>C. Energy</p> <p>D. Both (A) and (B)</p> <p>E. All of these</p>