

## ECAT Chemistry Chapter 5 Atomic Structure

Sr	Questions	Answers Choice
1	When the electron jumps form second third, fourth orbit to the fist orbit, the transitions are known as	A. Balmer series B. Lyman series C. Pfund series D. Brackett series
2	The nature of positive rays depend on:	<ul><li>A. Nature of discharge tube.</li><li>B. Nature of resident gas.</li><li>C. Nature of electrode.</li><li>D. All of above.</li></ul>
3	Charge on electron was discovered by:	A. Millikan. B. Crook. C. Neil Bohr. D. Rutherford.
4	For a 3P subshell the set of principle and azimuthal quantum number is	A. n = 1, I = 2 B. n = 3, I = 0 C. n = 3, I = 1 D. n = 1, I = 3
5	Splitting of spectral lines when atoms are subjected to strong electron field is called	A. Zeeman effect B. Stark effect C. Photoelectric effect D. Compton effect
6	Which of the following is not a property of cathode rays	A. They can produce x-rays when they strike a heavy metal anode B. They can cause reduction reaction C. They produce fluorescence in rare earth and minerals  D. They comprise neutral particles
7	Schrodinger wave equation describes electron completely because	A. It describes a set of four quantum number B. It describes the particle nature of electron C. It measures wavelength of electron D. It describes electron moving in specific orbit
8	The nature of positive ray depend on:	<ul><li>A. The nature of electrode.</li><li>B. The nature of discharge tube.</li><li>C. The nature of residual gas.</li><li>D. All of above.</li></ul>
9	Rutherford's atomic model suggests the existence of	A. Atom B. Nucleus C. alpha particle D. Measons
10	The nature of the positive rays depend on	A. The nature of the electrode B. The nature of the discharge tube C. The nature of the residual gas D. All of the above
11	1 erg of energy corresponds to	A. 6.02 x 10 <sup>23</sup> J/mol B. 6.02 x 10 <sup>16</sup> J/mol C. 1 erg/mol D. 10 <sup>-7</sup> J/mol
12	Number of neutrons in heavy hydrogen atom is	A. 0 B. 1 C. 2 D. 3
13	The configuration 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>5</sup> 3s <sup>1</sup> shows	A. Excited state of O <sub>2</sub> B. Excited state of neon C. Excited state of fluorine D. Ground state of fluorine atom
14	When electron jumps from $n_2$ = 2,3,4,5, orbit to $n_1$ = 1 orbit in the hydrogen atom, the radiations emitted give the spectral lines	A. Lyman series B. Blamer series C. Paschen series D. Brackett series

5	The wave number of light emitted by a certain source is 2 x $10^5 \text{m}$ . The wavelength of this light will be:	A. 500 NM. B. 500 M. C. 200 NM. D. 5 x 10 <sup>7</sup> m
6	Rutherford's experiment led to the discovery of	A. Nucleus B. Electron C. Proton D. alpha particle
7	In the ground state of an atom, the electron is present:	<ul><li>A. In the nucleus.</li><li>B. In the second shell.</li><li>C. Nearest to the nucleus.</li><li>D. farthest from the nucleus.</li></ul>
8	The spectrum of helium is expected to be similar to that of	A. H B. Li <sup>+</sup> C. Na D. He <sup>+</sup>
19	The atomic number of an element is 35 what is the total number of electrons present in all the p-orbitals of the ground state atom of that element?	A. 6 B. 11 C. 17 D. 23
20	The spectrum of He is expected to be similar to that of	A. H B. Na C. He <sup>+</sup> D. Li <sup>+</sup>