

ECAT Chemistry Chapter 5 Atomic Structure

Sr	Questions	Answers Choice
1	In Millikan method the oil droplet falls under the force of gravity but it moves upward due to	A. Electric field B. Magnetic field C. Incident light D. X-rays
2	$E = hv$ is the	A. Spectral equation B. Plank's equation C. de Broglie's equation D. None of these
3	The e.m value for positive rays maximum for:	A. Oxygen. B. Nitrogen. C. Helium. D. Hydrogen.
4	Number of neutrons in heavy hydrogen atom is	A. 0 B. 1 C. 2 D. 3
5	The de-Broglie wavelength of a particle with mass 1g and velocity 100 m/s is	A. 6.63×10^{-33} m B. 6.63×10^{-34} m C. 6.63×10^{-35} m D. 6.65×10^{-35} m
6	The configuration $1s^2 2s^2 2p^5 3s^1$ shows	A. Excited state of O^{2-} B. Excited state of neon C. Excited state of fluorine D. Ground state of fluorine atom
7	Quantum number values for 2p orbitals are	A. $n = 2, l = 1$ B. $n = 1, l = 2$ C. $n = 1, l = 0$ D. $n = 2, l = 0$
8	The nature of positive ray depend on:	A. The nature of electrode. B. The nature of discharge tube. C. The nature of residual gas. D. All of above.
9	The maximum number of electrons in a subshell for which $l = 3$ is	A. 14 B. 10 C. 8 D. 4
10	The electron in an atom	A. moves randomly around the nucleus B. has fixed space around the nucleus C. is stationary in various energy levels D. moves around its nucleus in definite energy levels
11	What is the packet of energy called?	A. Electron B. Photon C. Positron D. Proton
12	Four d-orbitals contain four lobes while fifth contains only two lobes the orbital is	A. dx_y B. dx_z C. dz^2 D. $dx^2 - y^2$
13	The arrangement of subshells in the ascending order of their energy on complete filing of 4f subshell the entering electrons goes to	A. 5s B. 5p C. 5d D. 5f
14	The rules which describe the distribution of electron in atomic energy levels are Auf-ban principle, Pauli's exclusion principle. Hunds rule. The pauli exclusion principle refers to the	A. Orientation of orbital in space B. Fact that two electrons in the same orbital should have opposite spins C. Energy of the orbital D. Spin of the electron

15	The wave number of light emitted by a certain source is $2 \times 10^5 \text{m}^{-1}$. The wavelength of this light will be:	<p>A. 500 NM. B. 500 M. C. 200 NM. D. $5 \times 10^7 \text{m}$</p>
16	Electrons in degenerate orbitals are placed in separate orbitals with same spin according to	<p>A. Hund's rule B. Pauli exclusion principle C. Aufbau principle D. Mosley's law</p>
17	If the radius of first Bohr orbit be a_0 , then the radius of third Bohr orbit would be	<p>A. $3 \times a_0$ B. $6 \times a_0$ C. $9 \times a_0$ D. $1/2 \times a_0$</p>
18	With increasing principle quantum number, the energy difference between adjacent energy levels in H atom	<p>A. Decreases B. Increases C. Remains constant D. Decreases for low value of Z and increase for higher value of Z</p>
19	The nature of the positive rays depend on	<p>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</p>
20	Charge to mass ratio (e/m) of the electron is determined by	<p>A. R. A. Millikan B. J. J. Thompson C. G. J. Stoney D. None of these</p>