ECAT Chemistry Chapter 5 Atomic Structure

Sr	Questions	Answers Choice
1	The de-Brogile wavelength of a particle with mass 1g and velocity 100 m/s is	A. 6.63 x 10⁻³³m B. 6.63 x 10⁻³⁴m C. 6.63 x 10⁻³⁵m D. 6.65 x 10⁻³⁵m
2	In Bohr model of hydrogen atom the distance between adjacent orbits increases away from the nucleus, the energy difference between the orbits	A. Increases B. Decreases C. Reaming same D. Orbits coincide
3	The number of de-electrons retained in Fe^{2+} (At.No. of Fe = 26) ions is	A. 3 B. 4 C. 5 D. 6
4	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
5	Pauli's principle is applicable to	A. Degenerate orbits B. Two electrons in the same orbital C. One electron D. None
6	Alpha rays consist of:	A. Neutrons. B. Helium nucleus. C. Protons. D. Hydrogen nucleus.
7	Mass of simple electron is:	A. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">9.1 x 10⁻³¹ kg<o:p> </o:p> B. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">9.1 x 10⁻³⁰ kg<o:p> </o:p> C. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">1.66 x 10⁻³¹ kg<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;"><o:p> </o:p>

		D. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">9.1 x 10⁻³¹ kg<o:p> </o:p>
8	In the ground state, an element has 13 electrons in its M shell. The element is	A. Copper B. Chromium C. Nickel D. Iron
9	Anode is the surface on which probability of finding electron is:	A. 50% B. Less than 10%. C. More than 95%. D. Zero.
10	The value of R (Rydberg's constant) is _____ m-1	A. 1.0974 x 107 B. 1.0842 x 107 C. 1.082 x 10-7 D. Both a and b
11	The symbol of the element whose atoms have the outer most electronic configuration $2s^2 2p^3$is	A. N B. Li C. P D. Na
12	Neutron was discovered by:	A. Chadwick. B. Bohr. C. Rutherford. D. Plank.
13	The order of frequency of the following radiations unltraviolet, visible, infrared and microwave is	A. Microwave > infrared > visible > ultraviolet B. Visible > ultraviolet > microwave > infrared C. Ultraviolet > visible > infrared > microwave D. Infrared > microwave > ultraviolet > visible
14	The experimental evidences for the existence of atomic nucleus comes from:	A. Line spectrum of hydrogen. B. Magnetic bonding of cathode rays. C. Millikan oil drop experiment. D. Scattering of alpha particles by thin metal foil.
15	The configuration $1s^2 2s^2 2p^5 3s^1$shows	A. Excited state of O₂ B. Excited state of neon C. Excited state of fluorine D. Ground state of fluorine atom
16	The wave number of the light emitted by a certain source is $2 \times 10^6 m^{-1}$. The wavelength of this light will be	A. 500 nm B. 500 m C. 200 nm D. 5 x 10⁷m
17	Cathode rays emitted from cathode are	A. Canal rays B. Protons C. Electrons D. Positrons
18	Splitting of spectral lines when atoms are subjected to strong electric field is called:	A. Zeeman effect. B. Stark effect C. Photoelectric effect. D. Compton effect.
19	Negatively charged particle nature of cathode rays was first demonstrated in 1895 by:	A. Millikan. B. J. Perrin. C. Hittrof D. J.J. Thomson.
20	n + l value for 4f will	A. 2 B. 5 C. 7 D. 9