

## ECAT Chemistry Chapter 5 Atomic Structure Online Test

Sr	Questions	Answers Choice
1	The uncertainty principle was stated only	A. De Broglie B. Heisenberg C. Einstein D. Schrodinger
2	Question Image	A. Plank's equations B. de Broglie's equations C. Heisenberg's equation D. None
3	The divisibility of atom was shown by	A. Stoney B. J.J. Thomson C. Millikan D. Rutherford
4	The wave number of the line emitted is $109.678 \times 10^5 \text{m}^{-1}$ in the Lyman series when electron transition occurs	
5	Light emitted from a source has its wave length 500nm, then its wave number will be	A. $2 \times 10^{16} \text{m}^{-1}$ B. $2 \times 10^{17} \text{m}^{-1}$ C. $5 \times 10^{18} \text{m}^{-1}$ D. $5 \times 10^{19} \text{m}^{-1}$
6	In the ground state of an atom the electron is present	A. In the nucleus B. In the second shell C. Nearest to the nucleus D. Farthest from the nucleus
7	Splitting of spectral lines of the hydrogen atom under the influence or magnetic field is called	A. Stark effect B. Zeeman effect C. Compton effect D. Photoelectric effect
8	The limiting line of Balmer series in hydrogen spectrum lies in	A. Visible regions B. Ultraviolet region C. Infrared region D. x-rays region
9	When electron jumps from $n_2 = 2, 3, 4, 5, \dots$ orbit to $n_1 = 1$ orbit in the hydrogen atom, the radiations emitted give the spectral lines	A. Lyman series B. Balmer series C. Paschen series D. Brackett series
10	In the atomic emission spectrum the lines which appear bright, appear dark in absorption spectrum because	A. The radiations emitted in emission spectrum are absorbed in absorption spectrum B. Atomic emission spectrum is continuous C. Atomic absorption spectrum is continuous D. Distance between the lines increases
11	Energy of electron in an orbit according to Bohr theory is negative due to	A. Repulsion of electrons in the same orb B. At infinity energy is zero and a traction towards nucleus decreases energy C. Electron has negative charge D. Product of positive nuclear charge and negative charge is negative
12	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. Remaining same D. Orbits coincide
13	Energy of electron in the infinite Bohr orbit of H-atom is	A. 0 KJ/mole B. 1 KJ/mole C. -1 KJ/mole D. 1000 KJ/mole

		D. -1313.32 KJ/mole
14	Energy of electron in first orbit of H atom is	A. -45.32 KJ/mole B. -82.08 KJ/mole C. -52.53 KJ/mole D. -1313.31 KJ/mole
15	The radius of first orbit of H-atom is	A. 4.75 Å B. 3.84 Å C. 8.4 Å D. 0.529 Å
16	The order of distance between the various Bohr orbits is	A. $r_2 < r_1 < r_3 < r_4 < \dots$ B. $r_1 < r_2 < r_3 < r_4 < \dots$ C. $r_2 < r_1 = r_3 < r_4 < \dots$ D. $r_2 < r_1 < r_3 < r_4 < \dots$
17	Rutherford's planetary like picture of the atomic model was defective because	A. It did not describe the quantity of positive charge B. It did not explain the repulsion of protons within the nucleus C. No empty space between nucleus and the electrons D. Moving electron should radiate energy
18	Smallest charge of electricity that has been measured so far is	A. Charge on $\alpha$ -rays B. Charge on electron ( $1.602 \times 10^{-19} \text{ C}$ ) C. Charge on x-rays D. Charge on gamma rays
19	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
20	In Millikan method for determination of charge on electron the air in the chamber is ionized by	A. Protons B. Electric field C. X-rays D. $\alpha$ - particles
21	Question Image	A. Neutrons are attracted by nucleus B. Neutrons carry out nuclear reactions C. Neutrons carry no charge D. Neutrons are electromagnetic radiations
22	When the 6d orbital is completed the entering electron goes into	A. 7f B. 7s C. 7p D. 7d
23	Positive particle in discharged tube is produced by ionization of gas molecules, which is caused by	A. Gas molecules collide with anode B. Gas molecules are at high temperature C. Gas molecules produce X-rays D. Cathode rays remove electrons from gas molecules
24	When cathode rays strike the anode metal X-rays are emitted and not the positive rays because	A. Cathode rays are material particles B. Cathode rays knock out electrons from anode, which emit X-rays when outer electron take their place C. Cathode rays are absorbed by the nucleus D. Cathode rays become heated
25	e/m of cathode rays is same but for positive rays e/m changes by changing gas in the discharge tube because	A. Cathode rays are small sized particles B. Cathode rays have same charge C. Nature of cathode rays same for all gasses, but masses of nuclei are different for different gases D. Temperature of cathode rays higher

26	No cathode rays are produced in the discharged tube when gas is under ordinary pressure even if voltage of 5000 to 10000 is applies. This reason is	A. Voltage is low B. Discharge tube is not coloured C. Gas does not conduct current under ordinary pressure D. Temperature low
27	Cathode rays drive a small paddle wheel placed in their path. This observation shows that	A. Cathode rays travel in straight lines B. Cathode rays are negatively charged C. Cathode rays produce x-rays D. Cathode rays are material particles having momentum
28	The value of charge on electron is	A. $1.602 \times 10^{-19}$ coulombs B. $1.602 \times 10^{-18}$ coulombs C. $1.602 \times 10^{-17}$ coulombs D. $1.602 \times 10^{-16}$ coulombs
29	Question Image	A. s B. p C. d D. f
30	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