ECAT Chemistry Online Test

Sr	Questions	Answers Choice
1	The radius of ion while considering it to be spherical in shape is called:	A. Covalent radii. B. Atomic radii. C. Ionic radii. D. Both (a) and (C).
2	As the nuclear charge increases, the pull on the electrons is increased and size of an atom:	A. Decreases. B. Remain same. C. Increases. D. Is negligible.
3	Which statement is true for Na and Na^+	A. Both have equal sizes. B. Both have same properties. C. Size of Na is smaller than Na⁺ D. Size of Na is greater than Na⁺
4	In a group of periodic table, atomic radii is:	A. Remains some. B. Increases. C. First decreases then increases. D. Decreases.
5	which of the following has smaller size:	A. Fe+ ^{3<o:p></o:p>} B. Fe+ ^{2<o:p></o:p>} C. Fe+ ^{1<o:p></o:p>} D. Fe^{<o:p></o:p>}
6	The bond length b/w atoms of hydrogen in the hydrogen molecules is:	A. 7.54 nm. B. 0.0754 nm. C. 0.754 nm. D. 0.00754 nm.
7	When two hydrogen atoms approach each other.	A. Forces of attraction operate. B. Forces of repulsion operate. C. Forces of attraction and repulsion operate simultaneously. D. Nothing happens.
8	According to modern theory of chemical bonding atoms form bonds as it leads to a:	A. First decrease then increase in energy. B. Decrease in energy. C. No energy change. D. Increase in energy.
9	Which of the following compound is no formed according to octet rule:	A. KrF_{2<o:p> </o:p>} B. XeF₂ <o:p></o:p> C. XeO₃ <o:p></o:p> D. SF₆ <o:p></o:p>
10	In the chemical combination of hydrogen and fluorine to form HF:	A. Sodium atom donates major share of its electrons. B. Hydrogen atom donates the major share of its electrons. C. Both the atoms share the electrons equally. D. None of above.
11	In the chemical combination of sodium and hydrogen to form NaH:	A. Hydrogen atom gains an electron. B. Sodium atom gains an electron. C. Both the atoms share the electron.
12	The tendency of atoms to attain a maximum of eight electrons in the valence shell is known	A. Duplet rule. B. Triad rule.

	as:	C. Octet rule. D. Tetrade rule.
13	Which of the following is a noble gas:	A. Ne. B. Cl₂. C. H₂. D. N₂.
14	Elements combine together due to inherent tendency to stabilize themselves by:	A. Losing electron. B. Sharing electrons. C. Gain in electrons. D. All of above.
15	Which of the following elements is not stable:	A. Xe B. Ar. C. Kr. D. Li.
16	Chemical reactivity of elements depends upon their characteristic:	A. Shape. B. Color. C. Electronic configuration. D. Sizes
17	The theory of chemical bonding has been a major problem of:	A. Modern Physics. B. Modern Chemistry. C. Modern Biology. D. Mechanics.
18	The forced which holds together two or more atoms or ions to form a large variety of compounds in called:	A. A chemical bond. B. An ionic bond. C. A covalent bond. D. A coordinate bond.
19	Which of the following species has unpaired electrons in ant-bonding molecular orbitals?	A. O2⁺²<o:p></o:p> B. N2⁻²<o:p></o:p> C. B₂<o:p></o:p> D. F₂<o:p></o:p>
20	Which of the hydrogen halides has the highest percentage of character?	A. HI B. HF C. HCl D. HBr
21	Which of the following molecules has zero dipole moment?	A. NH₃ B. CHCl₃ C. H₂O D. BF₃
22	Which of the following molecules has zero dipole moment>	A. H₂O B. CHCl₃ C. BF₃ D. NH₃
23	Which of the following statements is no correct regarding bonding molecular orbitals?	A. Bonding molecular orbitals possess ls energy than atomic orbitals from which they are formed. B. Bonding molecular orbitals have low electron density between the two nuclei. C. Every electron in bonding molecular orbitals contributes to the attraction b.w atoms. D. Bonding molecular orbitals are formed when the electron waves undergo constructive interference.
24	The number of bonds in nitrogen molecule is	A. Oneφ and one π<o:p></o:p> <o:p></o:p> B. Oneφ and two π<o:p></o:p> C. three sigma only D. Two φ and one π<o:p></o:p>
25	An ionic compound A+B is most likely to be formed when	A. The ionization energy of A is high and electron affinity of B is low. B. The ionization energy of A is low and electron affinity of B is high. C. Both ionization energy of A and electron affinity of B are high. D. Both ionization energy of A and

		D. Both ionization energy of A and electron affinity of B are low.
26	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.
27	Anode is the surface on which probability of finding electron is:	A. 50% B. Less than 10%. C. More than 95%. D. Zero.
28	Which one of the following statements is true about discovery of neutrons?	A. These particles were formed by the bombardment of Alpha-particles on Beryllium. B. These particles are formed by the spiting of alpha-particles. C. These particles were discovered by natural radioactivity. D. None of above.
29	With the reference of w/m ratio of anode rays, the e/m ratio of cathode rays s:	A. Greater. B. same. C. Smaller. D. Not fixed.
30	Negatively charged particle nature of cathode rays was first demonstrated in 1895 by:	A. Millikan. B. J. Perrin. C. Hittrof D. J.J. Thomson.