ECAT Chemistry Chapter 6 Chemical Bonding Online Test

Sr	Questions	Answers Choice
1	The bond angle H - O - H in ice ins closest to	A. 120° , 28['] B. 60° C. 90° D. 109°
2	Outer shells of two elements X and Y have two and six electrons respectively. If they combine, the expected formula of compound will be	A. XY B. X₂Y C. X₂Y₃ D. XY₂
3	Which of the following geometry is associated with the compound in which the central atom assumes sp^3d hybridization?	A. Planar B. Pyramidal C. Angular D. Trigonal bipyramidal
4	Covalent compounds are soluble in	A. Polar solvents B. Non-polar solvents C. Concentrated acids D. All solvents
5	Among the alkaline earth metals the element forming predominantly covalent compounds is	A. Be B. Mg C. Sr D. calcium
6	Hydrogen chloride molecule contains	A. Covalent bond B. Double bond C. Co-ordinate bond D. Electrovalent bond
7	Water H_2O is liquid while hydrogen sulphide H_2S is a gas beause	A. Water has higher molecular weight B. Hydrogen sulphide is a weak acid C. Sulphure has high electronegativity than oxyhe D. Water molecules associate through hydrogen bonding
8	B-atom in BF_3 has	A. sp³hybridization B. sp²hybridization C. sp hybridization D. no hybridization
9	Which of the following molecules have its central atom sp^2 hybridized	A. CH₄ B. C₂H₂ C. C₂H₄ D. CCl₄
10	Planar geometry of molecules is due to	A. sp³hybridization B. sp²hybridization C. sp hybridization D. P - p overlap
11	Nitrogen in NH_3 is sp^3 hybridized but the bond angle in NH_3 is 107° and not 109.5° due to	A. sp³orbital planar B. sp³orbital trigonal C. Repulsion between lone pair and bonded pairs D. None of them
12	The three N - Hσ-bonds are made by	A. sp³- s overlap B. sp²- s overlap C. P - p overlap D. sp - overlap
13	Three sp^2 hybrid are co-planar at an angle of	A. 104.5° B. 109.5° C. 107°

		D. 120°
14	During the formation of a chemical bond the potential energy of the system	A. Decreases B. Increases C. Does not change D. None of these
15	The geometry of 4 sp^3hybrid orbitals on an atom is	A. Square planar B. Tetrahedral C. Trigonal planar D. Linear
16	Which of the following molecules have sp^3hybridized carbon	A. CH₄ B. C₂H₄ C. C₂H₂ D. CO₂
17	Question Image	A. Excitantion of an electron from 2s to 2p-orbital B. Transfer of three electrons from B to the other atoms C. Excitation of two electrons form 2s orbital to 2p orbital D. Formation of molecular ion
18	N-atom forms three covalent bonds, its electronic configuration is	
19	In which of the following theories the hybridizationis considered	A. Vsepr B. Lewis C. Molecule orbital D. Valence bond
20	In H_2O molecule the bond angle is	A. 90° B. 109.5° C. 107° D. 104.5°
21	The overlapping of two partially filled atomic orbital is in such a way that the probability of finding the electron pair is maximum along the axis joining the two nuclei, the bond is	A. Sigma bond B. Pi bond C. Ionic bond D. Non-polar bond
22	One of the following bonds is polar but compound is non-polar	A. H₂O B. NH₃ C. HCl D. CO₂
23	The bond order for He_2molecule is	A. zero B. 1/2 C. 1 D. 2
24	Tripple bond is present in	A. O₂ B. H₂ C. N₂ D. Cl₂
25	Coordinate covalent bond is present in the molecules	A. H₂O B. BF₃ C. SiO₂ D. SO₂
26	The bond order O_2molecule is	A. 1 B. 2 C. 3 D. Zero
27	Which is made by coordinate covalent bond	A. H₃O⁺ B. H₂O C. CH₄ D. HCl
28	Which of the following molecules have multiple bonds	A. CH₄ B. C₂H₄ C. C₂H₆ D. CCl₄
29	Which of the following has polar bond	A. O₂ B. N₂ C. HCl D. Cl₂
30	The number of electron pairs shared in carbon tetrachloride molecule is	A. 2 B. 3 C. 4 D. 1