ECAT Chemistry Chapter 6 Chemical Bonding Online Test

Sr	Questions	Answers Choice
1	The bond order in No is 2.5 while that in $NO^+$is 3.Which of the following statements is true for these two species?	A. Bond length in NO⁺is greater than in NO B. Bond length in unpredictable C. Bond length in NO⁺is equal to that in NO D. Bond length in NO is greater than in NO⁺
2	Which carbon is more electronegative?	A. sp³- hybridized carbon B. sp-hybridized carbon C. sp²-hybridized carbon D. always same irrespective of its hybrid state
3	Maximum hydrogen bonds in water are	A. 4 B. 3 C. 2 D. 8
4	In OF_2, number of bond pairs and lone paris of electrons are respectively	A. 2,6 B. 2,8 C. 2,10 D. 2,9
5	Which of the following has zero depole-moment?	A. ClF B. PCl₃ C. SiF₄ D. CFCl₄
6	Number of sigma bonds in $P_4O_{10}$is	A. 6 B. 7 C. 17 D. 16
7	The electronegativeities of F,Cl,Br and I are 4.0,3.0,2.8,2.5 respectively.Hydrogen halide with a high percentage of ionic character is	A. HF B. HCL C. HBr D. HI
8	Shape of $ClO_3$is	A. Triangular pyramidal B. Tetrahedral C. Triangular planar D. Triangular bipyramidal
9	Fluorine molecule is formed by	A. The axial p-p overlap B. The sidewise p-p overlap C. The axial s-p overlap D. The overlap of two sp²hybrid orbitals
10	The boiling point of heavy water is	A. 108°C B. 101.4°C C. 99°C D. 110°C
11	Antibonding MO is formed by	A. Addition of atomic orbitals B. Substraction of atomic orbitals C. Multiplication of atomic orbitals D. None of these
12	The number of antibonding electron pairs in O^{2-}molecular ion on the basis of MOT is	A. 4 B. 3 C. 2 D. 5

13	The bond order of individual C - C bond is benzene is	A. One B. Two C. Between one and two D. One and two alternately
14	The shape of gaseous $SnCl_2$is	A. Tetrahedral B. Linear C. Angular D. T-shaped
15	The shape of the molecule $SF_2Cl_2$is	A. Trigonal bipyradmidal B. Cubic C. Octahedral D. Tetrahedral
16	The most suitable method of the separation of a mixture of ortho and para-nitrophenol mixed in the ratio of 1: 1 is	A. Distrillation B. Crystallization C. Vapourisation D. Colour spectrum
17	According to VSEPR theory, the shape of the water molecule is	A. Octahedral B. Distorted tetrahedral C. Planar triangle D. Linear
18	Which of the following hydrides has the lowest boiling point?	A. H₂O B. H₂S C. H₂S3 D. H₂Te
19	The shape of ClO^-_3according to valence shell electron pair repulsion theory will be	A. Planar triangle B. Pyramidal C. Tetrahedral D. Square planar
20	H-bonding is not present in	A. Glycerine B. Water C. Hydrogen sulphide D. Hydrogen fluride
21	The structure of $ICl_2$is	A. Trigonal B. Trigonal bipyramidal C. Octahedral D. Square planar
22	Which of the following species is paramagnetic?	A. CO₂ B. NO C. O²⁻ D. CN
23	The nature of interparticle forces in benzene is	A. Dipole-dipole interaction B. Dispersion force C. Ion-dipole interaction D. H-bonding
24	A molecule in which sp^2hybrid orbitals are used by the central atom in forming covalent bonds in	A. He₂ B. SO₂ C. PCl₅ D. N₂
25	Which of the following has unchanged valency?	A. H B. Na C. Fe D. Oxygen
26	Which of the following phenomena will occur when two atoms of the elements having same spin of electron approach for bonding?	A. Orbital overlap will not occur B. Bonding will not occur C. Both (A) and (B) are correct D. None of the above are correct
27	Which one of these is weakest?	A. Ionest bond B. Covalent bond C. Metallic bond D. Van der Waal's forces
28	XeF_4has shape of	A. Sphere B. Trigonal bipyramidal C. Tetrahedral D. Square planar
29	Inter molecular forces in solid hydrogen are	A. Covalent forces B. Van der Waal forces or London dispersion forces C. Hydrogen bonds D. All of these
30	According to MO Theory, the species O_2+ possesses	A. bond order of 2.5 B. three unpaired C. diamagnetic character

30	According to MO Theory, the species O_2^{2-} possesses	C. diamagnetic character D. stability lower then O₂