

Gaining Apex Coaching Centre

(Where Toppers make..... Toppers)

Compiled By: Dapinderjeet Singh

(10+1 CHEMISTRY)

Chemical Bonding (Assignment -I)

- 1) Out of sigma and pi bond which is stronger and why?
- 2) Explain Hybridization. SP^2, SP^3, SP
- 3) Define resonance
- 4) Why CCl_4, CO_2 have zero dipole moment
- 5) Explain the Geometry of water , ammonia and PCl_5 molecule
- 6) Out of sigma and pi bond which is stringer
- 7) Differentiate between Anti bonding and bonding orbital
- 8) Out of NH_3 and NF_3 which has higher dipole moment
- 9) What are the favourable condition for writing resonating structures
- 10) How we can predict the nature and shape of molecule using the concept of dipole moment
- 11) Helium molecule does not exists. Explain
- 12) What are the conditions for the combinations of atomic orbitals
- 13) Using MO theory arrange $O_2^{2-}, O_2, O_2^-, O_2^+$ in increasing order of bond energy. Also draw the energy level diagram of O_2
- 14) Do H_2^+ and H_2^- have the same bond order
- 15) Water is soluble in alcohol. Explain
- 16) Out of NH_3 and H_2O which has higher boiling point
- 17) Ice floats on water Why?
- 18) Water has maximum density and minimum volume at $4^\circ C$. Explain
- 19) Predict the shape of $BeCl_2, SiCl_4, AsF_5, PH_3$ on the base VSEPR theory
- 20) Write the resonating structures of NO_3^-, CO_3^{2-} and SO_3
- 21) Why BeH_2 molecule has zero dipole moment although Be-H bond is polar
- 22) Is there any change in the hybridization of B and N atoms as a result of the following reaction $BF_3 + NH_3 \rightarrow F_3B.NH_3$
- 23) Out of Hydrogen bond and weak vander waal forces which is stronger and Why?
- 24) Can a non polar molecule have polar covalent bond

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- 25) NaCl gives ppt with AgNO_3 solution but CCl_4 does not
- 26) Why HCl is predominantly covalent in the gaseous state but is ionic in aqueous solution
- 27) Out of 1) CuO or CuS 2) AgCl or AgI 3) PbCl_2 or PbCl_4 4) BeCl_2 or MgCl_2
- 28) Out of N_2 and H_2O which is polar
- 29) How VBT differs from lewis concept
- 30) Out of OCS and CS_2 which has higher dipole moment
- 31) Which of the following species has greater polarizing power
- i) Fe^{3+} or Fe^{2+} ii) Cu^{2+} or Na^+
- 32) Which of the following species is most susceptible to polarization
- i) Br^{--} or I^{--} ii) O^{2--} or S^{2--} iii) N^{3--} or O^{2--}
- 33) Discuss the shape of CO_2 on the base of hybridization