

ECAT Chemistry Chapter 6 Chemical Bonding

Sr	Questions	Answers Choice
1	When of the following is isoelectronic with krypton	A. Ca ⁺⁺ B. Al ⁺⁺⁺ C. Br ⁻¹ D. I ⁻¹
2	The bond angle H - O - H in ice is closest to	A. 120° B. 60° C. 90° D. 109°
3	The boiling point of heavy water is	A. 108°C B. 101.4°C C. 99°C D. 110°C
4	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
5	The bond angle depends upon the	A. Types of bonds B. Number of bonds C. Non-bonding electron pairs D. All of the above
6	Which of the following statements is not correct regarding bonding molecular orbitals?	A. Bonding molecular orbitals possess less 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 the bonding molecular orbitals contributes to the attraction between atoms D. Bonding molecular orbitals are formed when the electron waves undergo constructive interference
7	The electronegativity of elements in a period from left to right	A. Decreases B. Increases C. First decreases then increases D. First increases then decreases
8	On the basis of VSEPR theory SO ₂ is a	A. Linear molecule B. A bent molecule C. A strong molecule D. A gaseous molecule
9	The shape of gaseous SnCl ₂ is	A. Tetrahedral B. Linear C. Angular D. T-shaped
10	A molecule in which sp ² hybrid orbitals are used by the central atom in forming covalent bonds in	A. He ₂ B. SO ₂ C. PCl ₅ D. N ₂

11	Which of the following has unchanged valency?	A. H B. Na C. Fe D. Oxygen
12	The bond order for He ₂ molecule is	A. zero B. 1/2 C. 1 D. 2
13	Which of the following has polar bond	A. O ₂ B. N ₂ C. HCl D. Cl ₂
14	Molecular orbital picture of N ₂ indicates	A. One unpaired electron B. Two unpaired electron C. No unpaired electron D. None of these
15	Which one of these is weakest?	A. lonest bond B. Covalent bond C. Metallic bond D. Van der Waal's forces
16	The formation of compounds like PF ₅ , BCl ₃ , SF ₆ indicates that	A. These halides are ionic B. These halides are covalent C. They are Lewis acids D. Octet rule not obeyed so the rule is not universal
17	Which of the following has zero depole-moment?	A. ClF B. PCl ₃ C. SiF ₄ D. CFCl ₄
18	Planar geometry of molecules is due to	A. sp ³ hybridization B. sp ² hybridization C. sp hybridization D. P - p overlap
19	SnCl ₂ have _____ shape	A. Planner B. Tetrahedral C. Angular D. None
20	The shape of the molecule SF ₂ Cl ₂ is	A. Trigonal bipyradmidal B. Cubic C. Octahedral D. Tetrahedral