



Class 11 Chemistry | Chemical Bonding And Molecular Structure

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Shape of NH_3 is:

- A. Trigonal pyramidal B. Linear
C. Tetrahedral D. Trigonal planar

2. Which molecule has zero net dipole moment?

- A. H_2O B. NH_3 C. CO_2 D. SO_2

3. Central-atom hybridisation in BF_3 is:

- A. sp B. sp^3d C. sp^2 D. sp^3

4. Bond angle in gaseous BeCl_2 is:

- A. 90° B. 120° C. 109.5° D. 180°

5. Which bond is formed by sideways p-orbital overlap?

- A. π bond B. Hydrogen bond
C. Ionic bond D. σ bond

6. Number of σ and π bonds in ethene is:

- A. 4 and 2 B. 5 and 1 C. 3 and 3 D. 6 and 0

7. O_2 is paramagnetic because it contains:

- A. A lone pair on one atom only
B. Only paired electrons
C. Two unpaired electrons
D. No antibonding electrons

8. MO bond order of N_2 is:

- A. 3 B. 2 C. 1 D. 0

9. Compared with O_2 , O_2^+ has:

- A. Same bond order B. Higher bond order
C. Lower bond order D. Zero bond order

10. Formal charge on N in NH_4^+ is:

- A. 0 B. +1 C. -1 D. +2

11. Strongest repulsion in VSEPR is between:

- A. Two nuclei only
B. A bond pair and nucleus
C. Two lone pairs
D. Two bond pairs

12. Which substance shows extensive intermolecular hydrogen bonding?

- A. CH_4 B. PH_3 C. H_2S D. H_2O

13. Shape of SF_6 is:

- A. Trigonal bipyramidal B. Tetrahedral
C. Square planar D. Octahedral

14. Shape of XeF_4 is:

- A. Square planar B. Tetrahedral
C. See-saw D. Trigonal pyramidal

15. Which has greatest covalent character by Fajans' rule?

- A. LiF B. KF C. NaF D. LiI

ANSWER KEY — check after completing all 15 questions

1.A 2.C 3.C 4.D 5.A 6.B 7.C 8.A 9.B 10.B 11.C 12.D 13.D 14.A 15.D

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper