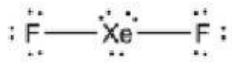
CHEMBUDDY CHAPTER 4

4.2 MOLECULAR GEOMETRY

CHOOSE THE CORRECT ANSWER

NO	QUESTION	ANSWER
1	Choose the **CORRECT** statement regarding PH_4^+ molecule. A. The H-P-H bond angles are less than 109.5°. B. The P-H bonds are polar, and the molecule is polar. C. The molecular geometry is tetrahedral. D. It has the same geometry as NF_3.	A B C D
2	The F-Cl-F bond angles in ClF_3 are expected to be A. 90° and 120° C. <90° and <120° B. <90° D. <120°	A B C D
3	Which one of the following molecules is ***non-polar***? A. OF_2 C. H_2O B. CH_3Cl D. BF_3	A B C D
4	Which of the following molecules have the **SAME** geometries? A. SF_4 and CH_4 C. CO_2 and BeH_2 B. CO_2 and H_2O D. N_2O and NO_2	A B C D
5	Which of the following molecules forms trigonal bipyramidal? A. PCl_3 C. NBr_3 B. PCl_5 D. ICl_4^+	A B C D

6	Which of the following statement is **TRUE** for ICl_4^+ and ICl_4^-. A. Both compounds form non-polar molecules. B. There are more lone pairs on the central atom, I for ICl_4^+ than ICl_4^-. C. Bond angle between Cl-I-Cl in ICl_4^+ is smaller than ICl_4^-. D. Both compounds have 5 electron pairs surrounding the central atom.	A B C D
7	PCl_5 molecule has A. to be non polar molecule with non polar bonds. B. non polar bonds and is a polar molecule. C. to be polar molecule with polar bonds. D. polar bonds but is a non polar molecule.	A B C D
8	Why XeF_2 is a non polar molecule?  A. Because it is expended octet molecule. B. Because it has same terminal atoms. C. Because the linear shape is symmetrical thus μ=0. D. Because it has 3 lone pairs.	A B C D

9	These molecules are sp^2 hybrid orbital on central atom except A. CO_2 C. $BeCl_2$ B. H_2O D. HCN	A B C D
10	What are the orbitals overlapped to form BF_3? A. sp and p-orbital B. sp^2 and p-orbital C. sp^3 and p-orbital D. sp^3 and s-orbital	A B C D
11	Which of the following molecule is NOT tetrahedral? A. XeF_4 B CCl_4 C. $SiCl_4$ D. CH_4	A B C D
12	Which of the following molecule is NOT tetrahedral? A. XeF_4 B CCl_4 C. $SiCl_4$ D. CH_4	A B C D