

CHEMBUDDY CHAPTER 4
4.2 MOLECULAR GEOMETRY



CHOOSE THE CORRECT ANSWER

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



6	<p>Which of the following statement is TRUE for ICl_4^+ and ICl_4^-.</p> <p>A. Both compounds form non-polar molecules.</p> <p>B. There are more lone pairs on the central atom, I for ICl_4^+ than ICl_4^-.</p> <p>C. Bond angle between Cl-I-Cl in ICl_4^+ is smaller than ICl_4^-.</p> <p>D. Both compounds have 5 electron pairs surrounding the central atom.</p>	<p>A B</p> <p>C D</p>
7	<p>PCl_5 molecule has</p> <p>A. to be non polar molecule with non polar bonds.</p> <p>B. non polar bonds and is a polar molecule.</p> <p>C. to be polar molecule with polar bonds.</p> <p>D. polar bonds but is a non polar molecule.</p>	<p>A B</p> <p>C D</p>
8	<p>Why XeF_2 is a non polar molecule?</p> <p style="text-align: center;"> $\begin{array}{c} \text{F} \quad \text{Xe} \quad \text{F} \\ \text{::} \quad \text{::} \quad \text{::} \\ \text{::} \quad \text{::} \quad \text{::} \end{array}$ </p> <p>A. Because it is expended octet molecule.</p> <p>B. Because it has same terminal atoms.</p> <p>C. Because the linear shape is symmetrical thus $\mu=0$.</p> <p>D. Because it has 3 lone pairs.</p>	<p>A B</p> <p>C D</p>



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

