

- C. $\text{PH}_3 > \text{H}_2\text{S} > \text{SiH}_4$
 D. $\text{SiH}_4 > \text{PH}_3 > \text{H}_2\text{S}$
19. Which of the following molecules forms trigonal bipyramidal?
 A. PCl_3 C. NBr_3
 B. PCl_5 D. ICl_4^+
20. 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.
21. 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.
22. Choose the **CORRECT** statement about ammonia molecule.
 A. The molecular geometry is trigonal pyramidal.
 B. The N-H bond is polar but the molecule is non-polar.
- C. The bond angles between H-N-H is 109° .
 D. It is not obey the octet rule.
23. Why XeF_2 is a non polar molecule?
- $$\begin{array}{c} \text{:}\ddot{\text{F}}\text{---}\ddot{\text{Xe}}\text{---}\ddot{\text{F}}\text{:} \\ \text{:}\ddot{\text{F}}\text{---}\ddot{\text{Xe}}\text{---}\ddot{\text{F}}\text{:} \end{array}$$
- A. Because it is expended octet molecule.
 B. Because it has same terminal atoms.
 C. Because the linear shape is symmetrical thus $\mu=0$.
 D. Because it has 3 lone pairs.
24. These molecules are sp^2 hybrid orbital on central atom except
 A. CO_2 C. BeCl_2
 B. H_2O D. HCN
25. 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
26. The number of π and σ bond C_2H_4 are
 A. 1 π and 4 σ
 B. 1 π and 6 σ
 C. 2 π and 4 σ
 D. 1 π and 5 σ