Unit 2 – Chapters 8,9: Bonding & Hybridization **Name _____**

Assignment #1 : Energy of Ionic Compounds, Lewis Structures, Polarity **Period _____**

1) Which compound in each of the following pairs of ionic substances has the most exothermic lattice energy? Justify your answers.
   a. LiF, CsF
   b. NaBr, NaI
   c. $BaCl_2$, BaO
   d. Na_2SO_4, $CaSO_4$
   e. KF, K_2O
   f. Li_2O, Na_2S

2) Write the Lewis structures that obey the octet rule for each of the following.

a. HCN	d. NH_4^+	g. CO_2
b. PH_3	e. H_2CO	h. O_2
c. $CHCl_3$	f. SeF_2	i. HBr

***Except for HCN and H_2CO, the first atom listed is the central atom. For HCN and H_2CO_3, carbon is the central atom.**

3) Write Lewis structures and predict whether each of the following is polar or nonpolar.
   a. HOCN (exists as HO-CN)
   b. COS
   c. XeF_2
   d. CF_2Cl_2
   e. SeF_6
   f. H_2CO (C is the central atom)