**HOMEWORK PROBLEMS SET 8**

All problems must go in your homework notebook, dated and numbered sequentially. You must show the formulas used, the work and the answers where appropriate. Explanations and justifications need to be concise but thorough.

**Day 18**

1. Which of the following salts has the largest lattice energy? Explain (you must make reference to Coulomb’s Law).

LiF, LiCl, LiBr, LiI

1. Predict whether the following compounds are ionic or covalent.

SiCl4, MgBr2, PH3, NH4Cl, HCl, Al2O3

1. . Write the Lewis structures for the following ions or molecules:
   1. HBr (d) ClO3- (g) Cl2CO
   2. PCl3 (e) C2H4 (h) HCN
   3. SO32- (f) CH2Cl2

**Day 19**

1. Write the Lewis structures for the following ions or molecules. Show all resonance structures where appropriate.
   1. CO32- (b) NO2- (c) HCO2- (d) N2O
2. Calculate the formal charge on the indicated atom in each of the following molecules or ions:
   1. the central oxygen atom in O3
   2. phosphorus in PF6-
   3. nitrogen in NO2
   4. iodine in ICl3
   5. chlorine in HClO4 (hydrogen is bonded to O)