1. Define
   (a) ionic bond
   
   (b) covalent bond

2. (a) What are valence electrons?

   (b) How is this different from the concept of valence as defined in the Organic Supplement?
   (See page O.1 of the Organic Supplement.)

3. State the octet rule. Give an example of how it works in ionic bonding.

4. (a) Define lattice energy.

   (b) Define $E$, $\kappa$, $Q_1$, $Q_2$, and $d$ in the following equation:

   $$E = \frac{\kappa Q_1 Q_2}{d}$$

6. Compare the length and strength of double and triple bonds.

7. Define bond polarity.

8. What is the difference between electronegativity and electron affinity?

9. Why is sodium fluoride written as $\text{Na}^+ \text{F}^-$, but hydrofluoric acid written as $\text{H}^\delta^+ \text{F}^\delta^-$?

   What is a dipole moment?