Name _____Per. _____Date _____

CST Review Worksheet #2: Bonding and Organic Chemistry Review (Standards 2 & 10)

1. Describe how ionic bonds are formed (use the words **electrostatic attraction**, **crystal lattice**, and **lattice energy** in your description).
2. Ionic bonds _____ electrons, covalent bonds _____ electrons and metallic bonds _____ electrons.
3. Ionic bonds occur between _____, covalent bonds occur between _____, metallic bonds form between _____.
4. Describe how the electrons behave in a metallic bond.
5. What type of bonds exist between the following compounds?
   a. NaCl _____ d. Hg _____ g. Fe _____
   b. CO_2 _____ e. NH_3 _____ h. CsCl _____
   c. KF _____ f. H_2O _____ i. CCl_4 _____
6. Draw the Lewis structures for the following:

a. H

f. CH4

b. Br

g. CO2

c. Sn

d. Sr

h. NH3

e. In

8. Define intermolecular forces:
9. What makes a substance a solid as opposed to a liquid at room temperature (check Standard 2d)?
10. Most organic compounds contain this element:
11. _____ are molecules that are made up of many repeating subunits, known as _____.
12. Proteins are made up of these monomers: _____
13. What are the monomers that make up the following polymers:

a. -CHOHCHOHCHOHCHOHCHOH-
b. -$CH_2CHCHCH_2CHCHCH_2CHCHCH_2CHCH$
c. -CFClCHCHCFClCHCHCFClCHCHCFClCHCH-
d. ~CH2CHCH2CHCH2CH~
e. ~CH2CFCHCH2CFCH~
f. ~CCl2NHCH2CCl2NHCH2CCl2NHCH2~

14. Carbon is in many various organic molecules because:
15. Define polymer. Define monomer:
16. For the following biochemical monomer-polymer pairs, fill in the corresponding blanks:
    a. Polymer : _____ Monomer : monosaccharides
    b. Polymer : nucleic acids (DNA/RNA) Monomer : _____
    c. Polymer : _____ Monomer : lipids
    d. Polymer : proteins Monomer : _____