**Topics Test #5: Covalent Compounds and Moles Makeup**

1) How is a nonpolar molecule different from a polar molecule? (4 pt)

2) Why do polar covalent compounds usually have higher surface tension than nonpolar covalent compounds? (3 pt)

3) Why do I say that covalent compounds are like Tylenol capsules while ionic compounds behave more like LEGO blocks? (4 pt)

4) Define the following terms (2 pt each):

* mole
* molar mass
* covalent bond

5) In what ways are an ionic bond different from that of a covalent bond? (4 pt)

6) What type of chemical bond does each of the following? Possible answers are metallic, covalent, polar covalent, and ionic. (1 pt each)

a) Allows the dissolved substance to conduct electricity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Burns well: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) Melts at an extremely high temperature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) a) What is the molar mass of NaBr? (1 pt)

b) How many moles are in 2.0 grams of NaBr? (4 pt)

8) a) What is the molar mass of Fe(OH)2? (1 pt)

b) How many grams are in 5.0 moles of Fe(OH)2? (4 pt)

9) a) What is the molar mass of Ca(OH)2? (1 pt)

b) How much does 50 moles of Hg(OH)2 weigh? (4 pt)