

## Chem 121- Worksheet 5

## Covalent Compounds

1. Using the periodic table, predict whether the following chlorides are ionic or covalent:

- a. KCl     Ionic
- b. NCl<sub>3</sub>   Covalent
- c. ICl     Covalent
- d. MgCl<sub>2</sub>   Ionic
- e. PCl<sub>5</sub>     Covalent
- f. CCl<sub>4</sub>     Covalent

2. Which of the following is a covalent compound?

- ~~a. RbCl~~
- b. CO
- ~~c. MgS~~
- ~~d. TiO~~

3. What is the empirical formula of C<sub>6</sub>H<sub>14</sub>?

C<sub>3</sub>H<sub>7</sub>

4. The compound, P<sub>4</sub>S<sub>10</sub>, is used in the manufacture of safety matches. What is its name?

tetraphosphorous decasulfide

5. Diiodine pentoxide is used as an oxidizing agent that converts carbon monoxide to carbon dioxide. What is its chemical formula?

$\text{I}_2\text{O}_5$

6. Write the chemical formula for nitric acid.

$\text{HNO}_3$

7. Write the name for the formula  $\text{H}_2\text{SO}_{4(\text{aq})}$ .

Sulfuric acid

8. Write the name for the formula  $\text{HClO}_{3(\text{l})}$ .

Chloric acid