**Homework #2: Chemistry 1013 Spring 2012**

**Due Wed 1 February in class 20 pts**

**ANSWERS**

1. **Given the elements and atom counts below, write the conventionally accepted compound formula for the combinations given:**

**a)1 N + 2 O NO2**

**b) 1 Si + 6 O + 2 C SiC2O6**

**c) 4 O + 1 P + 1 Fe FePO4**

**d) 2 C + 6H + 1 O C2H6O (an organic compound follows C🡪H🡪N🡪O)**

1. **Given the unbalanced reaction shown here: 2C4H10 + \_\_\_ O2 🡪 8CO2 + 10H2O**
2. **Supply the correct coefficient for O2 to balance the reaction 13 (8\*2+10=26O=>13O2)**
3. **How many H atoms are involved in the balanced reaction ? 2\*10=20**
4. **Decide whether the bonding between the elements below will be ionic or covalent.**

**(refer to Figure 2.9 ) a)N + O b) H + F c) Cs + Cl d) P + S**

1. **N + O b) H + F c) Cs + Cl d) P + S**

**Δ(electronegativity) 3.5-3.0 4.0-2.1 3.5-0.7 2.5-2.1**

**0.5 <2 1.9 < 2 2.8 >2 0.4<2**

**covalent covalent ionic covalent**

1. **Write down in correct compound format the most likely formula for a compound composed of: DELETE c**
2. **Ca + F b) K + P ~~c) Sc + O~~ d) Mg + N e) Na + S**

**CaF2 K3P Sc2O3 Mg3N2 Na2S**

**ScO**

**(meant Cs here…but Sc is also an element)**

1. **What specific group do each of the elements below belong to ? (refer to Figure 2.3)**
2. **Na b) Fe c) Ba d) Cl e) Kr f) U**

Alkali transition alkaline halogen noble actinide (not in fig 2.3…see inside flap of text)

metal metal earth gas