**Homework #2: Chemistry 1013 Spring 2013**

**Due Wednesday 6 February 23 pts**

1. **Use Figure 1.20 to classify the materials below**
2. **A cup of green tea (no leaves) b) Baking soda c) fresh cow’s milk**

**Homogeneous mixture pure compound heterogeneous mixture**

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 H6C2O**

1. **Given the unbalanced reaction shown here: 2C4H10 + 13\_\_\_ O2 🡪 8CO2 + 10H2O**
2. **Supply the correct coefficient for O2 to balance the reaction 13**
3. **How many H atoms are involved in the balanced reaction ? 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**

**ΔEN 0.5 1.9 2.3 0.4**

**Cov Cov-polar Ionic Cov**

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

**CaF2  K3P Sc2O3  Mg3N2 Na2S**

1. **What specific group do each of the elements below belong to ? (refer to Figure 2.3)**
2. **Na alkali metal**
3. **Fe transition element (metal)**
4. **Ba alkaline earth metal**
5. **Cl halogen**
6. **Kr inert gas (noble gas)**
7. **U actinide**