**Homework #2: Chemistry 1013 Spring 2014**

**Due Wednesday 5 February 23 pts**

**0. A regulation basketball is 9 inches in radius. If we define it to be the nucleus,**

**compute the number of miles away the edge of the electron cloud should be (to the nearest mile). Note that: 1 foot= 12 inches; 5280 feet= 1 mile [2 pts]**

**1. I am an isotope with 12 neutrons and a mass number (sum of protons and neutrons)**

**of 23. I am found in great abundance in the ocean and in Fritos corn chips.**

**a) how many protons do I own per atom ?**

**b) who am I (name and symbol) ?**

**2. Use Figure 1.20 to classify the materials below**

1. **A cup of green tea (no leaves) b) Baking soda c) fresh cow’s milk**

**3. Given the elements and atom counts below, write the conventionally accepted compound formula for the combinations given: a)1 N + 2 O b) 1 Si + 6 O + 2 C c) 4 O + 1 P + 1 Fe d) 2 C + 6H + 1 O**

**4. Given the unbalanced reaction shown here: 2C4H10 + \_\_\_ O2** 🡪 **8CO2 + 10H2O**

1. **Supply the correct coefficient for O2 to balance the reaction**
2. **How many H atoms are involved in the balanced reaction ?**

**5. 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**

**6. 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**

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