**Homework #7: Chemistry 1013 Spring 2012**

**Due Monday 26 March in class 15 pts (1 pt/answer)**

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.1. Write the complete electronic configurations for the elements below**

**(for elements containing d electrons, put the s orbitals in their row after the d shell,e.g….3d44s2)**

1. **B**
2. **Cl**
3. **Mn**
4. **Sb**

1. **Sc1+**

**7.2. Write the abbreviated configurations for the elements above:**

1. **B**
2. **Cl**
3. **Mn**
4. **Sb**

1. **Sc1+**

**7.3. Who am I ?**

1. **1s22s22p5 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (element symbol)**
2. **[Ar] 3d6 4s2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(element symbol)**
3. **[Kr] 4d105s25p2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_(element symbol)**

**7.4. What two elements have no 3 or 4 d electrons and 5 valence electrons in their ground state ?**

**(hint: see problem 5.15 and the answers in text if you are stuck on this one.)**

**\_\_\_\_\_\_\_\_\_(ELEMENT SYMBOL) \_\_\_\_\_\_\_\_\_\_(ELEMENT SYMBOL)**