**Quiz 4A**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. Answer the following questions about nickel (5 points):
   1. Write the symbol: \_\_\_\_Ni\_\_\_\_
   2. What is the atomic number? \_\_\_\_28
   3. Write the complete electron configuration: \_\_1s22s22p63s23p64s23d8
   4. Write the condensed electron configuration: \_\_[Ar] 4s23d8
   5. Write the condensed electron configuration of the +2 ion: \_\_\_\_[Ar] 3d8

1. Arrange these elements in order of increasing metallic character (4 points):

Fr, Sb, In, S, Ba, Se

S < Se < Sb < In < Ba < Fr

1. List two types of electromagnetic radiation with frequencies higher than visible light (2 points).

Gamma, Ultraviolet, or x-rays

1. Give the name and symbol of the element in the third period (row) of the periodic table with (8 points).
   1. three valence electrons \_\_\_\_\_\_aluminum, Al
   2. a total of four 3p electrons \_\_\_\_\_sulfur, S
   3. six 3 p electrons \_\_\_\_\_argon, Ar
   4. two 3s electrons and no 3p electrons \_\_\_\_magnesium, Mg
2. What is the goal of this week’s experiment (1 point)?

The goal of the Nomenclature experiment is to learn how to name compounds.