**PART I: MULTIPLE CHOICE 008QUESTIONS (15 points)**

1. Which element is **INCORRECTLY** matched with its symbol?  
a) Cu / copper b) Pb / lead  
c) K / potassium d) B / bismuth

2. The density of Au is 19.3 g/mL. What would be the value of a 100 cm3 ingot of gold if gold is worth $35 per ounce. (Note: There are 16 ounces in a pound; 1 pound = 0.4536 kg)

a) $ 123 c) $ 3,500

b) $ 2,383 d) $ 440

3. Nichrome is an alloy (mixture) commonly used to make heating elements. It is composed of 60% nickel, 24% iron and 16% chronium. If you have 2.15 g of nichrome wire, how much of each element do you have?

a) 1.6g Ni, 0.31g Fe, 0.24g Cr b) 1.6g Ni, 0.41g Fe, 0.14g Cr c) 1.3g Ni, 0.52g Fe, 0.34g Cr d) 1.2g Ni, 0.61g Fe, 0.14g Cr

4. In which item below is the result expressed **INCORRECTLY** in terms of number of significant figures?  
a) 3.14 x 2.584 = 8.11

b) 0.003/0.0015 = 2  
c) 1.314 + 189.71 = 191.0

d) all results are corrected.

5. Which of the following is **NOT** an SI unit of that measured quantity?  
a) Length is expressed in meters  
b) Energy is expressed in pokemon

c) Time is expressed in seconds

d) Mass is expressed in kilograms

6. Which of the following numbers has 4 significant figures?  
a) 0.04309 b) 0.0430  
c) 0.043090 d) 0.43980

7. Atoms are composed of:  
a) protons, neutrons, electrons b) protons, neutrinos, elections c) positrons, neutrons, electrons d) positrons, neutrons, negatrons

8. Choose the correct answer:  
a) cations have a positive charge, anions have a negative charge  
b) anions have a positive charge, cations have a negative charge  
c) the opposite of a cat ion is a dog ion d) uh, what?

9. Which two subatomic particles have approximately the same mass?  
a) electrons and nuclei  
b) neutrons and electrons

c) protons and electrons d) protons and neutrons

10. Isotopes are atoms of the same element that:  
a) have different numbers of electrons.

b) have different numbers of protons.

c) have different numbers of neutrons.

d). have different atomic numbers

11. The mass spectrum shown above for an element shows two mass peaks. Predict the atomic mass (g/mole) for this element.  
a) 25.8 b) 26.0

c) 25.5 d) 25.0

12. How many neutrons are in the nucleus of this element: 226Ra

a) 138 c) 226

b) 88 d) 108

13. Select the element with the electron configuration: [Kr] 5s2 4d2.  
a) Hf b) Y

c) Zr d) Ti

14. Which combination of protons, neutrons,

and electrons is correct for the 63Cu isotope of Copper?

a) 29 protons, 34 neutrons, and 29 electrons b) 29 protons, 29 neutrons, and 63 electrons c) 63 protons, 29 neutrons, and 63 electrons d) 34 protons, 29 neutrons, and 34 electrons

15. Which of the following elements has the lowest first ionization energy?

a) Be c) Ca

b) Mg d) S