

NAME: \_\_\_\_\_

**Chemistry 150**  
**Quiz 2**  
**October 1, 2003**

1. What is the difference between atomic number and mass number? (2 points)  
**The atomic number is equal to the number of protons while the mass number is the sum of the number of protons plus the number of neutrons.**
  
2. Which of the following list the elements K, Li, Be, C, and F in order of increasing 1<sup>st</sup> Ionization Energy? (1 point, circle only one answer)
  - a. Li, K, Be, C, F
  - b. K, Be, Li, C, F
  - c. **K, Li, Be, C, F**
  - d. K, C, F, Li, Be
  - e. K, Be, C, Li, F
  
3. How many neutrons are there in:
  - a. A germanium atom of mass number 73? (1 point)  
 $73 - 32 = \mathbf{41}$
  
  - b. A Pt atom of mass number 195? (1 point)  
 $195 - 78 = \mathbf{117}$
  
4. What is the outer shell (or valence shell) electron configuration of the elements in group 17 (= group 7A)? (2 points):  
 **$ns^2np^5$  with  $n = 2, 3, 4, 5, 6$**
  
5. Write the Lewis dot structures of the following elements: (1 point each):
  - a. Tin  
 $\begin{array}{c} \cdot \\ \cdot \text{Sn} \cdot \\ \cdot \end{array}$
  
  - b. Potassium  
 $\text{K} \cdot$
  
6. What is the maximum amount of electrons that can be placed in the second shell? (1 point, circle only one answer)
  - a. 2
  - b. 4
  - c. 6
  - d. **8**
  - e. 10

POINTS: \_\_\_\_\_ ( of 10)