

Chemistry 121  
Fall 2004  
Test 1, FORM A

Name: \_\_\_\_\_

Instructions: You have 50 minutes to complete this 100-point exam. You may use a simple scientific calculator. No programmable calculators allowed.

$$1 \text{ in} = 2.54 \text{ cm}$$

$$1000\text{g} = 1\text{kg}$$

$$1000 \text{ mg} = 1 \text{ g}$$

**I. MULTIPLE CHOICE:** (25 pts, 5 points each) Carefully and clearly circle the best answer. If you circle two answers, *one of which is correct*, you will receive 3 points.

1. The mass number of an atom is indicated by:
  - a. The number of protons
  - b. The number of electrons
  - c. The number of neutrons
  - d. The number of protons + electrons
  - e. The number of protons + neutrons
  
2. The chemical formula for a compound containing 3 oxygen atoms, 5 hydrogen atoms, 4 carbon atoms and 1 fluorine atom is:
  - a.  $\text{O}_3\text{H}_5\text{C}_4\text{F}$
  - b.  $\text{C}_4\text{FH}_5\text{O}_3$
  - c.  $\text{C}_4\text{H}_5\text{FO}_3$
  - d.  $\text{C}_4\text{H}_5\text{O}_3\text{F}$
  - e. None of the above
  
3. The number of significant figures in 0.0059420 is:
  - a. 4
  - b. 5
  - c. 6
  - d. 7
  - e. None of the above
  
4. Elements in Group 1A of the periodic table are called:
  - a. Nonmetals
  - b. Halogens
  - c. Alkaloids
  - d. Alkaline Earth Metals
  - e. Alkali Metals
  
5. A temperature of 303 K is \_\_\_\_\_°C.
  - a. 30
  - b. 273
  - c. 576
  - d. 303
  - e. None of the above.



5. (10 pts) The density of silver is 10.50 g/mL. What is the volume of a silver necklace that weighs 1.25 g?
6. (15 pts) Millikenium, with element symbol Mi, originates on planet Oil Drop. Millikenium has 2 isotopes:  $^{35}\text{Mi}$  with a mass of 34.9567 g/mol and  $^{39}\text{Mi}$  with a mass of 39.0095 g/mol. The molar mass of millikenium is 35.9826 g/mol. What are the percent abundances of both of the isotopes?
7. (15 pts) How many molecules of Vitamin E are in a 500 mg Vitamin E tablet? You will need to use the molar mass you determined in 4a.