

**Exam One (Chapter 1 only practice)**  
**CHM 203 (Dr. Mattson)**  
**20 September 2012**

*Print your name:*

*Signature:*

**Instructions:** Show all work whenever a calculation is required! You will receive credit for how you worked each problem as well as for the correct answer. If you need more space, you may use the back of your periodic table — Write: "See PT" in box and then attach the periodic table. 1. Scratch paper is NOT allowed during this exam. 2. Programmable or graphing calculators are NOT allowed during this exam. 3. Calculator slip covers are NOT allowed during this exam. 4. Include units whenever appropriate. **BOX YOUR ANSWERS!** Write legibly. Note: [SF] means significant figures count for this problem.

1. (5 pts) Convert  $1.7 \times 10^{-3} \text{ m}^3$  to liters.

2. (5 pts) Convert 280.0 microliters to mL. [SF]

3. (5 pts) Which is smaller:  $1.0 \times 10^{20} \text{ pm}$  or  $1.0 \times 10^6 \text{ m}$ ?

4. (5 pts) The normal dose for digitalis, a drug that controls atrial fibrillation, is  $20 \mu\text{g}/\text{kg}$  body weight. What is the correct dose of digitalis, in mg, for a 200 pound patient? [Given:  $454 \text{ g} = 1 \text{ pound}$ ]

5. (5 pts) The wheels on train box cars require 3.0 pounds of grease per wheel per month. Assuming each boxcar has 8 wheels, how many kilograms of grease should be ordered from a supplier per year? [SF]

6. (5 pts) A steel marble has a diameter of 1.74 cm and mass of 21 g. What is the density of the marble? [SF] [Given:  $V = \frac{4}{3} \pi r^3$ ]

7. (5 pts) Convert  $83 \text{ }^\circ\text{F}$  to the kelvin scale.

8. (10 pts) Matching

- |                      |               |
|----------------------|---------------|
| ___ alkali metal     | A. phosphorus |
| ___ alkaline earth   | B. lithium    |
| ___ transition metal | C. iron       |
| ___ Group 3          | D. xenon      |
| ___ Group 4          | E. sulfur     |
| ___ Group 5          | F. chlorine   |
| ___ Group 6          | G. calcium    |
| ___ halogen          | H. silicon    |
| ___ noble gas        | I. aluminum   |

9. (10 points) Complete the table below

Element	Atomic symbol
chlorine	
	Si
gold	
zinc	
	F
	Mg
	Kr
beryllium	
boron	
	As

10. (5 pts) Which of the following are examples of extensive properties? (More than one correct answer.)

- A. mass
- B. color
- C. melting point
- D. volume
- E. hardness

Note: This practice test over only Chapter 1 is about twice as long as the questions I will ask you over this chapter. I anticipate asking 22 - 25 points worth of questions over Chapter 1 out of 80 points total. Chapter 2 will consist of about 22 - 25 points and Chapter 3 will be about 30 - 35 points.

The purpose of this practice test to help you see how you will do and how I will grade your work. The actual questions on the September 21 exam will NOT be based on these questions, so do not use this as a specific practice exam. The actual exam will be based on lecture notes, folder activities, homework problems and classroom demonstrations.

Completing this practice exam is optional. Turn it in and I will grade it as if it were a real exam.

Your score out of 60 possible (I will complete this):

\_\_\_\_\_

Your percentage: =  $100 * \text{above score}/60$

Determine your grade:

\_\_\_\_\_

$A+ \geq 95$ ;  $A \geq 90$ ;  $B+ \geq 85$ ;  $B \geq 80$ ;  $C+ \geq 75$ ;  $C \geq 70$ ;  $D \geq 60$