

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

Lab Section: 1(TuTh@3) 2(TuTh@9) 3(MW@1)CHM 101  
20 points**Basic Competency Quiz #3**  
Chemistry, 7<sup>th</sup> ed., Zumdahl & Zumdahl, sections 2.6-3.3Fall 2007  
30 minutes

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*Unless otherwise specified, each question is worth 4 points.*

1. Identify the following as ionic (I), covalent/molecular (M), or acidic compounds (A):

- a. sodium chloride ..... I
- b.  $\text{H}_2\text{CO}_3$  ..... A
- c.  $\text{CO}_2$  ..... M
- d.  $\text{FeCO}_3$  ..... I

2. Complete the following table of ions:

	NAME	FORMULA
a.	oxide	$\text{O}^{2-}$
b.	NITRATE	$\text{NO}_3^-$
c.	sodium	$\text{Na}^+$
d.	TITANIUM (III)	$\text{Ti}^{3+}$

3. Complete the following table of names and formulas for compounds:

	NAME	FORMULA
a.	silicon disulfide	$\text{SiS}_2$
b.	ALUMINUM OXIDE	$\text{Al}_2\text{O}_3$
c.	hydrofluoric acid	$\text{HF}$
d.	IRON (III) OXIDE	$\text{Fe}_2\text{O}_3$

4. A new element, LTCCenium, (Lt) has been discovered; it is composed of two isotopes:  
 72.13%  $^{281}\text{Lt}$ , atomic mass = 280.89 amu  
 27.87%  $^{283}\text{Lt}$ , atomic mass = 282.86 amu

What is the atomic mass of this new element?

$$\left. \begin{array}{l} .7213 \times 280.89 = 202.6 \\ .2787 \times 282.86 = 78.83 \end{array} \right\} \boxed{281.4 \text{ amu}}$$

