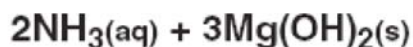
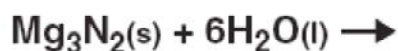


## Chapter 11 Practice Test-2012

## Multiple Choice

Identify the choice that best completes the statement or answers the question.

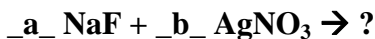
- \_\_\_\_\_ 1. Some of the molecules found in the human body are NHCHCOOH (glycine), CHO(glucose), and CH<sub>3</sub>(CH<sub>2</sub>)<sub>16</sub>COOH (stearic acid). The bonds they form are
- |             |             |
|-------------|-------------|
| a. covalent | c. metallic |
| b. ionic    | d. nuclear  |
- \_\_\_\_\_ 2. H<sub>2</sub>O<sub>2</sub>, hydrogen peroxide, naturally breaks down into HO<sub>2</sub> and O<sub>2</sub> over time. MnO<sub>2</sub>, manganese dioxide, can be used to lower the energy of activation needed for this reaction to take place and, thus, increase the rate of reaction. What type of substance is MnO<sub>2</sub> ?
- |                 |               |
|-----------------|---------------|
| a. an inhibitor | c. a product  |
| b. a catalyst   | d. a reactant |
- \_\_\_\_\_ 3. 
$$\text{C}_3\text{H}_8 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$$
- This chemical equation represents the combustion of propane. When correctly balanced, the coefficient for water is
- |      |       |
|------|-------|
| a. 2 | c. 8  |
| b. 4 | d. 16 |
- \_\_\_\_\_ 4. Which of the following is a balanced equation for the combustion of ethanol (CH<sub>3</sub>CH<sub>2</sub>OH)?
- |  |  |
|--|--|
| a. CH <sub>3</sub> CH <sub>2</sub> OH + 3O <sub>2</sub> → CO <sub>2</sub> + 2H <sub>2</sub> O  | c. CH <sub>3</sub> CH <sub>2</sub> OH + O <sub>2</sub> → 2CO <sub>2</sub> + 3H <sub>2</sub> O  |
| b. CH <sub>3</sub> CH <sub>2</sub> OH + 3O <sub>2</sub> → 2CO <sub>2</sub> + 3H <sub>2</sub> O | d. CH <sub>3</sub> CH <sub>2</sub> OH + 3O <sub>2</sub> → 2CO <sub>2</sub> + 2H <sub>2</sub> O |
- \_\_\_\_\_ 5. How many moles of CH<sub>4</sub> are contained in 96.0 grams of CH<sub>4</sub>?
- |                |               |
|----------------|---------------|
| a. 16.00 moles | c. 6.00 moles |
| b. 12.00 moles | d. 3.00 moles |
- \_\_\_\_\_ 6. How many atoms are in a chromium sample with a mass of 13 grams?
- |                           |                           |
|---------------------------|---------------------------|
| a. 1.5 × 10 <sup>23</sup> | c. 1.9 × 10 <sup>26</sup> |
| b. 3.3 × 10 <sup>23</sup> | d. 2.4 × 10 <sup>24</sup> |
- \_\_\_\_\_ 7. How many moles of chlorine gas are contained in 9.03 × 10<sup>23</sup> molecules?
- |               |              |
|---------------|--------------|
| a. 9.03 moles | c. 2.0 moles |
| b. 6.02 moles | d. 1.5 moles |



- \_\_\_\_\_ 8. Classify the following reaction.
- |                       |                       |
|-----------------------|-----------------------|
| a. combination        | c. single replacement |
| b. double replacement | d. combustion         |
- \_\_\_\_\_ 9. What is the gram formula mass of chromium (III) oxalate?
- |              |              |
|--------------|--------------|
| a. 65 g/mol  | c. 396 g/mol |
| b. 192 g/mol | d. 368 g/mol |
- \_\_\_\_\_ 10. What is the molar mass of calcium nitrate?
- |               |                |
|---------------|----------------|
| a. 70.1 g/mol | c. 164.1 g/mol |
| b. 74.1 g/mol | d. 204.1 g/mol |

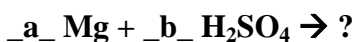


\_\_\_ 21. The products created from the reactants below would be:



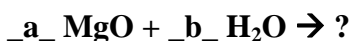
- |                            |   |
|----------------------------|---|
| a. NaNO <sub>3</sub> , AgF | c. Na <sub>3</sub> N, AgF, O <sub>2</sub> |
| b. FNO <sub>3</sub> , NaAg | d. NaNO, AgF, O <sub>2</sub>              |

\_\_\_ 22. The products created from the reactants below would be:



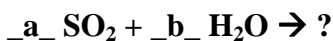
- |   |   |
|---|---|
| a. Manganese Sulfate and Hydrogen Gas         | c. Magnesium Sulfate and Hydrogen Gas         |
| b. Manganese Hydride and Sulfur Tetroxide Gas | d. Magnesium Hydride and Sulfur Tetroxide Gas |

\_\_\_ 23. The products created from the reactants below would be:



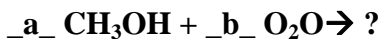
- |   |                          |
|---|--------------------------|
| a. Mg(OH) <sub>2</sub>                  | c. MgO + H <sub>2</sub>  |
| b. Mg(OH) <sub>2</sub> + H <sub>2</sub> | d. MgOH + H <sub>2</sub> |

\_\_\_ 24. The products created from the reactants below would be:



- |  |  |
|--|--|
| a. H <sub>2</sub> SO <sub>3</sub>                  | c. H <sub>2</sub> SO <sub>2</sub> + H <sub>2</sub> |
| b. H <sub>2</sub> SO <sub>3</sub> + H <sub>2</sub> | d. HSO + H <sub>2</sub>                            |

\_\_\_ 25. The products created from the reactants below would be:

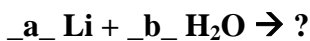


- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| a. CO <sub>2</sub> + OH               | c. CO <sub>2</sub>                  |
| b. CO <sub>2</sub> + H <sub>2</sub> O | d. CO <sub>2</sub> + H <sub>2</sub> |

\_\_\_ 26. An acid and base form what products?

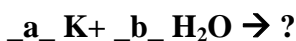
- |          |                        |
|----------|------------------------|
| a. water | c. water + salt        |
| b. salt  | d. hydrogen gas + salt |

\_\_\_ 27. The products created from the reactants below would be:



- |                                       |   |
|---------------------------------------|---|
| a. Li <sub>2</sub> O + H <sub>2</sub> | c. Li(OH) <sub>2</sub> + H <sub>2</sub> |
| b. LiO + H <sub>2</sub>               | d. LiOH + H <sub>2</sub>                |

\_\_\_ 28. The correct balanced equation for the reaction below is:



- |            |            |
|------------|------------|
| a. 2,2,2,1 | c. 2,1,1,1 |
| b. 2,2,1,1 | d. 2,1,1,2 |



## Chapter 11 Practice Test-2012

### Answer Section

#### MULTIPLE CHOICE

- |            |        |  |
|------------|--------|--|
| 1. ANS: A  | PTS: 1 |  |
| 2. ANS: B  | PTS: 1 |  |
| 3. ANS: B  | PTS: 1 |  |
| 4. ANS: B  | PTS: 1 |  |
| 5. ANS: C  | PTS: 1 | KEY: Mass to Moles                                     |
| 6. ANS: A  | PTS: 1 | KEY: Mass to Representative Particles                  |
| 7. ANS: D  | PTS: 1 | KEY: Representative Particles to Moles                 |
| 8. ANS: B  | PTS: 1 |  |
| 9. ANS: D  | PTS: 1 | KEY: molar mass(GFM) from name                         |
| 10. ANS: C | PTS: 1 | KEY: molar mass(GFM) from name                         |
| 11. ANS: D | PTS: 1 | KEY: Molar Volume of a gas at STP                      |
| 12. ANS: A | PTS: 1 | KEY: density of a gas at STP; molar mass; molar volume |
| 13. ANS: A | PTS: 1 | KEY: molar volume                                      |
| 14. ANS: B | PTS: 1 | KEY: Percent Composition                               |
| 15. ANS: B | PTS: 1 | KEY: Types of Reactions; Decomposition                 |
| 16. ANS: D | PTS: 1 | KEY: Types of Reactions; Single Replacement            |
| 17. ANS: A | PTS: 1 | KEY: Types of Reactions; Double Replacement            |
| 18. ANS: D | PTS: 1 | KEY: Types of Reactions; Single Replacement            |
| 19. ANS: A | PTS: 1 | KEY: Balancing Equations                               |
| 20. ANS: A | PTS: 1 | KEY: Balancing Equations                               |
| 21. ANS: A | PTS: 1 | KEY: Predicting Products                               |
| 22. ANS: C | PTS: 1 | KEY: Single Replacement;                               |
| 23. ANS: A | PTS: 1 | KEY: Single Replacement;                               |
| 24. ANS: A | PTS: 1 | KEY: Single Replacement;                               |
| 25. ANS: B | PTS: 1 | KEY: Single Replacement;                               |
| 26. ANS: C | PTS: 1 | KEY: Volume to Moles; Molar Volume                     |
| 27. ANS: D | PTS: 1 | KEY: Predicting Products                               |
| 28. ANS: A | PTS: 1 | KEY: Predicting Products                               |
| 29. ANS: B | PTS: 1 | KEY: Predicting Products                               |
| 30. ANS: A | PTS: 1 | KEY: Predicting Products                               |
| 31. ANS: B | PTS: 1 | KEY: Predicting Products                               |
| 32. ANS: A | PTS: 1 | KEY: Predicting Products                               |
| 33. ANS: B | PTS: 1 | KEY: Predicting Products                               |
| 34. ANS: C | PTS: 1 | KEY: Predicting Products                               |
| 35. ANS: C | PTS: 1 | KEY: Predicting Products                               |
| 36. ANS: B | PTS: 1 | KEY: Predicting Products                               |