Name: _____ **Class:** _____ **Date:** _____ **ID: A**

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 $CH_3(CH_2)_{16}COOH$ (stearic acid). The bonds they form are**
a. covalent
b. ionic
c. metallic
d. nuclear

____ 2. **H_2O_2, hydrogen peroxide, naturally breaks down into HO_2 and O_2 over time. MnO_2,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_2?**
a. an inhibitor
b. a catalyst
c. a product
d. a reactant

____ 3. $C_3H_8 + O_2 \longrightarrow CO_2 + H_2O$
This chemical equation represents the combustion of propane. When correctly balanced, the coefficient for water is
a. 2
b. 4
c. 8
d. 16

____ 4. **Which of the following is a balanced equation for the combustion of ethanol (CH_3CH_2OH)?**
a. $CH_3CH_2OH + 3O_2 \rightarrow CO_2 + 2H_2O$
b. $CH_3CH_2OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$
c. $CH_3CH_2OH + O_2 \rightarrow 2CO_2 + 3H_2O$
d. $CH_3CH_2OH + 3O_2 \rightarrow 2CO_2 + 2H_2O$

____ 5. **How many moles of CH_4 are contained in 96.0 grams of CH?**
a. 16.00 moles
b. 12.00 moles
c. 6.00 moles
d. 3.00 moles

____ 6. **How many atoms are in a chromium sample with a mass of 13 grams?**
a. 1.5×10^{23}
b. 3.3×10^{23}
c. 1.9×10^{26}
d. 2.4×10^{24}

____ 7. **How many moles of chlorine gas are contained in $9.03 \times 1\ 0^{23}$ molecules?**
a. 9.03 moles
b. 6.02 moles
c. 2.0 moles
d. 1.5 moles

____ 8. $Mg_3N_{2(s)} + 6H_2O_{(l)} \longrightarrow 2NH_{3(aq)} + 3Mg(OH)_{2(s)}$
Classify the following reaction.
a. combination
b. double replacement
c. single replacement
d. combustion

____ 9. **What is the gram formula mass of chromium (III) oxalate?**
a. 65 g/mol
b. 192 g/mol
c. 396 g/mol
d. 368 g/mol

____ 10. **What is the molar mass of calcium nitrate?**
a. 70.1 g/mol
b. 74.1 g/mol
c. 164.1 g/mol
d. 204.1 g/mol

____ 11. **Under which of the following sets of conditions will a 0.50 mole sample of helium occupy a volume of 11.2 liters?**

a. 298 K and 0.50 atm
b. 273 K and 1.50 atm
c. 373 K and 0.50 atm
d. 273 K and 1.0 atm

____ 12. **What is the density of 1 mole of NO_2 gas at <u>STP?</u>**

a. 2.05 g/L
b. 1.34 g/L
c. 1.03 g/L
d. 0.513 g/L

____ 13. **What is the volume of <u>2 moles</u> of Nitrogen gas at STP?**

a. 44.8 L
b. 22.4 L
c. 1.20×10^{24} L
d. 6.0×10^{23} L

____ 14. **Calculate oxygen's mass percent in aluminum sulfate.**

a. 46%
b. 56%
c. 69%
d. Oxygen is not present in Aluminum Sulfate

____ 15. **What type of reaction is the reaction below?**

_a_ Fe_2O_3 → _b_ Fe + _c_ O_2

a. Synthesis/Combination
b. Decomposition
c. Combustion
d. Single Replacement

____ 16. **What type of reaction is the reaction below?**

_a_ Al + _b_ $CuSO_4$ → _c_ $Al_2(SO_4)_3$ + _d_Cu

a. Synthesis/Combination
b. Decomposition
c. Double Replacement
d. Single Replacement

____ 17. **What type of reaction is the reaction below?**

_a_ NaF + _b_ $AgNO_3$ → ?

a. Double Replacement
b. Decomposition
c. Synthesis/Combination
d. Single Replacement

____ 18. **What type of reaction is the reaction below?**

_a_ Mg + _b_ H_2SO_4 → ?

a. Double Replacement
b. Decomposition
c. Synthesis/Combination
d. Single Replacement

____ 19. **Select the set of coefficients that properly balance the equation below.**

_a_ Fe_2O_3 → _b_ Fe + _c_ O_2

a. 2, 4, 3
b. 2, 2, 3
c. 1, 2, 3
d. 3, 4, 4

____ 20. **Select the set of coefficients that properly balance the equation below.**

_a_ $Pb(NO_3)_2$ + _b_ NH_4Cl → _c_ $PbCl_2$ + _d_ NH_4NO_3

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

____ 21. **The products created from the reactants below would be:**

_a_ NaF + _b_ $AgNO_3$ → ?

a. $NaNO_3$, AgF
b. FNO_3, NaAg
c. Na_3N, AgF, O_2
d. NaNO, AgF, O_2

____ 22. **The products created from the reactants below would be:**

_a_ Mg + _b_ H_2SO_4 → ?

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

____ 23. **The products created from the reactants below would be:**

_a_ MgO + _b_ H_2O → ?

a. $Mg(OH)_2$
b. $Mg(OH)_2$ + $\mathbf{H_2}$
c. MgO + $\mathbf{H_2}$
d. MgOH + $\mathbf{H_2}$

____ 24. **The products created from the reactants below would be:**

_a_ SO_2 + _b_ H_2O → ?

a. $H_2\mathbf{SO_3}$
b. $H_2\mathbf{SO_3}$ + $\mathbf{H_2}$
c. $H_2\mathbf{SO_2}$ + $\mathbf{H_2}$
d. H**SO** + $\mathbf{H_2}$

____ 25. **The products created from the reactants below would be:**

_a_ CH_3OH + _b_ O_2O→ ?

a. CO_2 + **OH**
b. CO_2 + $\mathbf{H_2O}$
c. CO_2
d. CO_2 + $\mathbf{H_2}$

____ 26. **An acid and base form what products?**

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

____ 27. **The products created from the reactants below would be:**

_a_ Li + _b_ H_2O → ?

a. Li_2O + H_2
b. LiO + H_2
c. $Li(OH)_2$ + H_2
d. LiOH + H_2

____ 28. **The correct balanced equation for the reaction below is:**

_a_ K+ _b_ H_2O → ?

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

____ 29. **Chlorine Gas is bubbled through a solution of calcium bromide at room temperature.** Choose all the correct product(s) for the reaction.

a. $Br_{2\ (s)}$
c. $BrCl_{(aq)}$
b. $Br_2 + CaCl_{2(l)}$
d. $CaCl + Br_2$

____ 30. A flaming splint of wood is extinguished by what gas?

a. carbon dioxide
c. water
b. oxygen
d. hydrogen

____ 31. A glowing splint of wood ignites from what gas?

a. carbon dioxide
c. water
b. oxygen
d. hydrogen

____ 32. Phenolphthalein indicator turns pink from the presence of a:

a. base
c. acid
b. oxygen
d. water

____ 33. **$Cu_{(s)} + O_{2(g)} \rightarrow$ ___.**
Assume that copper will form a +2 ion

a. Copper (I) Oxide
c. Copper (III) Oxide
b. Copper (II) Oxide
d. Copper Monoxide

____ 34. Two reactants are combined to produce a salt and water; these are the products of a reaction between:

a. a nonmetallic oxide and water
c. an acid and a base
b. a metallic oxide and water
d. a carbohydrate and oxygen

____ 35. **_a_ LiOH + _b_ $H_3PO_4 \rightarrow$? + ? +…**
This reaction represents a special (exceptional) case of a reaction, which is the:

a. formation of an acid
c. acid-base neutralization
b. formation of a base
d. formation of hydrogen gas

____ 36.
Hydrogen peroxide breaks down in the presence of mangenese dioxide to produce:

a. $H_2O_{(l)} + MnO_{3\ (g)}$
c. $H_2O_{(l)} + O_{2\ (g)}$
b. $H_2O_{(g)} + O_{2\ (g)}$
d. $H_2O_{(l)} + MnO_{2\ (g)}$

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