Classifying and Balancing Equations Name

Multiple Choice Date Per

PRACTICE TEST

_____1. A chemical reaction is a process in which
a. products change into reactants
b. the law of conservation of mass applies
c. substances can change state
d. all of these

_____2. During a chemical reaction,
a. new elements are produced
b. atoms are rearranged
c. atoms are destroyed
d. elements are destroyed

_____3. An equation is balanced by
a. changing subscripts
b. adding coefficients
c. erasing elements as necessary
d. adding elements as necessary

_____4 An atom's ability to undergo chemical reactions is determined by its
a. protons b. innermost electrons c. neutrons d. valence electrons

_____5. What are the reactants in the following chemical equation:

$Zn + CuSO_4 \text{ -----> } ZnSO_4 + Cu$

a. zinc and copper
b. zinc sulfate and copper
c. zinc and copper (II) sulfate
d. only zinc

_____6. What are the products in the above equation?
a. zinc and copper
b. zinc sulfate and copper
c. zinc and copper (II) sulfate
d. only zinc

Short Answer

For questions 7-12, classify the reaction according to the type it is. Put that answer in the blank. Then add coefficients to balance the reaction when necessary.

_____ 7. $Zn + H_2SO_4 \text{ -----> } ZnSO_4 + H_2$

_____ 8. $H_2CO_3 \text{ -----> } CO_2 + H_2O$

_____9. $CaCO_3 + HCl \text{ ------> } CaCl_2 + H_2CO_3$

_____10. $AgNO_3 + Zn \text{ -----> } Zn(NO_3)_2 + Ag$

_____ 11. $C_3H_8 + O_2 \text{ -----> } CO_2 + H_2O$

_____ 12. $C_2H_5OH + O_2 \text{ -----> } CO_2 + H_2O$

Write a balanced equation for each of the following reactions:

13. Magnesium chloride is the product of a reaction between magnesium and chlorine.
14. Copper (II) hydroxide and potassium sulfate are produced when potassium hydroxide reacts with copper (II) sulfate.

Unit 6 Practice Test – Key

1. b
2. b
3. b
4. d
5. c
6. B
7. Single replacement 1,1,1,1
8. Decompostion 1,1,1
9. Double replacement 1,2,1,1- $CaCO_{3(s)}$ is ppt (see Ref.Table)
10. Single replacement 2,1,1,2
11. Combustion 1, 5, 3, 4
12. Combustion 1,3,2,3
13. $Mg + Cl_2 \rightarrow MgCl_2$ 1,1,1
14. $KOH + CuSO_4 \rightarrow Cu(OH)_2 + K_2SO_4$ 2,1,1,1