

Use with textbook pages 202–211.

## Chemical equations

Match the Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

Term	Descriptor
1. _____ product	<b>A.</b> a chemical that reacts in a chemical reaction
2. _____ reactant	<b>B.</b> a chemical that forms in a chemical reaction
3. _____ coefficient	<b>C.</b> a chemical change in which new substances are formed
4. _____ word equation	<b>D.</b> a chemical equation that is written using chemical names
5. _____ skeleton equation	<b>E.</b> an integer placed in front of a formula in a chemical equation
6. _____ chemical reaction	<b>F.</b> a chemical equation that is written using chemical formulas
7. _____ chemical equation	<b>G.</b> a set of chemical formulas that identify the reactants and products in a chemical reaction

8. Which of following describes the law of conservation of mass?

I.	The mass is conserved in a chemical reaction.
II.	The total mass of the products is equal to the total mass of the reactants in a chemical reaction.
III.	The total number of each kind of atom at the start of the reaction is equal to the total number of each kind of atom after the reaction.

- A.** I and II only  
**B.** I and III only  
**C.** II and III only  
**D.** I, II, and III

9. How many oxygen atoms are there in the compound lead(IV) bisulphate,  $\text{Pb}(\text{HSO}_4)_4$ ?

- A.** 2                      **C.** 8  
**B.** 4                      **D.** 16

10. Which of the following are diatomic elements?

I.	iodine
II.	nitrogen
III.	hydrogen

- A.** I and II only                      **C.** II and III only  
**B.** I and III only                      **D.** I, II, and III

Use the following unbalanced equation to answer question 11.



11. Which of the following sets of coefficients will balance the equation?

- A.** 1, 4, 5, 1                      **C.** 1, 3, 5, 2  
**B.** 1, 5, 4, 1                      **D.** 1, 4, 2, 1

12. A solution of sodium sulphide is mixed with a solution of copper(II) nitrate. A precipitate of copper sulphide is formed in a solution of sodium nitrate. What are the reactants in this chemical reaction?

- A.**  $\text{Na}_2\text{S}$  and  $\text{CuS}$   
**B.**  $\text{CuS}$  and  $\text{NaNO}_3$   
**C.**  $\text{Na}_2\text{S}$  and  $\text{Cu}(\text{NO}_3)_2$   
**D.**  $\text{Na}_2\text{SO}_4$  and  $\text{Cu}_2\text{NO}_3$

13. A piece of aluminum metal is placed in a solution of sulphuric acid,  $\text{H}_2\text{SO}_4$ . A compound, aluminum sulphate, forms and bubbles are seen going to the surface. What type of gas formed during this reaction?

- A.** oxygen                      **C.** carbon dioxide  
**B.** hydrogen                      **D.** carbon monoxide