

Term 1 Final Revision

Chapter 3 Final Questions

Multiple Choice

1. What is the standard form for a single-replacement reaction?
 - A- $AX + BY \rightarrow AY + BX$
 - B- $A + B \rightarrow AB$
 - C- $AB \rightarrow A + B$
 - D- $A + BX \rightarrow AX + B$

2. According to collision theory, _____.
 - A- all collisions result in some sort of chemical reaction
 - B- a chemical reaction can occur without collisions
 - C- the amount of energy of the particles determines whether a reaction occurs

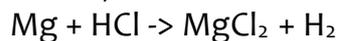
3. What is the general relationship between temperature and reaction rate?
 - A- the higher the temperature, the higher the reaction rate
 - B- the higher the temperature, the lower the reaction rate
 - C- temperature and rate vary inversely
 - D- there is no relationship between the two

4. What factor accounts for the fact that powdered sugar dissolves more quickly than granulated sugar under the same conditions?
 - A- temperature
 - B- concentration
 - C- nature of reactants
 - D- surface area

5. How does increasing gas pressure increase the rate of reaction?
 - A- gas particles move faster
 - B- new gas particles are made
 - C- gas particles are in a smaller space
 - D- gas particles are in a larger space

6. A substance that increases the rate of a reaction without itself being used up is called a(n)
- A- intermediate product
 - B- catalyst
 - C- inhibitor
 - D- activated complex
7. In an exothermic reaction:_____.
- A- the heat of the products is equal to the heat of the reactants
 - B- the heat of the products is greater than the heat of the reactants
 - C- the heat of the products is less than the heat of the reactants
 - D- it varies depending on the reaction
8. Which of the following statements about bonds and energy is correct?
- A- bond breaking and bond formation both require energy
 - B- bond breaking and bond formation both release energy
 - C- bond breaking requires energy and bond formation releases energy
 - D- bond breaking releases energy and bond formation requires energy
9. Endothermic reactions are reactions that:_____.
- A- absorb heat
 - B- release heat
 - C- do not involve heat
 - D- take place instantaneously
10. When the equation, $\text{Fe} + \text{Cl}_2 \rightarrow 2\text{FeCl}_3$, is balanced, what is the coefficient for Cl_2 ?
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- A- 1
 - B- 2
 - C- 3
 - D- 4

11. When the following equation is balanced, what is the coefficient for HCl?



- A- 6
- B- 3
- C- 1
- D- 2

12. Chemical reactions_____.

- A- the ways in which atoms are joined together are changed.
- B- new atoms are formed as products.
- C- the starting materials are named reactants.
- D- the bonds of the reactants are broken and new bonds of the products are formed

13. Chemical equations must be balanced to satisfy the_____.

- A- law of definite proportions
- B- law of multiple proportions
- C- law of conservation of mass
- D- principle of Avogadro

14. In the chemical equation, $\text{H}_2\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{O}_2$,

The H_2O_2 is a_____.

- A- product
- B- reactant
- C- catalyst
- D- solid

15. A catalyst is_____.

- A- the product of a reaction
- B- is a reactant
- C- one of the reactants in single-replacement reactions
- D- a chemical that speeds up the reaction

16. In every balanced chemical equation, each side of the equation has the same number of _____.

- A- atoms
- B- molecules
- C- moles
- D- Coefficients

17. In a combustion reaction, one of the reactants is _____.

- A- hydrogen
- B- nitrogen
- C- oxygen
- D- a metal

18. The products of a combustion reaction do NOT include _____.

- A- water
- B- carbon dioxide
- C- carbon monoxide

19. Which of these does **NOT** increase the rate of a reaction?

- A- increasing the surface Area
- B- adding a Catalyst
- C- mixing the chemicals vigorously
- D- increasing the Concentrations

20. Most metals are good conductors of _____.

- A- a bond between two atoms
- B- one pair of electrons shared between two atoms
- C- two pairs of electrons shared between two atoms
- D- two pairs of electrons shared between four atoms

