

Chemical Reactions MCQs and Short Questions

1. Which among the following is not a physical change?

- A. Melting of solids to liquids
- B. Vaporization of liquids to gases
- C. Liquefaction of gases to liquids

D. Decay of matter

2. Which among the following is not a chemical change?

A. Melting of ice

- B. Carbon cycle
- C. Dehydration of substances
- D. Fermentation of substances

3. Physical changes are _____.

A. Temporary

- B. Permanent
- C. Irreversible
- D. Endothermic

4. An example of a chemical change is _____.

- A. Formation of Clouds
- B. Glowing Of an Electric Light

C. Dropping Sodium into Water

- D. Dissolving Of Salt in Water

5. Which of these will cause a chemical change to occur?

- A. Grinding of wheat into flour

B. Lighting of a gas stove



C. Evaporation of water from a lake

D. Ringing of an electric bell

6. Chemical changes are _____.

A. Temporary, reversible and a new substance is produced

B. Always accompanied by exchange of light

C. Permanent, irreversible and a new substance is produced

D. Never accompanied by exchange of light and heat energy

7. Which of the following is a physical change?

A. Solubility in water

B. Combustibility

C. Aerial oxidation

D. Reaction with water

8. Which of the following information is conveyed by a chemical reaction?

A. The colour changes taking place

B. The structure of the reactants and products

C. The absorption of energy only

D. The masses of the reactants and products involved in the reaction

9. Which is the correct symbol for manganese?

A. M

B. Ma

C. Mn

D. Mg

10. The symbol H stands for _____ of hydrogen.

A. One atom

B. One molecule

C. One ion

D. Two atoms

11. The correct formula for nitrogen dioxide is _____.

A. NO

B. N₂O

C. NO₂

D. N₂O₅

12. The correct formula for ammonium sulphate is _____.

A. NH₄SO₄

B. (NH₄)₂SO₄

C. (NH₃)₂SO₄

D. (NH₄)₂(SO₄)₂

13. Which of the following is an incorrect formula?

A. NaCl₂

B. BaSO₄

C. H₂CO₃

D. P₂O₅

14. In one molecule of ammonium sulphide there are _____.

A. 2 atoms of N, 8 atoms of H, and 1 atom of S

B. 1 atom of N, 4 atoms of H, and 1 atom of S

C. 1 atom of N, 4 atoms of H, and 2 atoms of S

D. 2 atoms of N, 8 atoms of H, and 2 atoms of S

15. Breaking of lead bromide into lead and bromine is an example of _____.



A. Decomposition Reaction

- B. Synthesis Reaction
- C. Displacement Reaction
- D. Neutralisation Reaction

16. $\text{PbO}_2 + 4\text{HCl} \rightarrow \text{PbCl}_2 + \text{Cl}_2$ the substance undergoing oxidation is _____.

- A. Lead Dioxide

B. Hydrochloric Acid

- C. Hydrogen
- D. Lead Chloride

17. $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NaNO}_3$ is an example of _____.

- A. Neutralization Reaction
- B. Redox Reaction

C. Double Displacement Reaction

- D. Decomposition Reaction

18. $\text{BaCl}_2 + \text{ZnSO}_4 \rightarrow \text{ZnCl}_2 + \text{BaSO}_4$, the white precipitate seen is due to _____.

- A. ZnCl_2

B. BaSO_4

- C. BaCl_2
- D. ZnSO_4

19. A white solid which is yellow when hot but changes to white again on cooling is _____.

- A. PbO
- B. CaO
- C. Ag_2O

D. ZnO

20. From the given list, the nitrate which gives metal, NO_2 and O_2 on heating is _____.

A. NH_4NO_3

B. NaNO_3

C. AgNO_3

D. $\text{Cu}(\text{NO}_3)_2$

21. The products of a burning candle are _____.

A. Ash And Water Vapour

B. CO_2 And Water Vapour

C. Wax And Water Vapour

D. Only Melted Wax

22. Which of these metals do not corrode?

A. Lead

B. Copper

C. Platinum

D. Silver

23. The formula for rust is _____.

A. CuO

B. $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$

C. Al_2O_3

D. AgS

24. The rate constant of a chemical reaction decreases by decreasing the

A. Concentration of reactants

B. Pressure

C. Temperature

D. Duration of reaction



25. The reaction between oxygen and organic material is a/an _____ reaction.

A. Endothermic

B. Photochemical

C. Biochemical

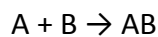
D. Exothermic

Short Questions

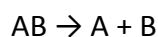
1Q. Write the generic form of each type of chemical reaction.

Ans.

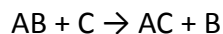
Synthesis:



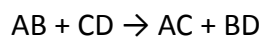
Decomposition:



Single displacement:

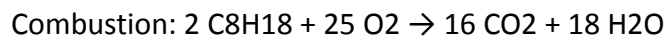


Double displacement:



2Q. Find out the type of reaction and balance it properly: $C_8H_{18} + O_2 \rightarrow CO_2 + H_2O$

Ans.



3Q. Name the gas evolved when zinc reacts with diluted form of HCl.

Ans.

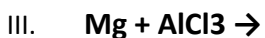
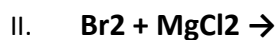
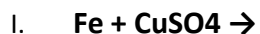
Hydrogen (H_2) gas is evolved.

4Q. Balancing of chemical equation is based on which law?



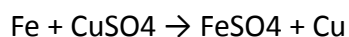
Ans. Balancing of a chemical equation is based on the law of conservation of mass which states that matter cannot be created nor destroyed.

5Q. Write down the correct products that will be formed when these reactants combine.



Ans.

- (I) Fe is more reactive than Cu, therefore it will replace copper to form the following products.



- (II) Cl is more reactive than Br because, therefore no reaction will occur.

- (III) Mg is listed above Al in the activity series, therefore the reaction will occur and following products will be formed.

