

EXERCISE - 1

(A) OBJECTIVE TYPE QUESTIONS

- Which of the following is not a decomposition reaction?
(A) $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$ (B) $2\text{KClO}_3 \longrightarrow 2\text{KCl} + 3\text{O}_2$
(C) Digestion of food in the body (D) $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$
- Which of the following a double displacement reaction?
(A) $2\text{H}_2 + \text{O}_2 \longrightarrow 2\text{H}_2\text{O}$ (B) $2\text{Mg} + \text{O}_2 \longrightarrow 2\text{MgO}$
(C) $\text{AgNO}_3 + \text{NaCl} \longrightarrow \text{AgCl} \downarrow + \text{NaNO}_3$ (D) $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$
- Which of the following is a displacement reaction?
(A) $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$ (B) $\text{CaO} + 2\text{HCl} \longrightarrow \text{CaCl}_2 + \text{H}_2\text{O}$
(C) $\text{Fe} + \text{CuSO}_4 \longrightarrow \text{FeSO}_4 + \text{Cu}$ (D) $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$
- The reaction $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$ is a –
(A) Decomposition reaction (B) Combination reaction
(C) Double displacement reaction (D) Displacement reaction
- Which of the following is a decomposition reaction?
(A) $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$ (B) $\text{NH}_4\text{CNO} \longrightarrow \text{H}_2\text{NCONH}_2$
(C) $2\text{KClO}_3 \longrightarrow 2\text{KCl} + 3\text{O}_2$ (D) $\text{H}_2 + \text{I}_2 \longrightarrow 2\text{HI}$
- Which of the following statement is substance?
(A) In oxidation, oxygen in added to a substance.
(B) In oxidation, Hydrogen is added to a substance.
(C) Oxidation agent in oxidized.
(D) Reducing agent is oxidized.
- Which of the following is a combination reaction –
(A) Boiling of water (B) Melting of wax
(C) Burning of petrol (D) None of these
- Which of the following is a redox reaction-
(A) $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$ (B) $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$
(C) $\text{CaO} + 2\text{HCl} \longrightarrow \text{CaCl}_2 + \text{H}_2\text{O}$ (D) $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$
- Which statement is correct about the following reaction?
$$\text{ZnO} + \text{CO} \longrightarrow \text{Zn} + \text{CO}_2$$

(A) ZnO is being oxidized (B) CO is being reduced
(C) CO₂ is being oxidized (D) ZnO is being reduced
- The reaction $\text{C} + \text{O}_2 \longrightarrow \text{CO}_2 + \text{Heat}$ is a –
(A) Combination reaction (B) Oxidation reaction
(C) Exothermic reaction (D) All of the above
- Conversion of CaCO_3 in to CaO as per following reaction is an example of-
$$\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$$

(A) Decomposition reaction (B) Reduction reaction

(C) Oxidation reaction

(D) None of these

12. $\text{Fe}_2\text{O}_3 + 2\text{Al} \longrightarrow \text{Al}_2\text{O}_3 + 2\text{Fe}$ This reaction is an example of –
(A) Combination reaction (B) Double displacement reaction
(C) Decomposition reaction (D) Displacement reaction
13. In reaction $\text{SO}_2 + 2\text{H}_2\text{S} \longrightarrow 2\text{H}_2\text{O} + 3\text{S}$ the reducing agent is-
(A) SO_2 (B) H_2S (C) H_2O (D) S
14. Which of the following reaction is metathesis reaction?
(A) $\text{FeCl}_3 + 3\text{NaOH} \longrightarrow \text{Fe}(\text{OH})_3 + 3\text{NaCl}$ (B) $\text{Zn} + \text{H}_2\text{SO}_4 \longrightarrow \text{ZnSO}_4 + \text{H}_2$
(C) $2\text{CO} + \text{O}_2 \longrightarrow 2\text{CO}_2$ (D) $\text{N}_2 + \text{O}_2 \longrightarrow 2\text{NO}$
15. What happens when dil hydrochloric acid is added to iron fillings?
(A) Hydrogen gas and Iron chloride are produced.
(B) Chlorine gas and Iron hydroxide are produced.
(C) NO reaction takes place.
(D) Iron salt and water are produced.
16. When Iron nails are added to an aqueous solution of copper sulphate, a chemical change occurs, which of the following is not true about this reaction?
(A) Blue colour of the solution fades. (B) Iron nails becomes brownish colour.
(C) It is (A) displacement reaction. (D) Iron nails dissolves completely.

(B) FILL IN THE BLANKS

1. The reaction $\text{CaCO}_3 \xrightarrow{\text{Heat}} \text{CaO} + \text{CO}$ is a reaction.
2. The reaction in which hydrogen is added to the substance is calledreaction.
3. Reaction in which hydrogen is added to a substance is calledreaction.
4. The process of loss of an electron is known asand the process of gain of an electron is known as.....
5. The species undergoing oxidation acts as a agent.
6. The reducing agent undergoes of electrons.
7. Formation of nitric oxide from nitrogen and oxygen is a reaction.
8. The potato chips manufacturers uses..... gas to flush the chips bags to prevent the chips getting oxidised.
9. Reaction in which energy is absorbed is known as reaction.
10. The reaction in which heat is give out along with products is known as reaction.
11. Digestion of food in our body is an example of reaction.

**CHEMICAL REACTION & EQUATION
EXERCISE**

ANSWER KEY

• **Objective type questions**

1.D

2.C

3.C

4.B 5.C

6.C 7.C

8.B

9.D

10.D

11.A

12.D

13.B

14.A

15.A

16.D

● **Fill in the blanks**

1. Decomposition

2. Oxidation

3. Reduction

4. Oxidation, reduction

5. Reducing

6. loss

7. combination

8. Nitrogen

9. Endothermic 10. Exothermic 11. Combustion

EXERCISE - 2

(C) **VERY SHORT ANSWER QUESTIONS**

1. Is it possible to have combustion without oxygen?
2. Can a double displacement reaction be a redox reaction?
3. What happens when a strip of zinc is dipped in a copper sulphate solution?
4. Is copper more reactive than iron? Give a reaction in support of your answer-
5. In which type of reaction does an exchange of partner takes place?
6. (Based on activities)
Why a dilute acid is added to water during electrolysis of water?
7. Name the product obtained on cathode electrolysis of water is
8. Is the volume of gases produced during electrolysis of water is same? If not than what is the ratio in between then?
9. What will happens if silver bromide is kept for some time in sunlight?
10. Write name of three metals which do not corrode?
11. Name two antioxidants which are usually added to fat and oil containing foods to prevent rancidity.

(D) **MATCH THE FOLLOWING**

	Column A		Column-B
	Types if chemical reaction		Chemical equation
(A)	Combination reaction	(i)	$\text{Zn} + \text{H}_2\text{SO}_4 \longrightarrow \text{ZnSO}_4 + \text{H}_2$
(B)	Oxidation & reduction reaction	(ii)	$2\text{H}_2\text{O} \xrightarrow{\text{Electricity}} 2\text{H}_2 + \text{O}_2$
(C)	Decomposition reaction	(iii)	$\text{CaO} + \text{CO}_2 \longrightarrow \text{CaCO}_3$
(D)	Displacement reaction	(iv)	$\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$
(E)	Double displacement	(v)	$\text{BaCl}_2 + \text{Na}_2\text{SO}_4 \longrightarrow \text{BaSO}_4 \downarrow + \text{NaCl}$

1.

(E) SHORT ANSWER QUESTIONS :-

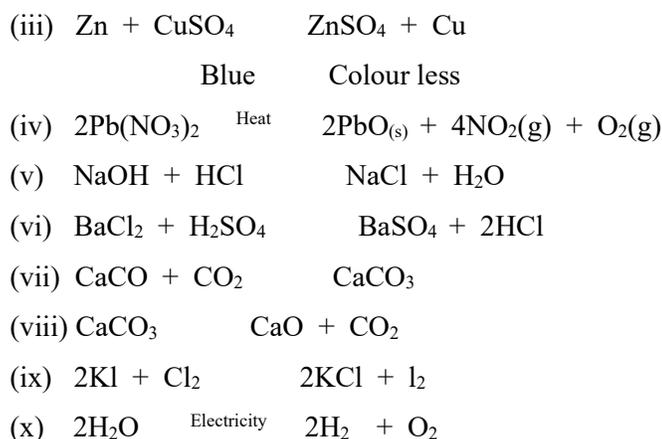
1. What do you mean by a precipitation reaction?
2. Why should a magnesium ribbon be cleaned before burning in air/
3. Write a balance chemical equation with symbols for the following reactions –
 - (i) Solution of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride.
 - (ii) Sodium hydroxide solution (in water) react with hydrochloric acid solution (in water) to produce sodium chloride solution and water.
4. Write the balance equation for the following chemical reactions.
 - (i) Hydrogen + chlorine \longrightarrow Hydrogen chloride.
 - (ii) Barium chloride + Aluminium Sulphate \longrightarrow Sodium hydroxide + Hydrogen.
 - (iii) Sodium + Water \longrightarrow Sodium hydroxide + Hydrogen.
5. How can you say that respiration is an exothermic process/
Name two biochemical reaction which are exothermic.
6. Why blue colour of copper sulphate solution become faded when iron fillings are added to it?
7. What happens when copper turnings are added to silver nitrate solution?
8. Why the solution of silver nitrate become blue in colour after some time when copper turnings are added to it ?
9. A solution of a substance 'X' is used for while washing -
 - (i) Name the substance 'X' and write the formula.
 - (ii) Write the reaction of the above substance 'X' with water.
10. When is the amount of gas double in one of the test tube during the electrolytic decomposition of water? Name the gas?
 - (i) Name the iron salt
 - (ii) Name the type of reaction that takes place during the heating of iron salt.
 - (iii) Write the chemical equation involved.
12. Write one equation each for decomposition reactions where energy is supplied by heat, light and electricity.
13. What is the difference between displacement and double displacement reactions? Write equation for these reactions.
14. Classify each of the following reactions as combination, decomposition, displacement or double displacement reaction.
 - (i) $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$
 - (ii) $2\text{KClO}_3 \xrightarrow{\text{Heat}} 2\text{KCl} + 3\text{O}_2$

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CHEMICAL REACTION & EQUATION ANSWER KEY EXERCISE - 2 CHEMICAL REACTION &

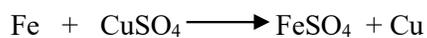
- **Very short answer type**

1. No

2. No

3. Blue colour of solution fade up.

4. No, because iron more reactive metal than copper.



5. Double displacement reaction.

6. To increase the ionization of water.

7. Hydrogen gas

8. No, $\text{H}_2 : \text{O}_2$ (2: 1)

9. Photochemical reaction takes place.



10. Silver, Gold, Platinum.

11. (a) BHA (Butylated Hydroxy Anisole)

(B) BHT (Butylated Hydroxy Toluene)

• Match the following

(A) → (iii),(iv); (B) → (ii),(iv); (C) → (ii) ; (D) → (i) ; (E) → (v)

Short Answer

14. (i) Combination reaction

(ii) Decomposition reaction

(iii)

Displacement reaction

(iv) Decomposition reaction]

(v) In double displacement reaction → Neutralization

reaction

(vi) Double displacement reaction

(vii) Combination reaction

(viii)

Decomposition reaction

(xi) Displacement reaction

(x) Decomposition reaction