CHAPTER:-1

STD:-10TH

SUB:-SCIENCE

1.Why should a magnesium ribbon be cleaned before burning in air?

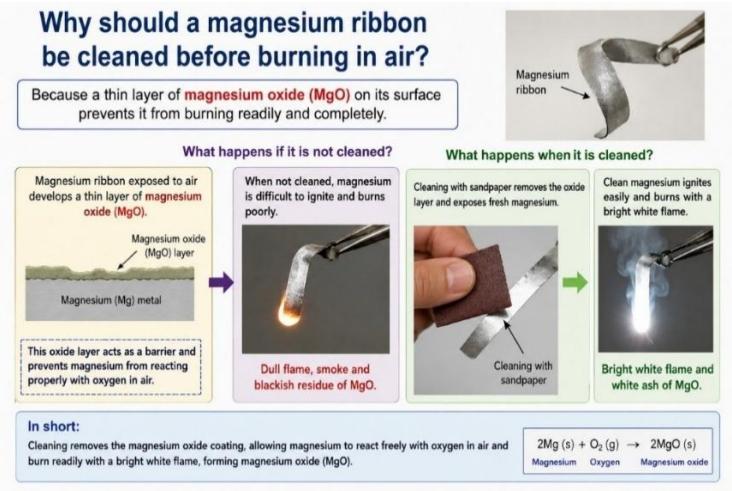
ANS :- A magnesium ribbon needs to be cleaned before burning in air because it usually has a thin coating of **magnesium oxide (MgO)** on its surface.

Here's why that matters:

- **Magnesium reacts with oxygen in air** to form magnesium oxide.
- This oxide layer forms naturally when the metal is exposed to air and acts as a **protective barrier**.
- If you try to burn magnesium without cleaning it, the oxide layer **prevents proper contact between magnesium and oxygen**, making it harder to ignite and burn efficiently.

By cleaning (usually rubbing with sandpaper), you **remove the oxide layer**, exposing fresh magnesium metal. This allows it to **burn readily with a bright white flame**.

So in short:
👉 Cleaning removes the oxide coating, ensuring smooth and complete burning.



CHAPTER:-1

STD:-10TH

SUB:-SCIENCE

1.Why should a magnesium ribbon be cleaned before burning in air?

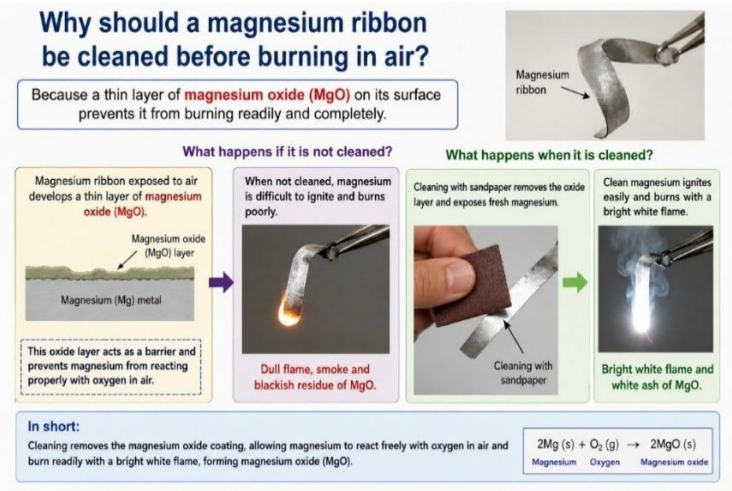
ANS :- A magnesium ribbon needs to be cleaned before burning in air because it usually has a thin coating of **magnesium oxide (MgO)** on its surface.

Here's why that matters:

- **Magnesium reacts with oxygen in air** to form magnesium oxide.
- This oxide layer forms naturally when the metal is exposed to air and acts as a **protective barrier**.
- If you try to burn magnesium without cleaning it, the oxide layer **prevents proper contact between magnesium and oxygen**, making it harder to ignite and burn efficiently.

By cleaning (usually rubbing with sandpaper), you **remove the oxide layer**, exposing fresh magnesium metal. This allows it to **burn readily with a bright white flame**.

So in short:
👉 Cleaning removes the oxide coating, ensuring smooth and complete burning.



2. Write the balanced equation for the following chemical reactions.

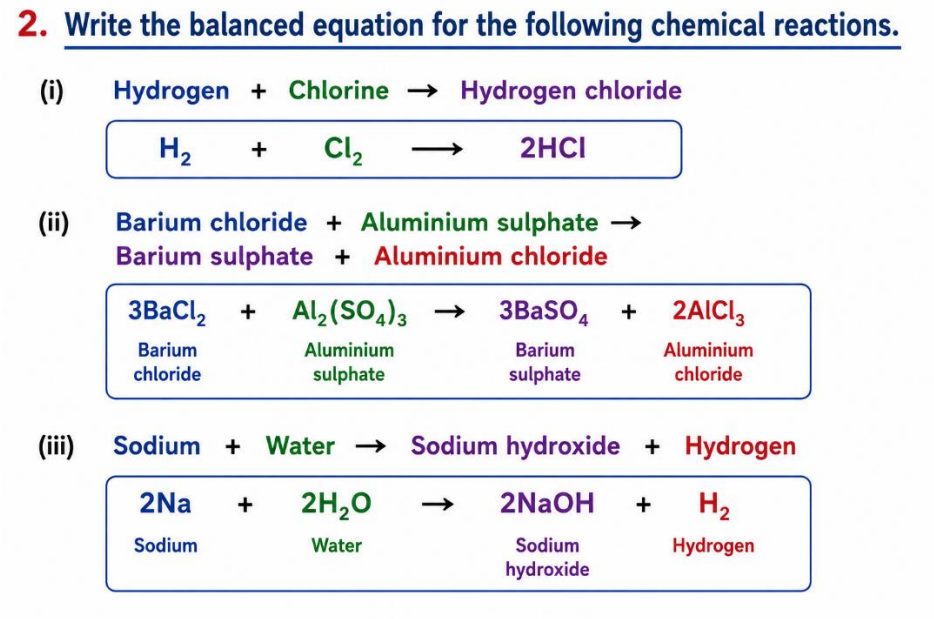
(i) Hydrogen + Chlorine → Hydrogen chloride

(ii) Barium chloride + Aluminium sulphate → Barium sulphate + Aluminium chloride

(iii) Sodium + Water → Sodium hydroxide + Hydrogen

ANS:- Here are the balanced chemical equations:

1. **Hydrogen + Chlorine → Hydrogen chloride**
   $H_2+C_{l2}\rightarrow 2HCl$
2. **Barium chloride + Aluminium sulphate → Barium sulphate + Aluminium chloride**
   $3BaC_{l2}+Al2(SO4)_3\rightarrow 3BaSO_4+2AlCl_3$
3. **Sodium + Water → Sodium hydroxide + Hydrogen**
   $2Na+2H_2O\rightarrow 2NaOH+H_2$



3. Write a balanced chemical equation with state symbols for the following reactions.

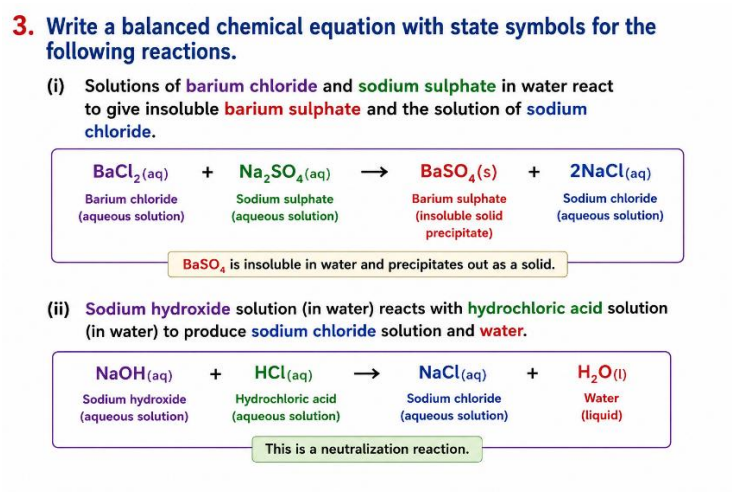
(i) Solutions of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride.

(ii) Sodium hydroxide solution (in water) reacts with hydrochloric acid solution (in water) to produce sodium chloride solution and water.

1. ANS:- **Barium chloride + Sodium sulphate → Barium sulphate + Sodium chloride**
   $BaCl_2(aq)+Na2SO_4(aq)\rightarrow BaSO_4(s)+2NaCl(aq)$

2. **Sodium hydroxide + Hydrochloric acid → Sodium chloride + Water**

$NaOH(aq)+HCl(aq)\rightarrow NaCl(aq)+H_2O(l)$



4. A solution of a substance 'X' is used for whitewashing.

(i) Name the substance 'X' and write its formula.

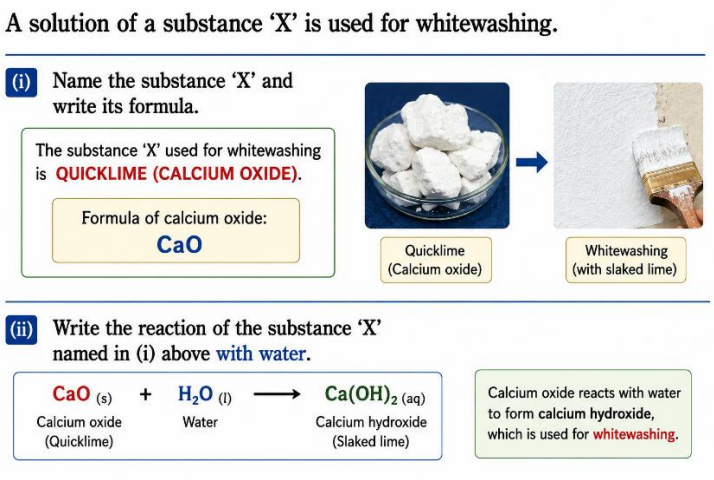
(ii) Write the reaction of the substance 'X' named in (i) above with water.

ANS:- (i) The substance **'X'** used for whitewashing is **quicklime (calcium oxide)**.

CaO

(ii) Reaction of 'X' with water (forms slaked lime used in whitewashing):

$CaO+H_2O\rightarrow Ca(OH)_2$



5. Why is the amount of gas collected in one of the test tubes in Activity 1.7 double of the amount collected in the other? Name this gas.

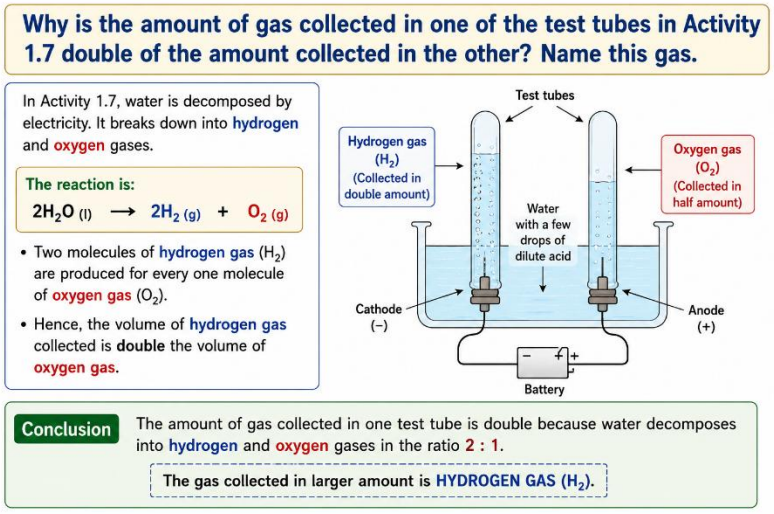
ANS:- In Activity 1.7 (electrolysis of water), the amount of gas collected in one test tube is double the amount collected in the other because **water breaks down into hydrogen and oxygen in the ratio 2 : 1**.

$$2H_2O \rightarrow 2H_2 + O_2$$

Two molecules of **hydrogen gas** are produced for every one molecule of **oxygen gas**.

- Therefore, the volume of hydrogen collected is **double** the volume of oxygen.

👉 The gas collected in larger amount is **hydrogen gas (H_2)**.



6.Why does the colour of copper sulphate solution change when an iron nail is dipped in it?

ANS:- When an iron nail is dipped into a copper sulphate solution, the colour changes because of a **displacement reaction** (a type of chemical reaction).

What happens?

- Copper sulphate solution is **blue** due to the presence of copper ions (Cu^{2+}).
- Iron is more reactive than copper, so it **displaces copper** from the solution.

The reaction:

Fe (iron) + $CuSO_4$ (copper sulphate) → $FeSO_4$ (iron sulphate) + Cu (copper)

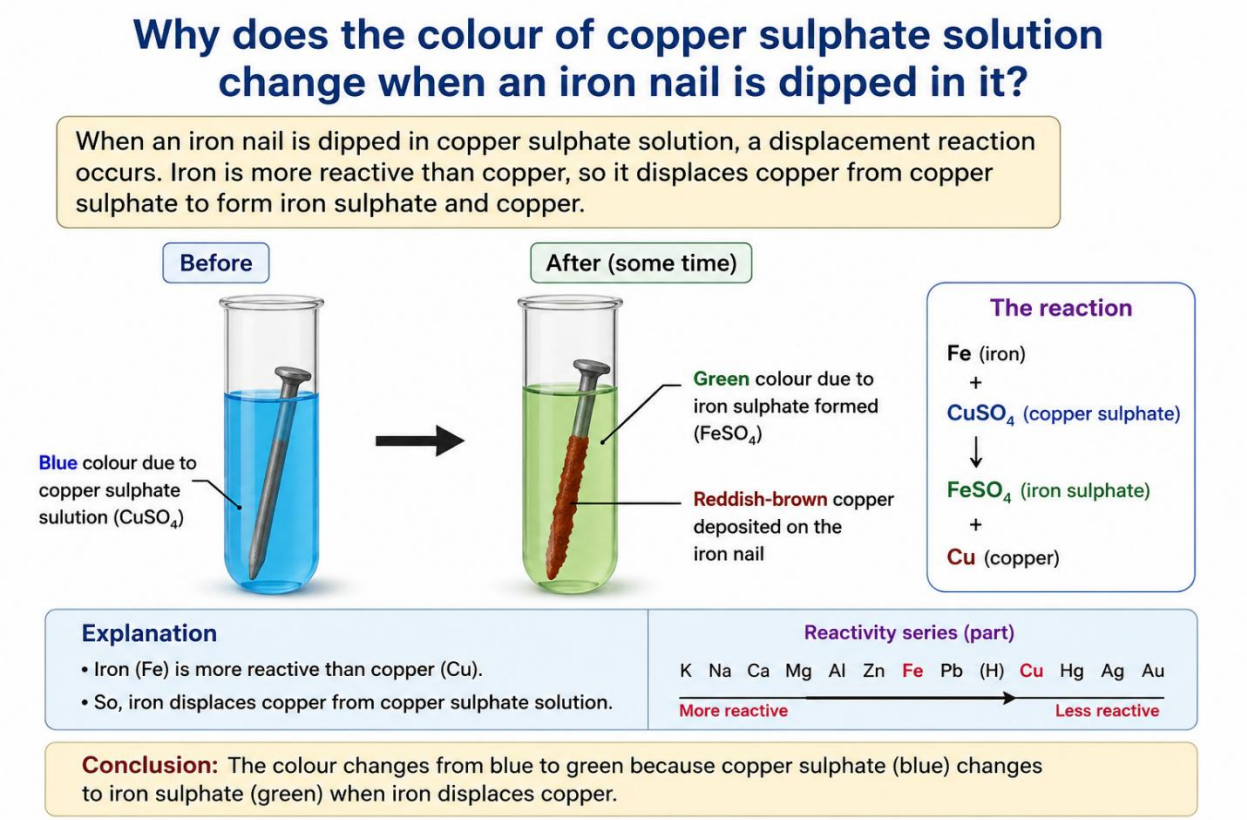
Why the colour changes:

- The blue copper sulphate solution turns **green** because **iron sulphate ($FeSO_4$)** is formed.
- A reddish-brown layer of copper metal deposits on the iron nail.

Key concept:

This is explained by the reactivity series — iron is above copper, so it can replace it from its compound.

So, the colour change occurs because a **new substance (iron sulphate)** forms while **copper is displaced and deposited**.



6. Give an example of a double displacement reaction other than the one given in Activity 1.10.

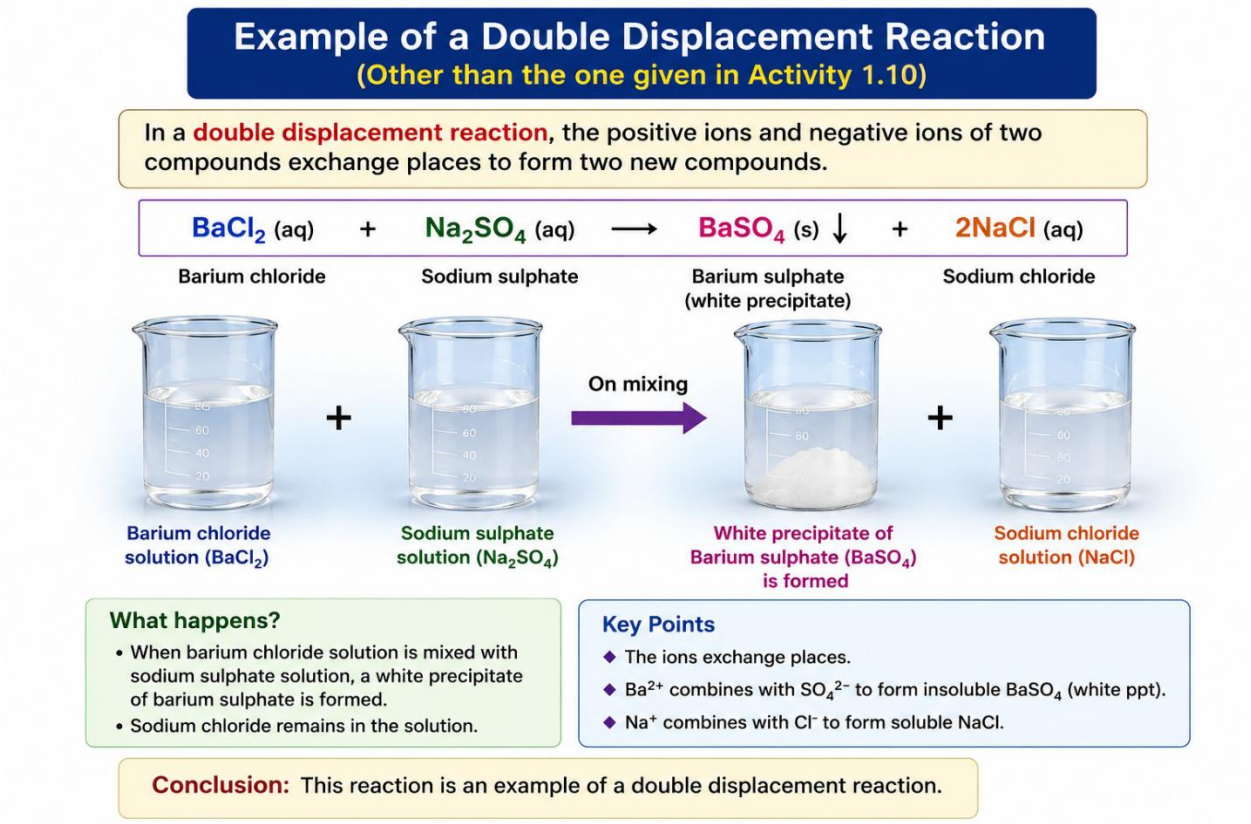
ANS:- An example of a **double displacement reaction** is:

$BaCl_2 + Na_2SO_4 \rightarrow BaSO_4 + 2NaCl$

Here:

- Barium chloride ($BaCl_2$) reacts with sodium sulphate (Na_2SO_4).
- The ions exchange places to form:
  - **Barium sulphate ($BaSO_4$)** — a white precipitate
  - **Sodium chloride (NaCl)**

This is called a double displacement reaction because the positive and negative ions of two compounds exchange places.



7. Identify the substances that are oxidised and the substances that are reduced in the following reactions.

(i) $4Na(s) + O_2(g) \rightarrow 2Na_2O(s)$

(ii) $CuO(s) + H_2(g) \rightarrow Cu(s) + H_2O(l)$

ANS:- (i) $4Na+O_2 \rightarrow 2Na_2O$

Sodium (Na) gains oxygen to form sodium oxide, so sodium is oxidised.

- Oxygen (O_2) combines with sodium, so oxygen is **reduced**.

Oxidation and Reduction:

- **Oxidised substance:** Sodium (Na)
- **Reduced substance:** Oxygen (O_2)

The reaction is shown below:

$4Na+O_2 \rightarrow 2Na_2O$

(ii) $CuO+H_2 \rightarrow Cu+H_2O$

Hydrogen (H_2) gains oxygen to form water, so hydrogen is oxidised.

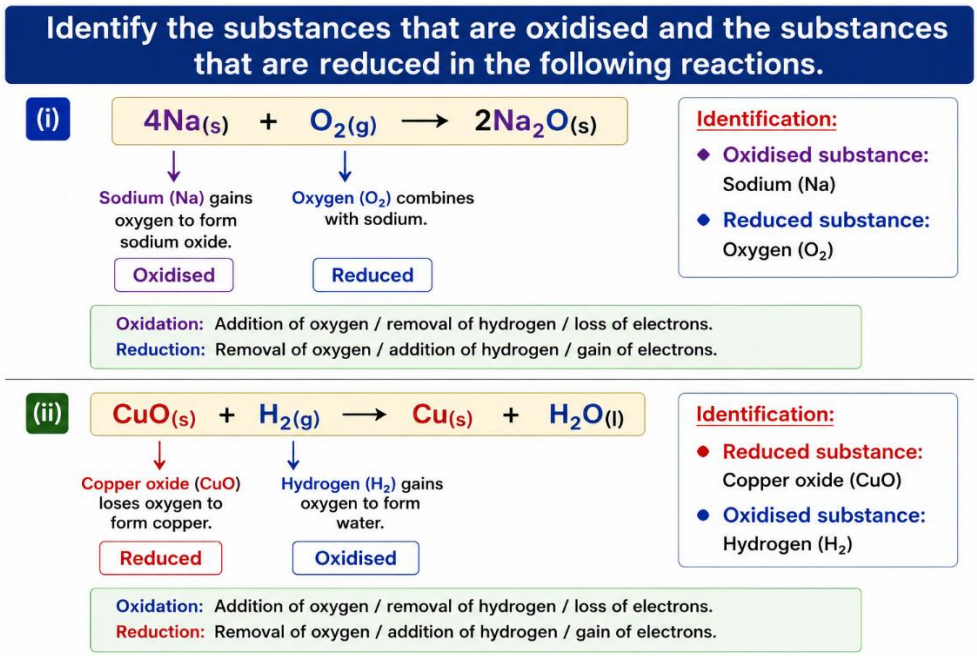
- Copper oxide (CuO) loses oxygen to form copper, so copper oxide is **reduced**.

Oxidation and Reduction:

- **Oxidised substance:** Hydrogen (H_2)
- **Reduced substance:** Copper oxide (CuO)

The reaction is shown below:

$CuO+H_2 \rightarrow Cu+H_2O$



E X E R C I S E S

1. 1. Which of the statements about the reaction below are incorrect?

   $2PbO(s) + C(s) \rightarrow 2Pb(s) + CO_2(g)$

   (a) Lead is getting reduced.

   (b) Carbon is getting oxidised.

   (c) Carbon dioxide is getting oxidised.

   (d) Lead oxide is getting reduced.

   (i) (a) and (b)

   (ii) (a) and (c)

   (iii)(a), (b) and (c)

   (iv) all

ANS:- $2PbO(s)+C(s)\rightarrow 2Pb(s)+CO_2(g)$

- **PbO → Pb** : Oxygen is removed from lead oxide, so **lead oxide is reduced**.
- **C → CO_2** : Oxygen is added to carbon, so **carbon is oxidised**.

Now check the statements:

- (a) **Lead is getting reduced** → Incorrect
  (Actually, lead oxide is reduced to lead.)
- (b) **Carbon dioxide is getting oxidised** → Incorrect
  (Carbon dioxide is the product formed; carbon is oxidised.)
- (c) **Carbon is getting oxidised** → Correct
- (d) **Lead oxide is getting reduced** → Correct

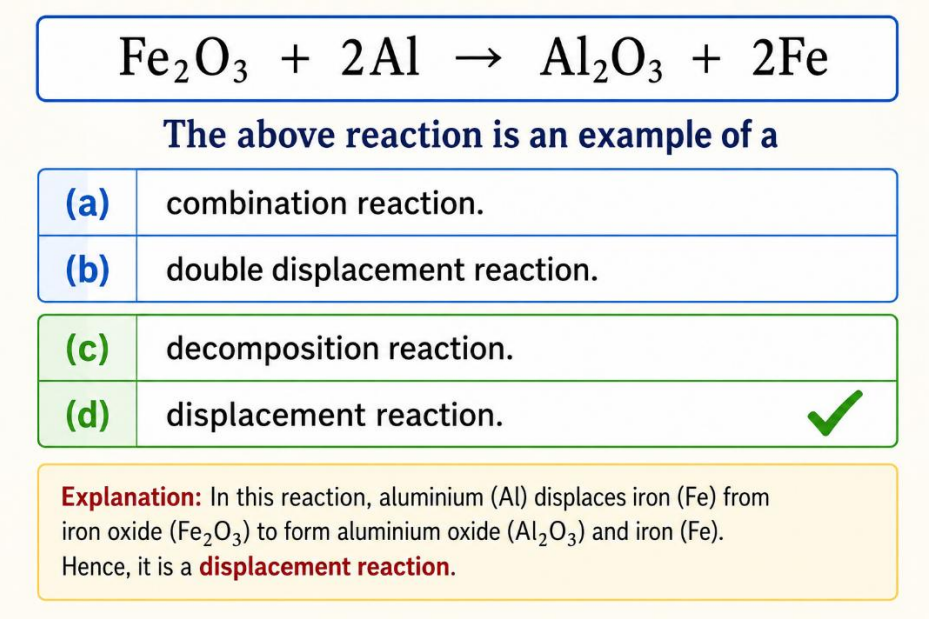
☑ Correct answer: **(i) (a) and (b)**

2. **$Fe_2O_3 + 2Al \rightarrow Al_2O_3 + 2Fe$**
   The above reaction is an example of a
   (a) combination reaction.
   (b) double displacement reaction.
   (c) decomposition reaction.
   (d) displacement reaction.

ANS:- $Fe_2O_3+2Al \rightarrow Al_2O_3+2Fe$

is a **displacement reaction** because aluminium displaces iron from iron oxide.

☑ Correct answer: **(d) displacement reaction**

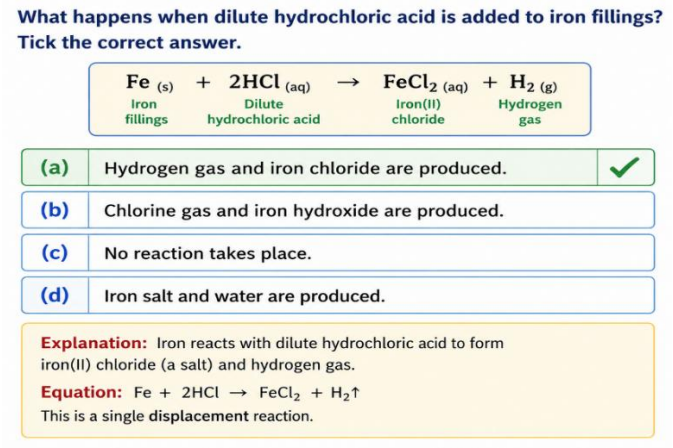


3.What happens when dilute hydrochloric acid is added to iron fillings? Tick the correct answer.
(a) Hydrogen gas and iron chloride are produced.
(b) Chlorine gas and iron hydroxide are produced.
(c) No reaction takes place.
(d) Iron salt and water are produced.

ANS:- When dilute hydrochloric acid reacts with iron filings:

$Fe+2HCl \rightarrow FeCl_2+H_2$ Iron reacts with hydrochloric acid to form **iron chloride** and **hydrogen gas**.

☑ Correct answer: **(a) Hydrogen gas and iron chloride are produced.**



4.What is a balanced chemical equation? Why should chemical equations be balanced?

ANS:- A **balanced chemical equation** is a chemical equation in which the number of atoms of each element is the same on both the reactant side and the product side.

Example:

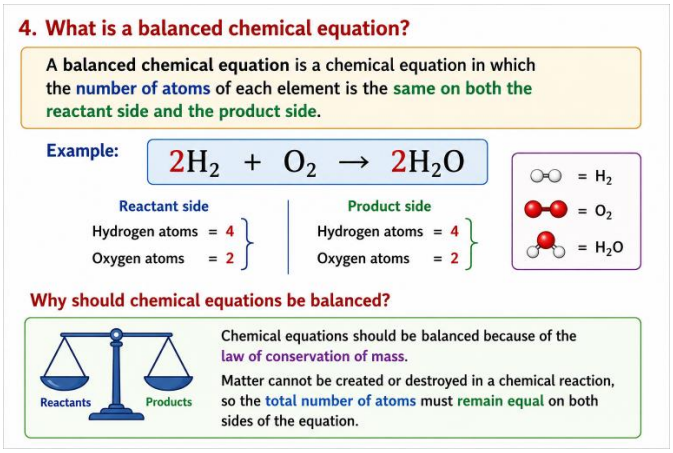
$2H_2+O_2 \rightarrow 2H_2O$

Here:

- Hydrogen atoms = 4 on both sides
- Oxygen atoms = 2 on both sides

Why should chemical equations be balanced?

Chemical equations should be balanced because of the **law of conservation of mass**.
Matter cannot be created or destroyed in a chemical reaction, so the total number of atoms must remain equal on both sides of the equation



5. Translate the following statements into chemical equations and then balance them.

(a) Hydrogen gas combines with nitrogen to form ammonia.

(b) Hydrogen sulphide gas burns in air to give water and sulpur dioxide.

(c) Barium chloride reacts with aluminium sulphate to give aluminium chloride and a precipitate of barium sulphate.

(d) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas.

ANS:- **(a) Hydrogen gas combines with nitrogen to form ammonia**

Unbalanced equation:

$H_2+N_2 \rightarrow NH_3$

Balanced equation:

$N_2+3H_2 \rightarrow 2NH_3$

(b) Hydrogen sulphide gas burns in air to give water and sulphur dioxide

Unbalanced equation:

$H_2S+O_2 \rightarrow H_2O+SO_2$

Balanced equation:

$2H_2S+3O_2 \rightarrow 2H_2O+2SO_2$

(c) Barium chloride reacts with aluminium sulphate to give aluminium chloride and barium sulphate

Unbalanced equation:

$BaCl_2+Al_2(SO_4)_3 \rightarrow AlCl_3+BaSO_4$

Balanced equation:

$3BaCl_2+Al2(SO_4)_3 \rightarrow 2AlCl_3+3BaSO_4$

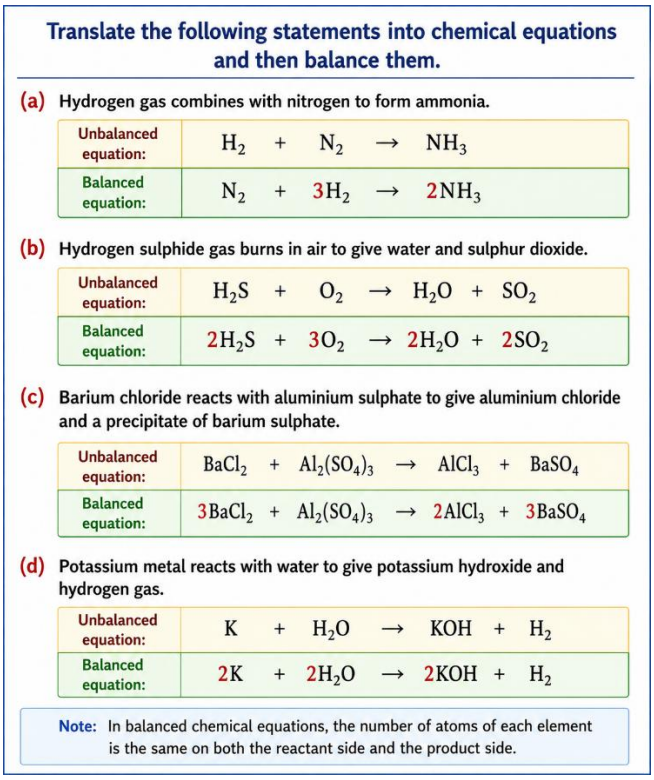
(d) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas

Unbalanced equation:

$K+H_2O \rightarrow KOH+H$

Balanced equation:

$2K+2H_2O \rightarrow 2KOH+H_2$



Translate the following statements into chemical equations and then balance them.

(a) Hydrogen gas combines with nitrogen to form ammonia.

Unbalanced equation:	$H_2 + N_2 \rightarrow NH_3$
Balanced equation:	$N_2 + 3H_2 \rightarrow 2NH_3$

(b) Hydrogen sulphide gas burns in air to give water and sulphur dioxide.

Unbalanced equation:	$H_2S + O_2 \rightarrow H_2O + SO_2$
Balanced equation:	$2H_2S + 3O_2 \rightarrow 2H_2O + 2SO_2$

(c) Barium chloride reacts with aluminium sulphate to give aluminium chloride and a precipitate of barium sulphate.

Unbalanced equation:	$BaCl_2 + Al_2(SO_4)_3 \rightarrow AlCl_3 + BaSO_4$
Balanced equation:	$3BaCl_2 + Al_2(SO_4)_3 \rightarrow 2AlCl_3 + 3BaSO_4$

(d) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas.

Unbalanced equation:	$K + H_2O \rightarrow KOH + H_2$
Balanced equation:	$2K + 2H_2O \rightarrow 2KOH + H_2$

Note: In balanced chemical equations, the number of atoms of each element is the same on both the reactant side and the product side.

6. Balance the following chemical equations.

(a) $HNO_3 + Ca(OH)_2 \rightarrow Ca(NO3)_2 + H_2O$

(b)) $NaOH + H_2SO_4 \rightarrow Na_2SO_4 + H_2O$

(c) $NaCl + AgNO_3 \rightarrow AgCl + NaNO_3$

(d) $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + HCl$

ANS:- **(a) Balance the equation**

Unbalanced:

$HNO_3+Ca(OH)_2 \rightarrow Ca(NO3)_2+H_2O$

Balanced:

$2HNO_3+Ca(OH)_2 \rightarrow Ca(NO3)_2+2H_2O$

(b) Balance the equation

Unbalanced:

$NaOH+H2SO_4 \rightarrow Na2SO_4+H2O$

Balanced:

$2NaOH+H2SO_4 \rightarrow Na2SO_4+2H_2O$

(c) Balance the equation

$NaCl+AgNO_3 \rightarrow AgCl+NaNO_3$

This equation is already balanced.

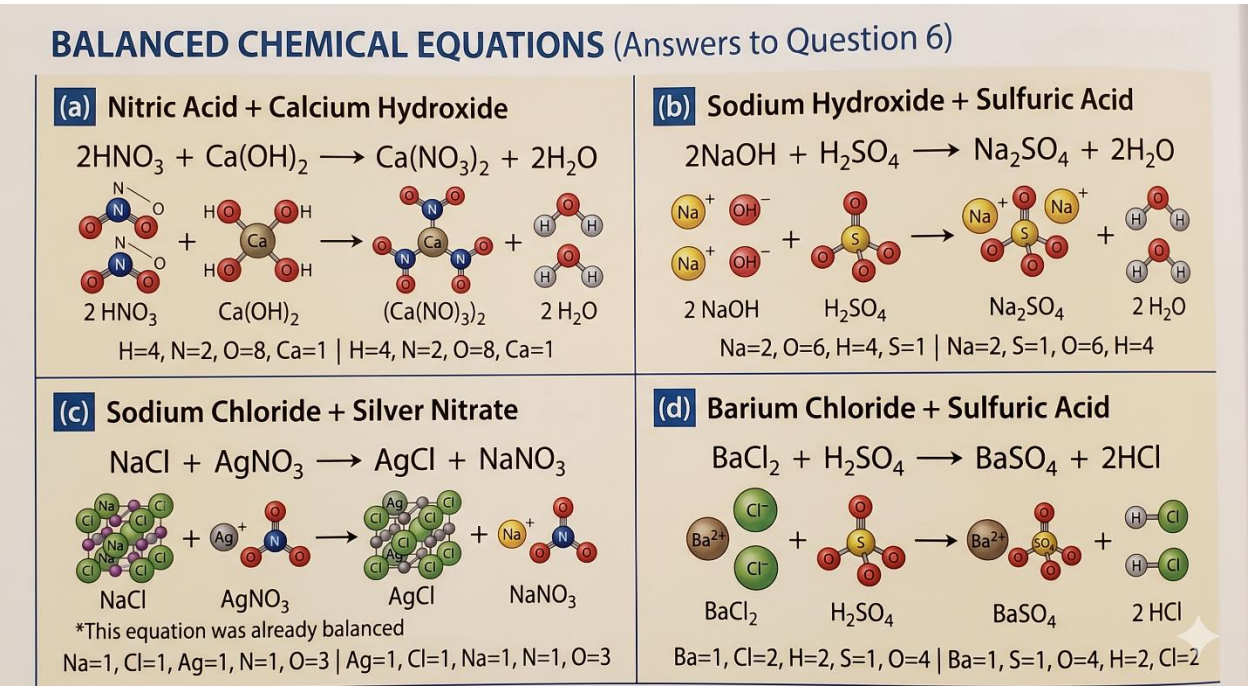
(d) Balance the equation

Unbalanced:

$BaCl_2+H2SO_4 \rightarrow BaSO_4+HCl$

Balanced:

$BaCl_2+H_2SO_4 \rightarrow BaSO_4+2HCl$



7. Write the balanced chemical equations for the following reactions.

(a) Calcium hydroxide + Carbon dioxide → Calcium carbonate + Water

(b)Zinc + Silver nitrate → Zinc nitrate + Silver

(c)Aluminium + Copper chloride → Aluminium chloride + Copper

(d) Barium chloride + Potassium sulphate → Barium sulphate + Potassium chloride

ANS:- Here are the balanced chemical equations:

(a) Calcium hydroxide + Carbon dioxide → Calcium carbonate + Water

$Ca(OH)_2+CO_2 \rightarrow CaCO_3+H2O$

(b) Zinc + Silver nitrate → Zinc nitrate + Silver

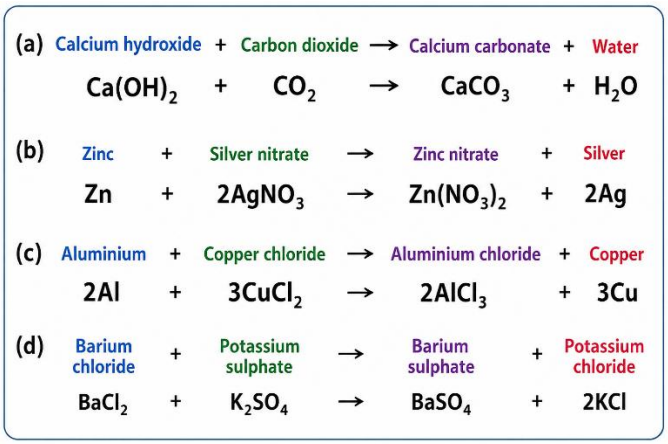
$Zn+2AgNO_3 \rightarrow Zn(NO_3)_2+2Ag$

(c) Aluminium + Copper chloride → Aluminium chloride + Copper

$2Al+3CuCl_2 \rightarrow 2AlCl_3+3Cu$

(d) Barium chloride + Potassium sulphate → Barium sulphate + Potassium chloride

$BaCl_2+K_2SO_4 \rightarrow BaSO_4+2KCl$



8. **Write the balanced chemical equation for the following and identify the type of reaction in each case.**

   (a) Potassium bromide(aq) + Barium iodide(aq) → Potassium iodide(aq) + Barium bromide(s)

   (b)Zinc carbonate(s) → Zinc oxide(s) + Carbon dioxide(g)

   (c)Hydrogen(g) + Chlorine(g) → Hydrogen chloride(g)

   (d)Magnesium(s) + Hydrochloric acid(aq) → Magnesium chloride(aq) + Hydrogen(g)

ANS:- **(a) Potassium bromide + Barium iodide → Potassium iodide + Barium bromide**

$2KBr(aq)+BaI_2(aq) \rightarrow 2KI(aq)+BaBr_2(s)$

Type of reaction: Double displacement reaction

(b) Zinc carbonate → Zinc oxide + Carbon dioxide

$ZnCO_3(s) \rightarrow ZnO(s)+CO_2(g)$

Type of reaction: Decomposition reaction

(c) Hydrogen + Chlorine → Hydrogen chloride

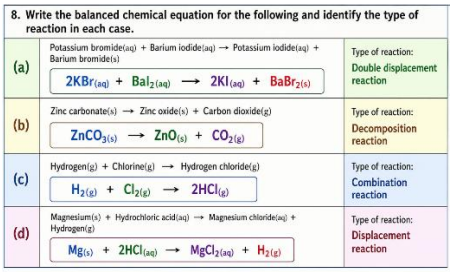
$H_2(g)+Cl_2(g)\rightarrow 2HCl(g)$

Type of reaction: Combination reaction

(d) Magnesium + Hydrochloric acid → Magnesium chloride + Hydrogen

$Mg(s)+2HCl(aq)\rightarrow MgCl_2(aq)+H_2(g)$

Type of reaction: Displacement reaction



8. Write the balanced chemical equation for the following and identify the type of reaction in each case.		
(a)	Potassium bromide(aq) + Barium iodide(aq) → Potassium iodide(aq) + Barium bromide(s) $2KBr_{(aq)} + BaI_{2(aq)} \longrightarrow 2KI_{(aq)} + BaBr_{2(s)}$	Type of reaction: Double displacement reaction
(b)	Zinc carbonate(s) → Zinc oxide(s) + Carbon dioxide(g) $ZnCO_{3(s)} \longrightarrow ZnO_{(s)} + CO_{2(g)}$	Type of reaction: Decomposition reaction
(c)	Hydrogen(g) + Chlorine(g) → Hydrogen chloride(g) $H_{2(g)} + Cl_{2(g)} \longrightarrow 2HCl_{(g)}$	Type of reaction: Combination reaction
(d)	Magnesium(s) + Hydrochloric acid(aq) → Magnesium chloride(aq) + Hydrogen(g) $Mg_{(s)} + 2HCl_{(aq)} \longrightarrow MgCl_{2(aq)} + H_{2(g)}$	Type of reaction: Displacement reaction

9. **What does one mean by exothermic and endothermic reactions? Give examples.**

ANS:- **Exothermic Reactions**

The chemical reactions in which heat is released to the surroundings are called **exothermic reactions**.

Example:

$CH_4+2O_2\rightarrow CO_2+2H_2O+Heat$

(Burning of methane releases heat.)

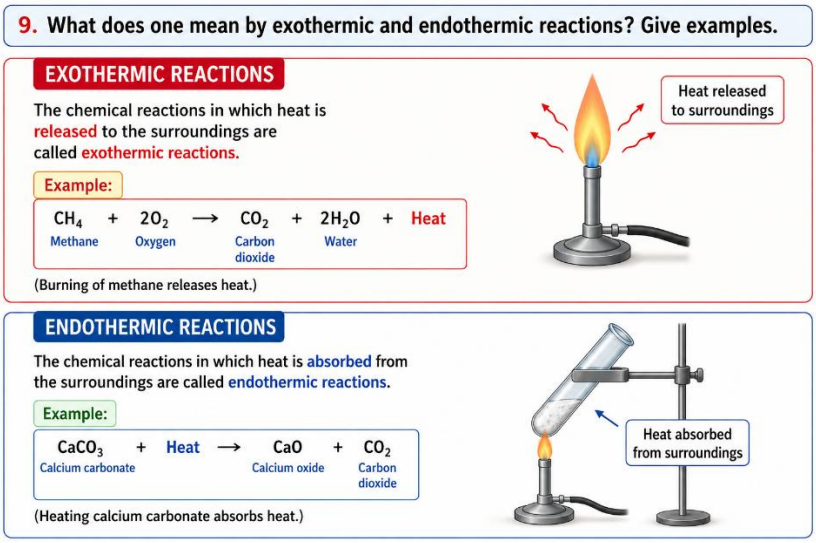
Endothermic Reactions

The chemical reactions in which heat is absorbed from the surroundings are called **endothermic reactions**.

Example:

$CaCO_3+Heat\rightarrow CaO+CO_2$

(Heating calcium carbonate absorbs heat.)



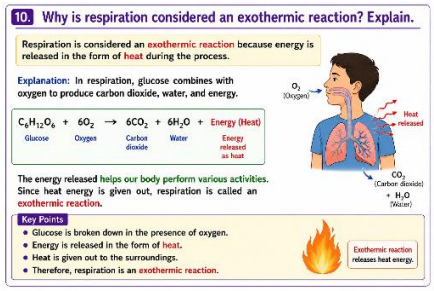
10. Why is respiration considered an exothermic reaction? Explain.

ANS:- **Respiration is considered an exothermic reaction because energy is released in the form of heat during the process.**

In respiration, glucose combines with oxygen to produce carbon dioxide, water, and energy.

$C_6H_{12}O_6+6O_2 \rightarrow 6CO_2+6H_2O+Energy$

The energy released helps our body perform various activities. Since heat energy is given out, respiration is called an **exothermic reaction**.



11. Why are decomposition reactions called the opposite of combination reactions? Write equations for these reactions.

ANS:- Decomposition reactions are called the opposite of combination reactions because:

- In a **combination reaction**, two or more substances combine to form a single product.

- In a **decomposition reaction**, a single substance breaks down into two or more simpler substances.

Thus, the processes are opposite to each other.

Example of Combination Reaction

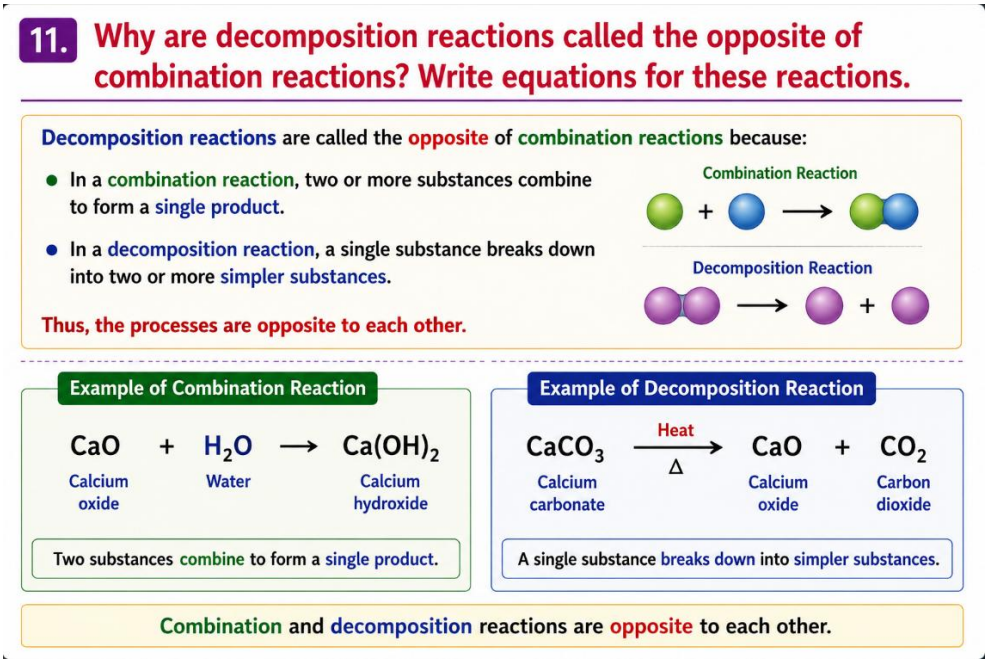
$CaO+H_2O \rightarrow Ca(OH)_2$

(Calcium oxide + Water → Calcium hydroxide)

Example of Decomposition Reaction

$CaCO_3 \rightarrow HeatCaO+CO_2$

(Calcium carbonate → Calcium oxide + Carbon dioxide)



12.Write one equation each for decomposition reactions where energy is supplied in the form of heat, light or electricity.

ANS:- **(a) Decomposition reaction by Heat (Thermal decomposition)**

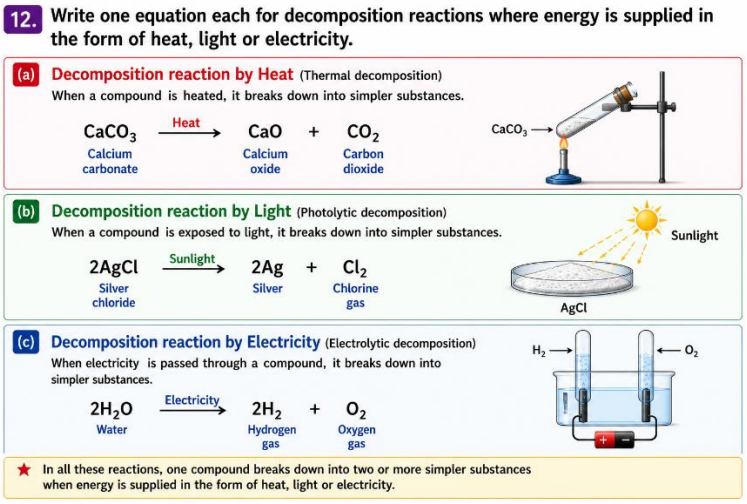
$CaCO_3 \rightarrow HeatCaO+CO_2$

(b) Decomposition reaction by Light (Photolytic decomposition)

$2AgCl \xrightarrow{Sunlight} 2Ag + Cl_2$

(c) Decomposition reaction by Electricity (Electrolytic decomposition)

$2H_2O \xrightarrow{Electricity} 2H_2 + O2$



12. What is the difference between displacement and double displacement reactions? Write equations for these reactions.

ANS:- Difference between Displacement and Double Displacement Reactions

Displacement Reaction	Double Displacement Reaction
One element replaces another element from a compound.	Two compounds exchange their ions to form new compounds.
Involves one element and one compound.	Involves two compounds.

Example of Displacement Reaction

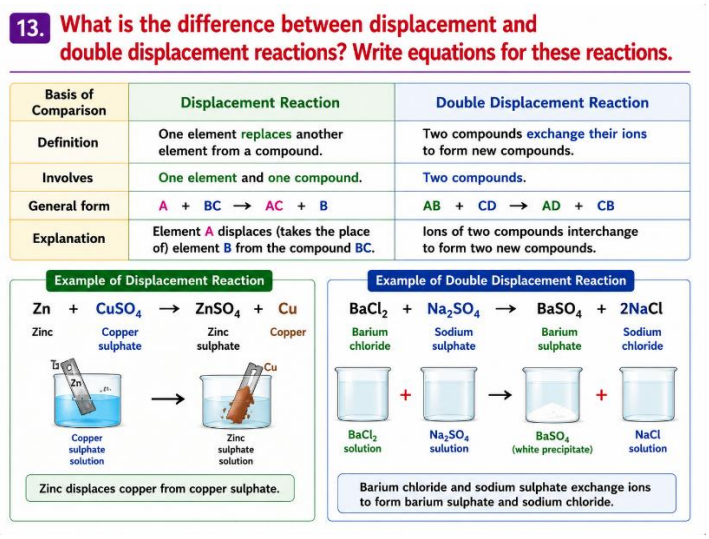
$Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$

(Zinc displaces copper from copper sulphate.)

Example of Double Displacement Reaction

$BaCl_2$+Na2SO_4→$BaSO_4$+2NaCl

(Barium chloride and sodium sulphate exchange ions.)



13. What is the difference between displacement and double displacement reactions? Write equations for these reactions.

ANS:-

Displacement Reaction	Double Displacement Reaction
In this reaction, one element replaces another element from a compound.	In this reaction, two compounds exchange their ions to form new compounds.
It involves only one compound and one element.	It involves two compounds.
General form: A + BC → AC + B	General form: AB + CD → AD + CB

Example of Displacement Reaction

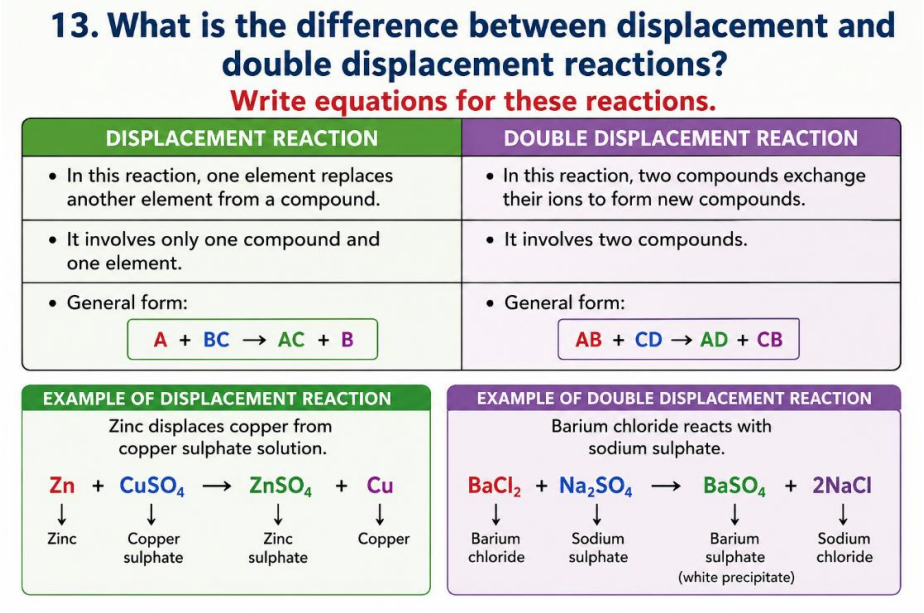
Zinc displaces copper from copper sulphate solution:

$Zn+CuSO_4 \rightarrow ZnSO_4+Cu$

Example of Double Displacement Reaction

Barium chloride reacts with sodium sulphate:

$BaCl_2+Na_2SO_4 \rightarrow BaSO_4+2NaCl$



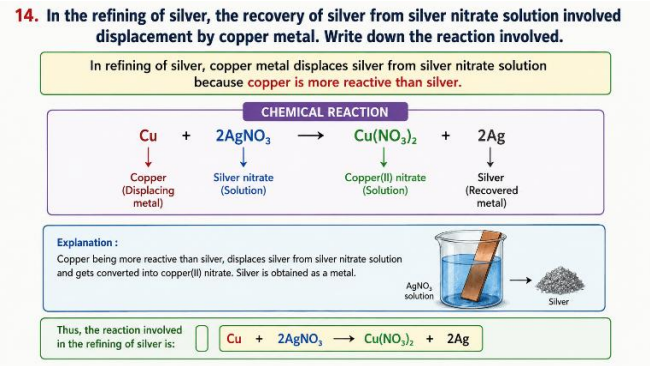
14. In the refining of silver, the recovery of silver from silver nitrate solution involved displacement by copper metal. Write down the reaction involved.

ANS:- Copper displaces silver from silver nitrate solution because copper is more reactive than silver.

Chemical Reaction

$Cu+2AgNO_3 \rightarrow Cu(NO_3)_2+2Ag$

- Copper (Cu) displaces silver (Ag) from silver nitrate.
- Silver is obtained as a metal.



15. What do you mean by a precipitation reaction? Explain by giving examples.

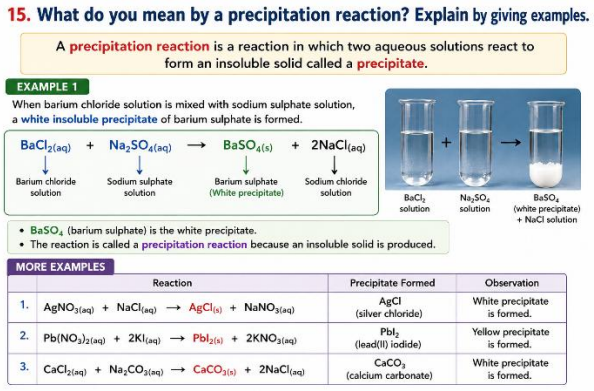
ANS:- A **precipitation reaction** is a reaction in which two aqueous solutions react to form an insoluble solid called a **precipitate**.

Example

When barium chloride solution is mixed with sodium sulphate solution, a white insoluble precipitate of barium sulphate is formed.

$BaCl_2(aq)+Na_2SO_4(aq)\rightarrow BaSO_4(s)+2NaCl(aq)$

- **$BaSO_4$ (barium sulphate)** is the white precipitate.
- The reaction is called a precipitation reaction because an insoluble solid is produced.



16. Explain the following in terms of gain or loss of oxygen with two examples each.

(a) Oxidation

(b) Reduction

ANS:- (a) Oxidation

Oxidation is the process in which a substance **gains oxygen** or **loses hydrogen**.

Examples

1. $2Cu+O_2\rightarrow 2CuO$

   Here, copper gains oxygen to form copper oxide.

2. $4Fe+3O_2\rightarrow 2Fe_2O_3$

   Here, iron gains oxygen to form iron oxide.

(b) Reduction

Reduction is the process in which a substance **loses oxygen** or **gains hydrogen**.

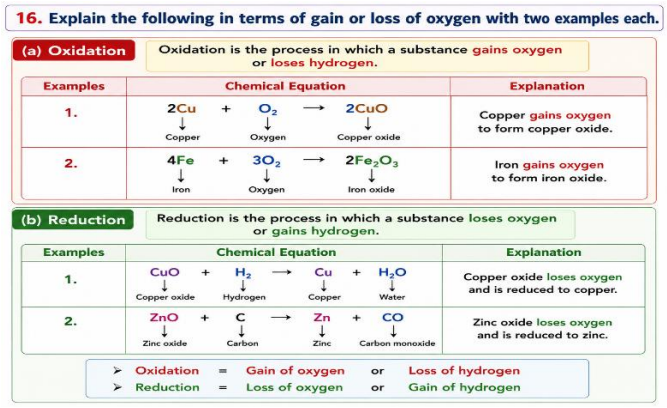
Examples

1. $CuO+H_2 \rightarrow Cu+H2O$

   Here, copper oxide loses oxygen and is reduced to copper.

2. $ZnO+C \rightarrow Zn+CO$

   Here, zinc oxide loses oxygen and is reduced to zinc.



17. A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound formed.

ANS:- The shiny brown coloured element **'X'** is **Copper (Cu)**.

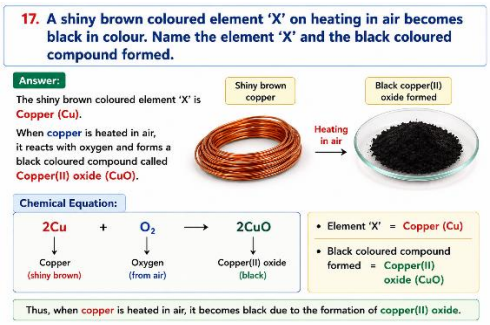
When copper is heated in air, it reacts with oxygen and forms a black coloured compound called **Copper(II) oxide (CuO)**.

Chemical Equation

$2Cu+O2 \rightarrow 2CuO$

Element 'X' = Copper (Cu)

- **Black coloured compound formed** = Copper(II) oxide (CuO)

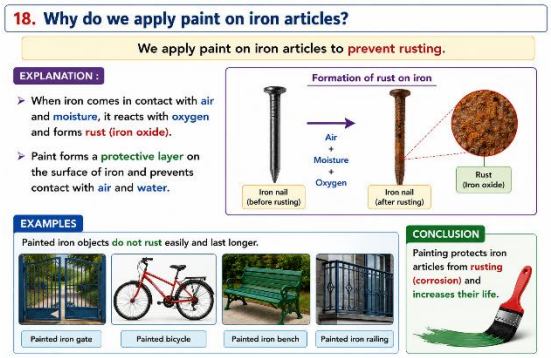


18. Why do we apply paint on iron articles?

ANS:- Paint is applied on iron articles to prevent **rusting**.

When iron comes in contact with air and moisture, it reacts with oxygen and forms rust (iron oxide). Paint forms a protective layer on the surface of iron and prevents contact with air and water.

Thus, painting protects iron articles from corrosion and increases their life.



19. Oil and fat containing food items are flushed with nitrogen. Why?

ANS:- Oil and fat containing food items are flushed with nitrogen to prevent **oxidation**.

When oils and fats react with oxygen present in air, they become rancid and develop an unpleasant smell and taste. Nitrogen is an unreactive gas, so it prevents contact of food with oxygen and keeps the food fresh for a longer time.

20. Explain the following terms with one example each.

(a) Corrosion

(b) Rancidity

ANS:- **(a) Corrosion**

Corrosion is the slow eating away or damage of a metal due to reaction with air, moisture or chemicals.

Example

Iron reacts with air and moisture to form rust.

$4Fe+3O_2+xH_2O \rightarrow 2Fe_2O_3 \cdot xHO$

(Rusting of iron)

(b) Rancidity

Rancidity is the process in which oils and fats get oxidised and develop an unpleasant smell and taste.

Example

Food items like chips or fried food become rancid when left open for a long time due to contact with air.