

Chp. 1 Chemical Reactions & Equations

classmate

Date

Page

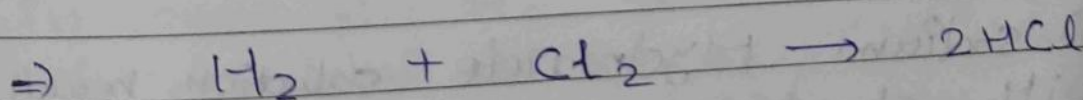
Answer the following.

Q1. Why should a magnesium ribbon be cleaned before burning in air?

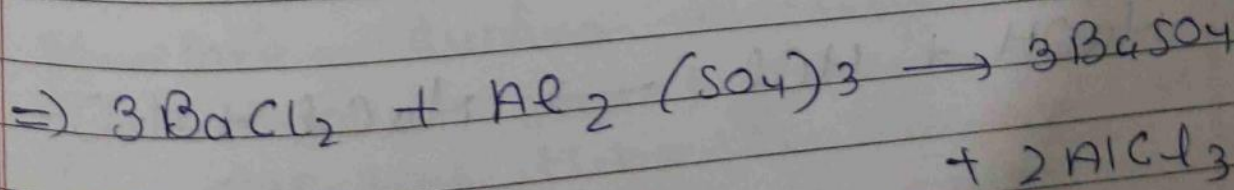
⇒ When magnesium ribbon is burned exposed to air, a layer of MgO is formed on its surface preventing it from burning. Hence, it should be cleaned using a piece of sand paper.

Q2. Write the balanced equation for the following chemical reactions.

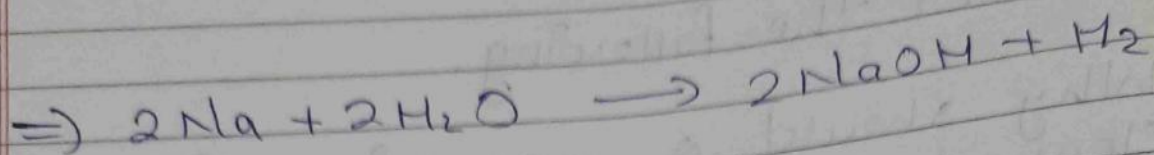
(i) Hydrogen + Chlorine \rightarrow Hydrogen Chloride



(ii) Barium Chloride + Aluminium sulphate \rightarrow Barium sulphate + Aluminium Chloride

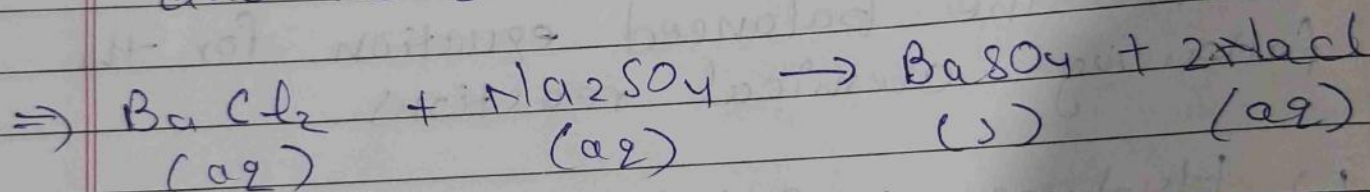


(iii) Sodium + Water \rightarrow Sodium Hydroxide + Hydrogen

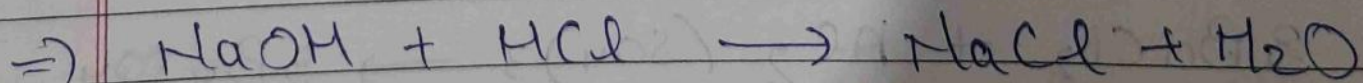


Q3. Write a balanced chemical with state symbol for the following reactions.

\Rightarrow (i) Solutions of Barium ~~chloride~~^{chloride} and Sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride.



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



Q1. A solution of a substance 'X' is used for white washing.

(i) Name the substance 'X'.

⇒ CaO — Calcium Oxide

(ii) Write the reaction of 'X' with water.

⇒ $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2 + \text{Heat}$

Q2. 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.

⇒ Water molecule contain two atoms of Hydrogen and one part of oxygen therefore during electrolysis of water the amount of Hydrogen gas collected in one test tube is double that of oxygen which is collected in the other test tube.

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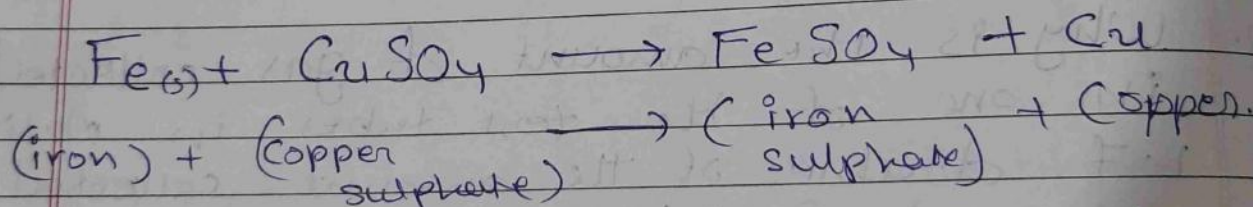
(Pg-13)

Q1. Why does the colour of CuSO_4 change when an iron nail is dipped in it?

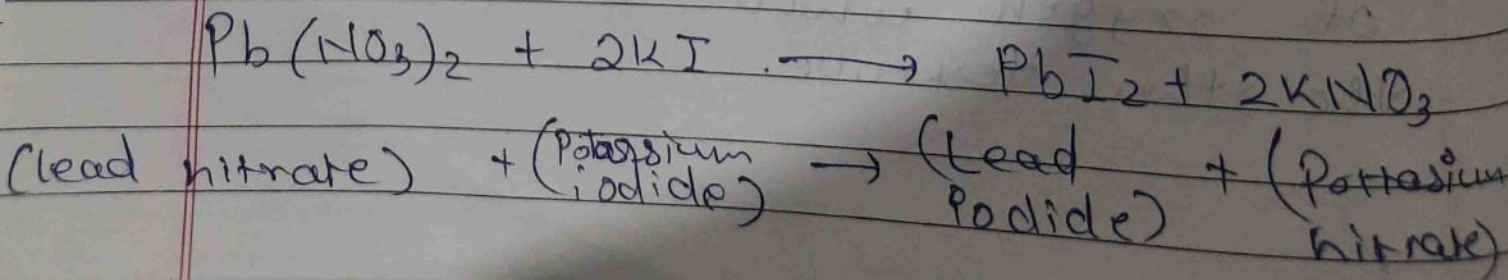
⇒ • Iron is more reactive than copper so when an iron nail is dipped in CuSO_4 solution, iron displaces copper from its solution.

• We can see two observations:

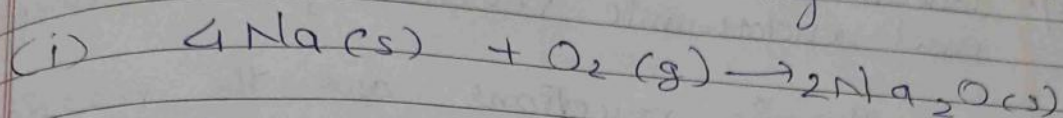
1. Blue colour of CuSO_4 changes to a green coloured FeSO_4 .
2. Iron nail gets coated by copper and looks brown in colour.



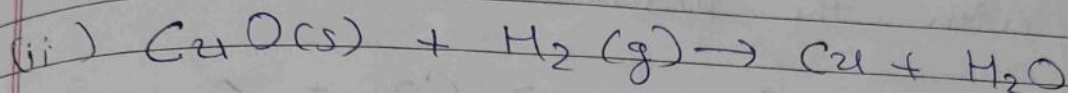
Q2. Give an example of double displacement reaction other than the one given in Activity 1.10.



Q3. I- identify the substances that are oxidised and substances that are reduced in the following:



\Rightarrow Sodium is oxidised to sodium oxide.



\Rightarrow CuO (copper oxide) is reduced to copper.

\Rightarrow H_2 (hydrogen) is oxidised to give H_2O (water).

* Exercises

Q4. What is a balanced chemical equation?

Why should it be balanced?

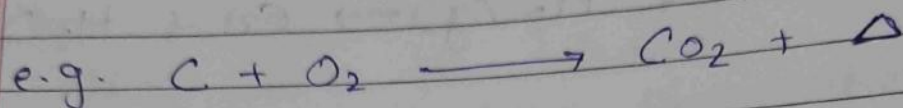
\Rightarrow When the mass of the reactants is equal to the mass of the products it is called a balanced chemical equation.

• Chemical equations should be balanced because mass can neither be created nor be destroyed, in a chemical reaction. It is the law of

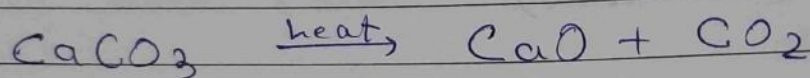
conservation of mass.

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

⇒ • Exothermic reactions are the reactions in which heat is released along with the products.



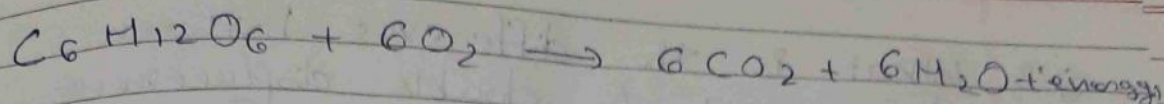
• Endothermic reactions are the reactions in which heat is absorbed.



100. Why is respiration considered as an exothermic reaction? Explain.

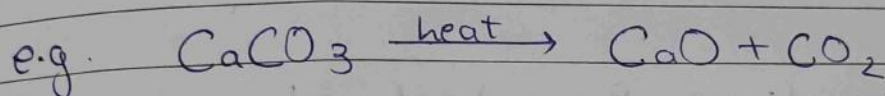
⇒ During respiration glucose combines with oxygen in the cells of our body & provides energy.

As energy is released during respiration it is called exothermic reaction.

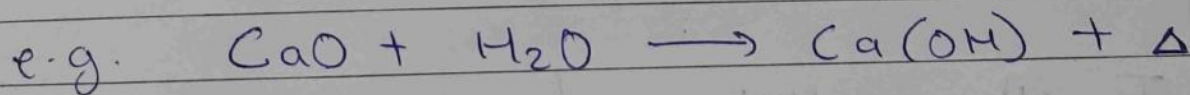


Q11. Why are decomposition reactions called the opposite of combination reactions? Write equations for these reactions.

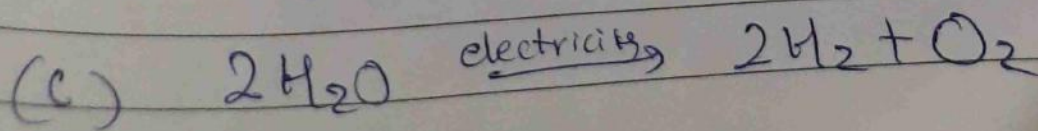
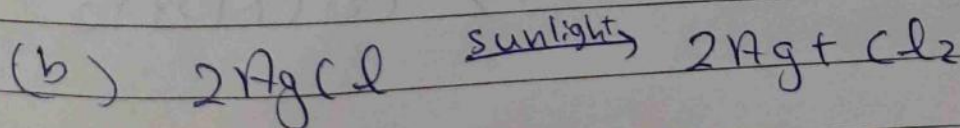
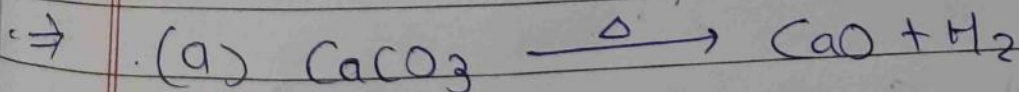
- ⇒ • In this reaction a single compound is broken down to give two or more products. Mostly, all the decomposition reactions are endothermic.



- In this reaction, two or more elements (reactants) combine together to give new compound (product) (Single). Mostly, all the combination reactions are Exothermic.

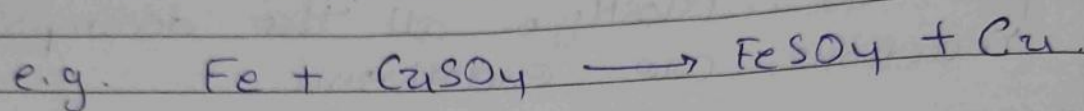


Q12. Write one equation each for decomposition reaction where.

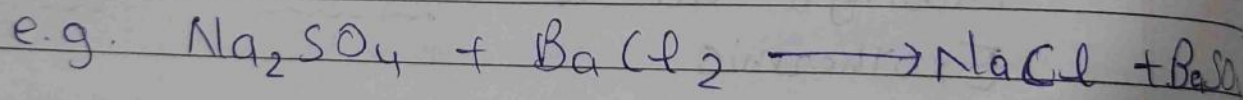


Q13. What is the difference between displacement & double displacement reaction? Write equations for these reactions.

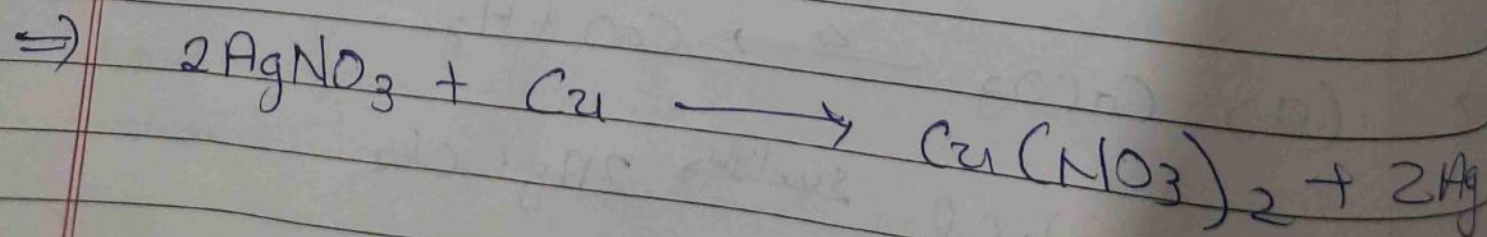
⇒ • Those reactions in which more reactive displaces less reactive element from its compound (salt solution) are called displacement reactions.



• Those reactions in which two compounds exchange their ions to form new compounds are called double displacement reactions.

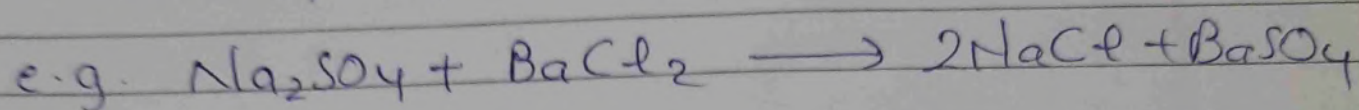


Q14. In the refining of silver, the recovery of silver from silver nitrate solution involved displacement by copper metal. Write down the reaction involved.



Q15 What do you mean by a precipitation reaction?

⇒ These reactions when two compounds react to form insoluble compound which is called precipitate & are called precipitation reaction.



LOG: 24-4-22

SORRY FOR THE HANDWRITING AND
SPELL ERRORS :)