

1. Q. What do you mean by chemical change and chemical reaction?

Answer: A change in which new substance is formed is called chemical change. A chemical reaction is a process in which one or more substances changed into new substance. Chemical reactions occur due to breaking and making of new bonds between atoms.

2. Q. Why cannot a chemical change be normally reversed?

Ans: In a chemical change some bonds are broken and some bonds are formed. The products are quite different from the reactants. Therefore it normally can't be reversed.

3. Q. How do you determine that a chemical reaction has taken place?

Answer: The following observation helps us to determine whether a chemical reaction has taken place

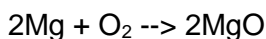
- (a) Change in state
- (b) Change in colour
- (c) Evolution of a gas
- (d) Change in temperature

4. Q. Why should a magnesium ribbon cleaned before burning in air?

Answer: To remove the layer of magnesium oxide. This is because this layer of magnesium oxide prevents further reaction of magnesium with oxygen.

5.Q. What happen when magnesium ribbon burn in air?

Answer: when magnesium ribbon burn in air with a dazzling white flame and changes into a white powder of magnesium oxide.



6.Q. What do you observe if you add potassium iodide solution in the solution of lead nitrate?

Ans: When potassium iodide is added to lead nitrate solution, the double displacement reaction takes place with formation of lead iodide yellow precipitate and potassium nitrate.



7. Q. Do you observe around the zinc granules when you add dilute hydrochloric acid or sulphuric acid?

Ans: There is a formation of hydrogen gas by the action of dilute sulphuric acid on zinc that appears as bubbles. When we touch the flask we feel warmth that indicates some heat has been also produced.



8. Q. Is there any shorter way for representing chemical equations?

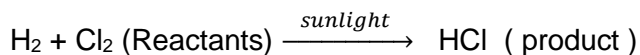
Answer: Yes, Chemical equation. The short hand or brief representation of chemical equations using chemical formulae and symbols is called Chemical equation.

For example: When a magnesium ribbon is burnt in oxygen, it gets converted to magnesium oxide. it can be written as



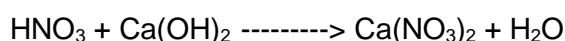
9. Q. What are reactants and product?

Answer: The substances that undergo chemical change in the reaction are the reactants. The new substance formed during the reaction is called the product. The arrowhead points towards the products, and shows the direction of the reaction.



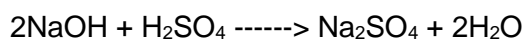
10. Q. What is skeletal chemical equation?

Answer: A chemical equation in which the numbers of atoms of each element are not the same on both the sides is a skeletal chemical equation for a reaction.



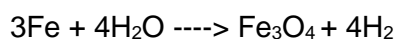
11. Q. What is balanced chemical equation?

Ans: A chemical equation in which the numbers of atoms of each element are same on both the sides is called a balanced chemical equation. For examples:



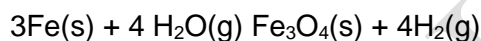
12. Q. Why we need to balance a chemical equation?

Answer: we need to balance a chemical equation to satisfy the law of conservation of mass i.e. to make the total mass of the elements present in the products equal to the total mass of the elements present in the reactants.

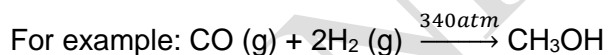


13. Q. How can we make a chemical equation more informative?

Answer: To make a chemical equation more informative, we indicate the physical states of the reactants and products along with their chemical formulae like (g), (l), (aq) and (s) etc. For example:



Sometimes the reaction conditions, such as temperature, pressure, catalyst, etc. are also indicated above or below the arrow in the equation.



14. Q. What are the conditions essential for Chemical Change?

Answer: The rate of a reaction depends on following factors:

(a) Temperature (b) Presence of light (c) Presence of catalyst (d) Electricity (d) Pressure

15. Q. What is Catalyst?

Answer: A catalyst is a substance that increases the rate of chemical reaction without itself undergoing any change.