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Class 7 chemistry

Lesson 5 The language of chemistry

Choose the correct option.

1. b) a reactant gives a product
2. c) catalyst
3. d) ammonium chloride
4. a) hydrogen

Match the following

1. Copper II carbonate b) green
2. Ammonium chloride d) white
3. Lead iodide a) yellow
4. Copper II oxide c) black

Fill in the blanks

1. Reactant , product.
2. Catalyst, unchanged.
3. Iodide , solution.

True and false

1. True
2. True
3. False
4. False

Answer the following in short.

1. What do you mean by reactant and product?

Ans. In a chemical reaction a reactant is a substance that changes to another substance called a product.

2. What happened to the atoms in a chemical reaction? Explain with an example.

Ans. The atoms rearrange themselves in a chemical reaction.

Example : C+O=CO2

3.Why are chemical reactions accompanied by energy changes?

Ans.Due to the absorption of energy when chemical bonds are broken, and the release of energy when chemical bonds are formed, chemical reactions almost always involve a change in energy between products and reactants.

4. What are exothermic reaction? give an example.

Ans. A reaction in which heat is evolved is called an exothermic reaction.

Hydrogen +oxygen ------ water

5. What is endothermic reaction? give an example.

Ans. A reaction in which heat is absorbed is called an endothermic reaction.

Nitrogen + oxygen --------- nitric oxide.

6. What is that substance called which generally speeds up a reaction, but itself remains unchanged? Give an example of such a substance.

Ans. The substance which generally speeds up the reaction but itself remains unchanged is called catalyst.

For example hydrogen peroxide slowly gets converted into water and oxygen. if left alone but the reaction takes place quickly in the presence of Manganese dioxide which remains unchanged. The Mangnese dioxide is a catalyst for this reaction.

7. What is a effervescence? Give an example.

Ans. When gas Bubbles are formed usually with a hissing sound due to a reaction the phenomenon is called effervescence

For example :

Sodium carbonate+ hydrochloric acid ---- sodium chloride + water + carbon dioxide

8. What is precipitate? Give an Example.

Ans. A precipitate is a solid that separates when a solution is added to another.

Example : when lead acetate reacts with potassium iodide it gives lead iodide (yellow precipitate) and potassium

acetate.

Lead acetate + potassium iodide ---------- lead iodide + potassium acetate.

9.Give word equations to represent the following chemical reactions.

a) copper II sulfate pentahydrate loses all its water at 260 degree Celsius.

Ans. Copper II sulfate pentahydrate ------- copper II sulfate + water(260º C)

b) sodium carbonate reacts with dilute hydrochloric acid to form sodium chloride water and carbon dioxide

Ans. Sodium carbonate + hydrochloric acid- ------- sodium chloride + water + carbon dioxide

Long answer questions

1. Write a note on energy changes in a chemical reaction.

Ans.Due to the absorption of energy when chemical bonds are broken, and the release of energy when chemical bonds are formed, chemical reactions almost always involve a change in energy between products and reactants. ... This stored chemical energy, or heat content, of the system is known as its enthalpy

2. Show, giving example how you can make chemical equations more informative.

Ans.The various ways in which a chemical equation can be made more informative are : (i) By indicating the physical states of the reactants and products. Example: Gaseous state is indicated by the symbol (g). (ii) By indicating the heat changes taking place in the reaction.