

## CHEMICAL REACTIONS AND EQUATIONS

Q. What are physical and chemical changes?

Ans- Physical changes- The processes in which no new chemical substances are formed are called physical changes. Eg- Melting of ice, evaporation of water, dissolution of sugar in water, etc.

Chemical changes- The processes in which the original substances lose their nature and identity, new chemical substances are formed with different properties are called chemical changes. Eg- Rusting of iron, souring of milk, cooking of food, etc.

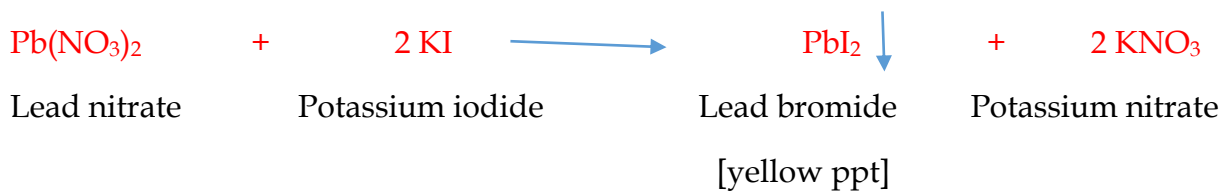
Q. What is a chemical reaction?

Ans- The process involving a chemical change is called a chemical reaction. A chemical reaction involves breaking of chemical bonds present in the reactant molecules forming new chemical bonds to give the products. It involves rearrangement of atoms.

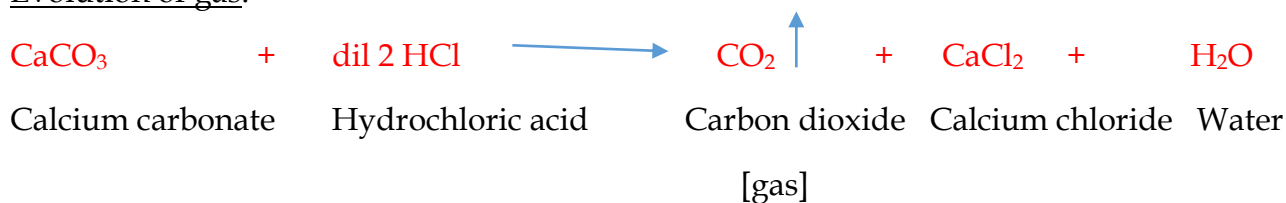
Q. What are the characteristics of chemical reactions?

Ans- The characteristics of chemical reactions are the easily observable changes that take place in a chemical reaction. They help us to check that a chemical reaction has taken place. For eg:

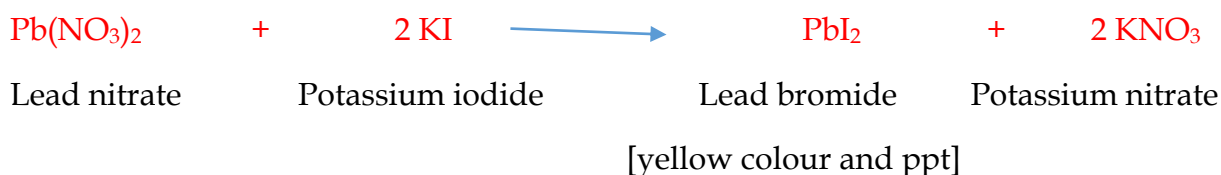
Formation of precipitate [insoluble substance]:



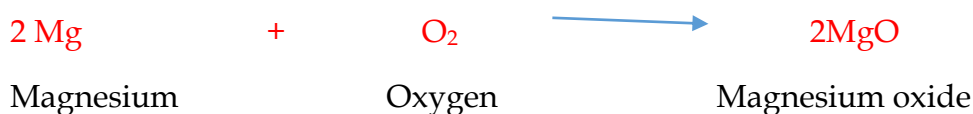
Evolution of gas:



Formation of colour:

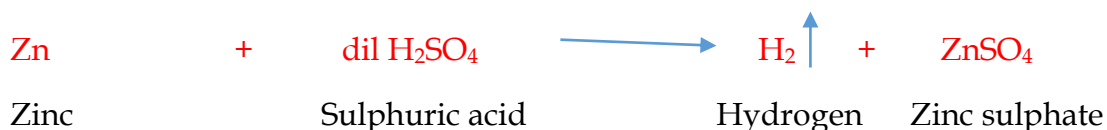


Change of State:



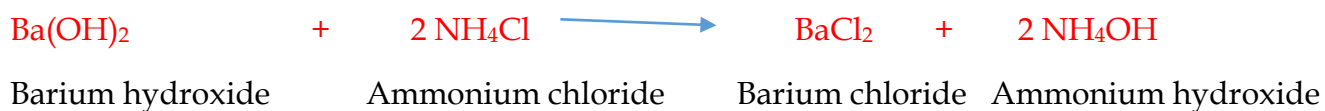
Change of temperature:

Evolution of heat -



Absorption of heat -

P.No.2



Q. Define the following:

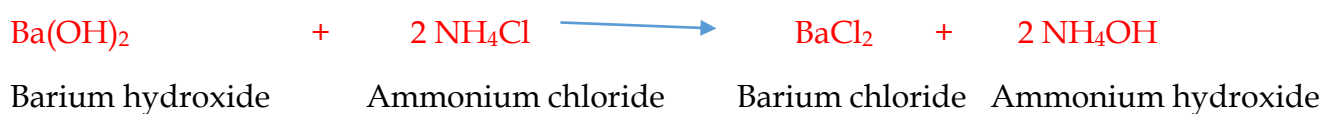
Reactants- These are the substances that undergo chemical change.

Products- These are the substances that do not undergo a chemical change or reaction.

Exothermic Reactions: These are the reactions which are accompanied by rise in temperature or evolution of heat. Eg-



Endothermic Reactions: These are the reactions which are accompanied by rise in temperature or evolution of heat. Eg-



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

Ans- When magnesium ribbon remains exposed to moist air, a white layer of magnesium oxide is formed on its surface. This hinders the burning of magnesium. Hence, this layer is first removed by rubbing with sand paper before burning.

Q. What is a chemical equation?

Ans- The representation of a chemical reaction by using symbols and formulae of reactants and products, is called a chemical equation.

Q. What is a word equation?

Ans- A word equation is the simplest way to represent a chemical reaction. Eg-



Q. What is a balanced chemical equation? Why should chemical equation be balanced?