

SOLVED QUESTIONS

1. Fill in the blank spaces.

- (a) When zinc carbonate is heated, the colour of residue is
- (b) When sodium nitrate is being heated, the gas evolved is
- (c) When a piece of calcium is dropped in water, it becomes cloudy after some time, due to the formation of
- (d) When aqueous iron (III) chloride and aqueous caustic soda are mixed, the colour of the precipitate is

Ans. (a) Yellow. (b) Oxygen. (c) Calcium hydroxide suspension. (d) Reddish brown

2. Complete the following word equations by writing down the products in each case.

- (a) Red hot iron + water (steam).
- (b) Copper oxide + carbon monoxide.

Ans.

- (a) Red hot iron + water (steam) → Magnetic oxide of iron + hydrogen.
- (b) Copper oxide + carbon monoxide → Copper + carbon dioxide.

3. Photosynthesis is a process which involves, water along with sunlight and chlorophyll.

- (a) Which gas in the atmosphere is involved in the reaction?
- (b) Which gas in the atmosphere is produced in the reaction?
- (c) What type of organic compound is produced in this reaction?

Ans.

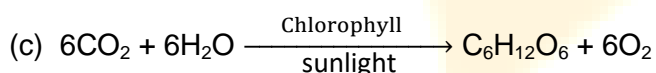
- (a) Carbon dioxide gas. (b) Oxygen gas. (c) Carbohydrate (Glucose).

4. A sample of water weed was placed in water and exposed to sunlight. Bubbles of a gas are seen on the surface of the leaves.

- (a) Name the gas evolved
- (b) Name the process taking place.
- (c) Write a balanced equation of reaction taking place.

Ans.

- (a) Oxygen
- (b) Photosynthesis.



5. What do you understand by the term combustion?

Ans.

Combustion : A chemical reaction in which substances combine with air or oxygen to liberate a large amount of energy in the form of heat and light is called combustion.

6. Define the following giving at least two examples.

- (a) Combustible substances
- (b) Inflammable substances
- (c) Non-combustible substances.

Ans.

- (a) Combustible substances : The substances which combine with oxygen or air to liberate heat and light energy are called combustible substances. Examples : Wood, charcoal, paper, petrol, etc.
- (b) Inflammable substances : The combustible substances which combine with oxygen or air at comparatively low temperature to produce large amount of heat and light accompanied by a flame are called inflammable substances. Examples : Petrol, ether, carbon disulphide, etc
- (c) Non-combustible substances : The substances which do not burn in air or oxygen even on strong heating are called non-combustible substances. Examples : Lime stone, sand stone, slate, cement.

7. State four factors which control the rate of combustion.

Ans.

Rate of combustion is controlled by :

- (a) Size of a particles of the combustible substance.
- (b) Nature of the combustible substance.
- (c) Ignition temperature of the combustible substance.
- (d) Nature of the gaseous environment.

8. Give one example for each of the following types of changes taking place in aqueous solution.

- (a) Oxidation of a salt of a metal.
- (b) Reaction of a soluble salt of metal with dilute acid to give off a gas.
- (c) Displacement of a metal by a more active metal.
- (d) Precipitation of sulphate.

Note : You must choose a compound of different metal for each reaction.

Ans.

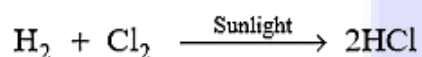
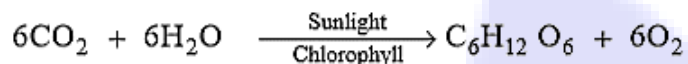
- (a) $2\text{FeCl}_2 + \text{Cl}_2 \rightarrow 2\text{FeCl}_3$.
- (b) $\text{Na}_2\text{S} + 2\text{HCl} \rightarrow 2\text{NaCl} + \text{H}_2\text{S}$.
- (c) $\text{CuSO}_4 + \text{Fe} \rightarrow \text{FeSO}_4 + \text{Cu}$.
- (d) $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow 2\text{NaCl} + \text{BaSO}_4$.

9. By giving two examples define photochemical reaction.

Ans.

Photo-chemical reactions : The chemical reactions which proceed with the absorption of light energy are called photo-chemical reactions.

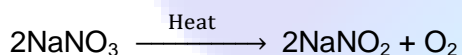
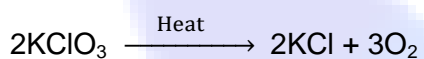
Examples :



10. By giving two examples each bring out clearly the difference between thermal decomposition and thermal dissociation.

Ans.

During thermal decomposition a chemical compound breaks into simpler compounds. The simpler compounds do not reunite to form the original compound on cooling.



During thermal dissociation a chemical compound breaks into simpler compounds. The simpler compounds on cooling reunite to form the original compound.

