



**SUBJECT: CHEMISTRY**

**CLASS 10**

**CHAPTER 1: CHEMICAL REACTIONS AND EQUATIONS**

**Guidelines**

Dear Students

- Revisit the concepts discussed in the previous E lessons
- Attempt these questions in your notebook
- Refer to N.C.E.R.T for any clarification
- Link of the chapter is as follows:

<http://ncert.nic.in/textbook/textbook.htm?jesc1=1-16>

**SUB TOPIC: Revision of the concepts taught in the previous E lessons**

1. The chemical formula of lead sulphate is
  - a.  $Pb_2SO_4$
  - b.  $Pb(SO_4)_2$
  - c.  $PbSO_4$
  - d.  $Pb_2(SO_4)_3$
2. Chemically rust is
  - a. hydrated ferrous oxide
  - b. only ferric oxide
  - c. hydrated ferric oxide
  - d. none of these
3. Which of the following gases can be used for storage of fresh sample of oil for a long time?
  - a. Carbon dioxide or oxygen
  - b. Nitrogen or helium
  - c. Helium or oxygen
  - d. Nitrogen or oxygen
4. The electrolytic decomposition of water gives  $H_2$  and  $O_2$  in the ratio of
  - a. 1 : 2 by volume
  - b. 2 : 1 by volume
  - c. 8 : 1 by mass
  - d. 1 : 2 by mass
5. Fatty foods become rancid due to the process of
  - a. oxidation
  - b. corrosion

- c. reduction
  - d. hydrogenation
6. Silver articles turn black when kept in the open for a few days due to the formation of
- a.  $H_2S$
  - b.  $AgS$
  - c.  $AgSO_4$
  - d.  $Ag_2S$
7. In which of the following, heat energy will be evolved?
- a. Electrolysis of water
  - b. Dissolution of  $NH_4Cl$  in water
  - c. Burning of L.P.G.
  - d. Decomposition of  $AgBr$  in the presence of sunlight
8. An element X on exposure to moist air turns reddish-brown and a new compound Y is formed. The substance X and Y are
- a.  $X = Fe, Y = Fe_2O_3$
  - b.  $X = Ag, Y = Ag_2S$
  - c.  $X = Cu, Y = CuO$
  - d.  $X = Al, Y = Al_2O_3$

**Fill in the blanks -**

1. Addition of hydrogen to a substance in a reaction is known as \_\_\_\_\_ reaction.
2. In a \_\_\_\_\_ reaction, two or more substances combine to form a new single substance.
3. Unbalanced reactions are also known as \_\_\_\_\_
4. Reactions in which heat is given out along with the products are called \_\_\_\_\_ reactions.
5. Reactions in which energy is absorbed are known as \_\_\_\_\_ reactions.
6. When an element displaces another element from its compound, a \_\_\_\_\_ reaction occurs.
7. Those reactions in which two compounds react by an exchange of ions to form two new compounds are called \_\_\_\_\_ reactions.
8. Precipitation reactions produce \_\_\_\_\_ salts.
9. Reduction is the \_\_\_\_\_ of oxygen or gain of hydrogen.
10. The digestion of food in the body is an example of \_\_\_\_\_ reaction.

### True / False -

1. The number of atoms of each element are conserved in any chemical reaction.
2. A magnesium ribbon burns with a dazzling flame in air (oxygen) and changes into a white substance, magnesium oxide.
3. Rusting is a double decomposition reaction.
4. Action of heat on ferrous sulphate is an example of decomposition reaction.
5. The formation of Na and Cl<sub>2</sub> from Sodium Chloride is an example of combination reaction.

### Answer the following questions -

1. Can a combination reaction be redox reaction?
2. Why do we apply paint on iron articles?
3. Write the chemical equation and name the reaction when a solution of sodium chloride is mixed with a solution of silver nitrate and a white precipitate of silver chloride is formed.
4. Why does the color of copper sulphate solution change when an iron nail is dipped in it?
5. Why is photosynthesis considered as an endothermic reaction?
6. Potassium chlorate (KClO<sub>3</sub>) on heating forms potassium chloride and oxygen. Write a balanced equation for this reaction.
7. Give an example of a chemical reaction characterized by the change in temperature.
8. What type of chemical reactions take place when:
  - a. Limestone is heated
  - b. A magnesium wire is burnt in air
  - c. Electricity is passed through water
  - d. Ammonia and hydrogen chloride are mixed
  - e. Silver bromide is exposed to sunlight
9. Describe an activity to show the Electrolysis of water
  - a. Why are a few drops of concentrated sulphuric acid added to water before electrolysis?
  - b. Represent the electrolysis in the form of a balanced chemical equation.
  - c. Why is the amount of gas collected in one of the test tubes in electrolysis of water double the amount collected in the other? Name this gas.
  - d. Draw a labelled diagram of the same.