**Work sheet**

**Chapter-1**

***Chemical Reactions and Equation***

*“Facts are not science — as the dictionary is not literature.”* Martin H. Fischer

**Syllabus**;-

[*Chemical equation, balanced chemical equation, implications of a balanced chemical equation, and types of chemical reactions: combination, decomposition, displacement, doubles displacement, precipitation, neutralization, oxidation and reduction.*]

Instructions: Questions: 1 to 5 – 1 Mark each, Questions: 6 to 9 – 2 Marks each,

Questions: 10 to 13 – 3 Marks each, Question 14 – 5 Marks

1. On what chemical law, balancing of chemical equation is based?

2. Identify the compound oxidized in the following reaction:

H2S (g) + Cl2 → S (s) + HCl (g)

3. Give an example of photochemical reaction.

4. Name the reaction which forms insoluble salts.

5. Name the product obtained and type of reaction given below:

Na2SO4 + BaCl2 → \_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_

6. Explain the following in terms of gain or loss of oxygen with one example: a. Oxidation b. Reduction

7. A copper coin is kept in a solution of silver nitrate for some time, what will happen to the coin and the color of the solution?

8. Why do we apply paint on iron articles?

9. What happens chemically when quicklime is added to water?

10. What is rancidity? Write the common methods to prevent it.

11. What is corrosion? State the conditions necessary for rusting of iron. How rusting is harmful?

12. Name the type of reactions in the following cases: a) Garbage producing foul smell

b) Burning of natural gas. c) Carbon dioxide gas passed through lime water.

13. a) Blue crystals of copper sulphate on heating in a dry test tube become colorless. Give reasons. b) Why is respiration considered an exothermic reaction? Explain.

14. a) Why can not a chemical change be normally reversed? b) Why is it always essential to balance a chemical equation? c) What happens when CO2 gas is passed through lime water and why does it disappear on passing excess CO2? d) Can rusting of iron take place in distilled water?

15. a) A water insoluble substance ‘X’ on reacting with dilute H2SO4 released a colorless and odorless gas accompanied by brisk effervescence. When the gas was passed through water, the solution obtained turned blue litmus red. On bubbling the gas through lime water, it initially became milky and milkyness disappeared when the gas was passed in excess. Identify the substance ‘X’. Write its chemical equations of the reactions involved.

b) A shiny brown colored element ‘X’ on heating in air becomes a black colored compound. Name the element ‘X’ & black the colored compound formed. Also write the equation.

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