GAIL DAV PUBLIC SCHOOL
GAIL GAON, DIBIYAPUR
SUBJECT-SCIENCE(2026-27)
CHEMICAL REACTIONS AND EQUATIONS
ASSESSMENT SHEET
CLASS- X

Q.NO.	ANSWER THE FOLLOWING QUESTIONS
1	Corrosion is the deterioration process of a material due to reactions with its surroundings. Corrosion is a natural process. Just like water flows to the lowest level, all the natural processes tend toward the lowest possible energy states. Corrosion can be defined in many ways. Some definitions are very narrow and deal with a specific form of corrosion while others are quite broad and cover many forms of deterioration. Corrosion's effects in our daily lives are both direct in that corrosion affects the usable service life of our properties, and indirect in that corrosion costs are borne by manufacturers and suppliers of products and services, which they pass on to customers. 1. Which of the following methods is not used for the prevention of corrosion? (a) Greasing (b) Painting (c) Plating (d) Heating 2. Copper gets corroded in presence of: (a) Nitrogen gas (b) Carbon dioxide gas (c) Hydrogen sulphide gas (d) Hydrogen gas 3. The colour of layer that deposits on silver ornaments: (a) Green (b) Blue (c) Black (d) Yellow 4. Corrosion can be prevented by (a) Alloying (b) Tinning (c) Galvanizing (d) All of the above 5. Rust is chemically (a) $Fe_2O_3 .xH_2O$ (b) Fe_2O_3 (c) $Fe_3 O_4$ (d) $Fe_3 O_4.xH_2O$
2	When zinc reacts with sulphuric acid which gas is evolved, write the chemical equation involved? How can we identify the gas?
3	Name and state the law which is kept in mind when we balance chemical equations.
4	Hydrogen being a highly inflammable gas and oxygen being a supporter of combustion, yet water, a compound made up of hydrogen and oxygen is used to extinguish fire. Why?
5	If copper metal is heated over a flame it develops a coating. What is the colour and composition of the coating?
6	Which one is a chemical change: fermentation of fruit juice or diluting fruit juice?
7	What happens chemically when quick lime is added to water filled in a bucket?
8	Balance the given chemical equation: $Al(s) + CuCl_2 (aq)$ ------- $AlCl_3 (aq) + Cu(s)$
9	On adding dilute hydrochloric acid to copper oxide powder, the solution formed is blue green. Predict the new compound formed which imparts a blue green colour to the solution.

10.	Why is respiration considered an exothermic process?
11.	Write the essential condition for the following reaction to take place: 2AgBr ------- 2Ag + Br_2 Write application of this reaction.
12.	Two reactions are given below: a.2KI + Cl_2 ------- 2KCl + I_2 b. 2K + Cl_2 ------ 2KCl Identify the type of reaction, giving justification in each case.
13.	Give one example of each: a. Chemical reaction showing evolution of a gas. b. Change in colour of a substance during chemical reaction.
14.	Write a balanced equation for the reaction between Magnesium and hydrochloric acid. Name the product obtained, identify the type of reaction
15.	Reaction of compound X with aluminium is used to join railway tracks or cracked machine parts. a. Identify the compound. b. Name the reaction. c. Write a balanced chemical equation for the reaction.
16.	When a metal X is added to salt solution of metal Y, the following chemical reaction takes place: Metal X + Salt solution of Y ----- Salt solution of X + Metal Y Mention the inference you draw regarding the reactivity of metal X and Y and also the type of reaction. State the reason for your conclusions.
17.	Give an example each for thermal decomposition and photochemical decomposition reactions. Write a balanced chemical equation also.
18.	What is a redox reaction? When a magnesium ribbon burns in air with a dazzling flame and forms a white ash, magnesium is oxidised or reduced. Why?
19.	Decomposition reactions require energy either in the form of heat, light or electricity for breaking down the reactants. Write an equation each for decomposition reactions where energy is supplied in the form of heat, light and electricity.
20.	(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A). (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A). (c) Assertion (A) is true but reason (R) is false. (d) Assertion (A) is false but reason (R) is true. Assertion (A): Calcium carbonate when heated gives calcium oxide and water. Reason (R): On heating calcium carbonate, decomposition reaction takes place.
21.	Define chemical reaction. State four observations which help to determine whether a chemical reaction has taken place or not. Write one example of each observation with a balanced chemical equation.
22.	Translate the following statement into chemical equation and then balance it Barium chloride reacts with aluminium sulphate. State and explain the type of reaction?
23	What is rancidity? Mention any two ways by which rancidity can be prevented?
24	A white salt on heating decomposes to give brown fumes and a residue is left behind. (i) Name the salt (ii) Write the equation for the decomposition reaction.

25.	What change in colour is observed when white silver chloride is left exposed to sunlight? State the type of chemical reaction in this change. Write a balanced chemical equation.