

PSBB LEARNING LEADERSHIP ACADEMY

2021-2022

CLASSWORK ASSIGNMENT

GRADE- VIII SUBJECT –SCIENCE

LESSON: METALS AND NON - METALS

I. Identify the following:-

1. The process of coating one metal over the other using electricity - Electroplating
2. Element used for making pencil leads -Graphite
3. Soft metal, that can be cut with a knife- Sodium
4. Process of coating metals with molten zinc is called –Galvanization

II. Answer the following:

1. What is displacement reaction? Write a balanced equation showing displacement reaction.

Ans) Displacement reaction is a chemical reaction in which a more reactive element displaces a less reactive element from its compound. Both metals and non-metals take part in displacement reactions. Example: $\text{Fe} + \text{CuSO}_4 \longrightarrow \text{FeSO}_4 + \text{Cu}$



2. What happens when magnesium ribbon is heated in presence of air?

Ans) When magnesium metal burns it reacts with oxygen found in the air to form Magnesium Oxide. Magnesium oxide is a basic oxide.



3. What happens when copper vessels are exposed to moist air?

Ans) When copper vessels are exposed to moist air, the metal reacts with carbon dioxide and moisture in the air to form a mixture of copper carbonate and copper hydroxide $\text{Cu}(\text{OH})_2 \cdot \text{CuCO}_3$ (basic copper carbonate). This forms a green coating on the surface of copper vessels.

4. Write the differences between metals and non- metals based on their physical properties. With suitable examples

Ans: refer page no. 47 (textbook)

III. Give reasons for the following:

- a) Gold and platinum are known as noble metals.
 - Gold and platinum do not get corroded as they do not react with air. Gold and platinum are least reactive metal.

- b) Copper cannot displace zinc from its salt solution.
 - Copper is less reactive than zinc, so it cannot displace zinc from its salt solution.
- c) Sodium and potassium are stored in kerosene.
 - Sodium and Potassium are very reactive; they react with air and water, so they are stored in kerosene.

IV. What happens when?

(a) Dilute sulphuric acid is poured on a copper plate

Ans) When dilute sulphuric acid is poured on a copper plate, copper reacts with acid to give copper sulphate and hydrogen.



(b) Iron nails are placed in a copper sulphate solution. Write an equation for the reaction.

Ans) When iron nails are placed in copper sulphate solution, displacement reaction takes place in which

(i) Blue colour copper sulphate turns into greenish ferrous sulphate solution.

(ii) Reddish brown deposits of copper are seen on the iron nail.



(Blue) (Green)

V. Write two chemical properties of metals with an example.

Ans: 1. Reaction with water:

When metal reacts with water it forms hydroxides and hydrogen.



2. Reaction with acid: Displacement Reaction



3. Reaction with oxygen (in air) :

