

WORKSHEET-1

- Multiple choice questions: (Tick the correct option).
 - When a chemical in a solution form or in a fused state breaks into simple elements by the passage of electric current, the process is called
 - analysis
 - synthesis
 - electrolysis
 - electro-decomposition
 - The electrolyte used in silver-plating an article is
 - silver nitrate
 - silver sulphate
 - silver cyanide
 - sodium silver cyanide
 - The process of separating a mixture of two or more liquids with different boiling is called
 - filtration
 - distillation
 - fractional distillation
 - decantation
 - Which one of these is a neutralisation reaction?
 - $\text{Cu(OH)}_2 \rightarrow \text{CuO} + \text{H}_2\text{O}$
 - $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$
 - $2\text{KI} + \text{Pb(NO}_3)_2 \rightarrow 2\text{KNO}_3 + \text{PbI}_2$
 - $\text{KOH} + \text{HCl} \rightarrow \text{KCl} + \text{H}_2\text{O}$
 - Heat energy is required during this reaction.
 - Endothermic
 - Exothermic
 - Both (a) and (b)
 - None of the above
- Fill in the blanks with appropriate words.
 - A mixture of ice and salt is known as
 - The melting point of pure ice is
 - The substances that are formed as a result of chemical reactions are called
 - The symbols or the formulae of the reactants are written on the hand side of the arrow
 - Molecular weight has unit.
 - An unbalanced equation is called a equation.
 - Magnesium oxide is a of magnesium and oxygen.
 - A reaction in which two or more substances combine to form a single substance is called a reaction.
 - A is a substance which changes the rate of a chemical reaction without undergoing a chemical change.
 - The formation of a solid product from two reactants in their aqueous state is called reaction.

3. Classify the following reactions as combination, decomposition, displacement, precipitation and neutralization
- $\text{NH}_3(\text{g}) + \text{HCl}(\text{g}) \rightarrow \text{NH}_4\text{Cl}(\text{s})$
 - $\text{CuSO}_4(\text{aq}) + \text{H}_2\text{S}(\text{g}) \rightarrow \text{CuS}(\text{s}) + \text{H}_2\text{SO}_4(\text{l})$
 - $\text{Zn}(\text{s}) + \text{CuSO}_4(\text{aq}) \rightarrow \text{ZnSO}_4(\text{aq}) + \text{Cu}(\text{s})$
4. Classify the following as oxidation or reduction
- $\text{Cl}^- \rightarrow \text{Cl}$
 - $\text{Al}^{3+} \rightarrow \text{Al}$
5. Give reasons for the following
- A chemical equation needs to be balanced.
 - Burning of magnesium in air is a chemical change.
 - Adding sodium to water is a chemical change.
6. Complete the following equations.
- $3\text{Mg} + \text{N}_2 \rightarrow$
 - $2\text{KNO}_3 \rightarrow$
 - $2\text{FeCl}_2 + \text{Cl}_2 \rightarrow$
7. Solve the following problems.
- What will be the mass of ferrous sulphide formed when 20 g of pure sulphur reacts with iron? [Atomic weight of Fe = 56 and S = 32]
 - Calculate the mass of oxygen used in the formation of water from 10.2 g of hydrogen. [Atomic weight of H = 1 and O = 16]
8. What are "redox reactions"? What are the characteristic properties of "redox reactions"?
9. Define the following terms:
- | | | | |
|-----------------|-------------------|-------------------------|--------------|
| (i) electrolyte | (ii) electrolysis | (iii) electrolytic cell | (iv) cathode |
| (v) anode | (vi) cation | (vii) anion | |
10. (i) By giving one example, explain the terms oxidation and oxidising agent. (ii) By giving one example, explain the terms reduction and reducing agent
11. Define or explain the following terms and support your answer by two examples.
- Chemical decomposition
 - Chemical displacement
 - Precipitation reaction
 - Neutralisation reaction
12. (i) Define the term catalyst.
- What are
 - positive catalysts

- (b) negative catalysts? Support your answer with one example each.
- (iii) Name three biochemical catalysts found in the human body

