

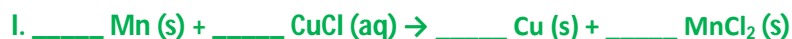
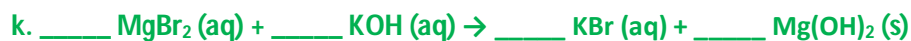
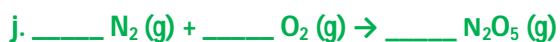
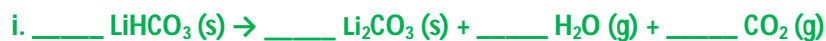
WORKSHEET 2

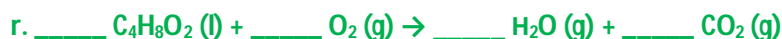
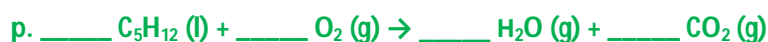
CHEMICAL REACTIONS AND EQUATIONS

Q1 Define:

- Reactants
- Products
- Balanced chemical equation.

Q2 Balance the following chemical equation and identify the reactants and products.





Q2 Write the skeleton equation for each of the following reactions. Then balance each of the following chemical equations.

1. hydrogen + oxygen \rightarrow water

2. iron(III) oxide + hydrogen \rightarrow water + iron

3. sodium + water \rightarrow sodium hydroxide + hydrogen

4. copper + Oxygen \rightarrow Copper(II) Oxide

5. potassium iodide + chlorine \rightarrow potassium chloride + iodine

6. chromium + tin(IV) chloride \rightarrow chromium(III) chloride + tin

7. magnesium + copper(II) sulphate \rightarrow magnesium sulphate + copper

8. zinc sulphate + strontium chloride \rightarrow zinc chloride + strontium sulphate

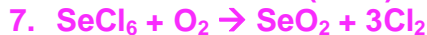
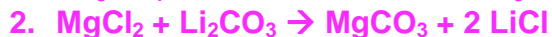
9. ammonium chloride + lead(III) nitrate \rightarrow ammonium nitrate + lead(III) chloride

10. iron(III) nitrate + magnesium sulphide \rightarrow iron(III) sulphide + magnesium nitrate

11. aluminum chloride + sodium carbonate \rightarrow aluminum carbonate + sodium chloride

12 sodium phosphate + calcium hydroxide \rightarrow sodium hydroxide + calcium phosphate

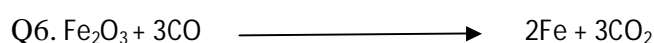
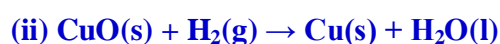
Q3 Indicate which type of chemical reaction (Combination, decomposition, single-displacement, double-displacement or combustion) is being represented in the following reactions:



Q4 Differentiate between:

- **Combination and Decomposition reaction**
- **Displacement and Double displacement reaction.**
- **Oxidation and Reduction reaction.**
- **Balanced and unbalanced chemical equation.**
- **Corrosion of iron and Copper.**

Q5 Identify the substances that are oxidized and the substances that are reduced in the following reactions.



Study the above reaction and name the following:

- **Substance getting reduced**
- **Substance getting oxidized**
- **Oxidizing agent**
- **Reducing agent.**

Q7. Give reasons for the following:

- **Silver Nitrate solution cannot be stored in Copper containers.**
- **Gold and Silver do not corrode in air**
- **Blue colour of copper sulphate solution starts fading when a zinc rod is dipped in it.**
- **Respiration is an endothermic reaction.**
- **Photo chemical decomposition reaction finds application in photography.**

Q8. why does stale food gives a bad smell and bad taste? How can this be prevented?

Q9. For each of the following experiments, decide whether a reaction will occur. If you think there will be no reaction, write down why you think this.

If you think a reaction will happen:

write down why you think it will happen, what you expect to see, and the word equation to go with it.

- a) **iron heated with copper(II) oxide**
- b) **aluminium heated with iron oxide**
- c) **copper heated with iron oxide**
- d) **magnesium heated with zinc oxide**

Q10. Give examples for the following:

- **Precipitation reaction.**
- **Thermal decomposition.**
- **Natural oxidation.**
- **Exothermic reaction.**