

Study of Acids, Bases and Salts

Chapter 3: Study of Acids, Bases and Salts · Topic 1

Key Concept

Arrhenius theory defines acids as substances releasing H^+ ions in water, and bases as substances releasing OH^- ions in water.

Acids taste sour and turn blue litmus red, while bases taste bitter, feel soapy, and turn red litmus blue.

Salts are formed when acids react with bases (neutralisation), producing salt and water: $\text{Acid} + \text{Base} \rightarrow \text{Salt} + \text{Water}$.

Understanding pH scale (0-14) helps quantify acidity or basicity, with 7 being neutral, below 7 acidic, and above 7 basic/alkaline.

Quick Revision Notes

- Arrhenius: acids release H^+ ions in water.
- Bases release OH^- ions in water.
- Acids taste sour, turn blue litmus red.
- Bases taste bitter, turn red litmus blue.
- Neutralisation: $\text{Acid} + \text{Base} \rightarrow \text{Salt} + \text{Water}$.
- pH scale ranges 0-14.
- 7 is neutral; below 7 acidic; above 7 basic.
- pH quantifies acidity or basicity.

Practice Questions

- 1 Test a household substance's pH using litmus paper.
- 2 Write the neutralisation reaction between HCl and NaOH.
- 3 Discuss the Arrhenius theory of acids and bases.
- 4 Research common household acids and bases.
- 5 Explain the pH scale with examples.
- 6 Discuss the properties of salts.