

CLASS 10

SCIENCE

REVISION NOTES

Revision Notes: Class 10 Science Chapter 2 Acids, Bases and Salts

A fast, one-glance recap of Class 10 Science Chapter 2 (Acids, Bases and Salts) -- for the full worked explanations, see the Solutions.

Contents

Why This Chapter Matters

Revision Notes: Acids, Bases and Salts

How to Use These Notes

A fast, one-glance recap of Class 10 Science Chapter 2 (Acids, Bases and Salts) — for the full worked explanations, see the [Solutions](#).

Why This Chapter Matters

Acids, Bases and Salts is one of the standard chapters in the CBSE/NCERT Class 10 Science syllabus and questions from it appear regularly in board exams, in formats ranging from 1-mark objective questions to longer 3-5 mark descriptive or numerical questions. Because the concepts here often build on earlier chapters (and feed into later ones), a solid grip on this chapter also makes the rest of the Science syllabus easier to follow.

Revision Notes: Acids, Bases and Salts

Acid: releases H^+ (as H_3O^+) ions in water — e.g. HCl , H_2SO_4 , CH_3COOH

Base: releases OH^- ions in water — e.g. NaOH , KOH , $\text{Ca}(\text{OH})_2$

Indicators: litmus (red $\leftrightarrow$ blue), phenolphthalein (colourless in acid, pink in base), methyl orange; olfactory indicators like onion/vanilla/clove oil lose their smell in base

Acid + Metal $\rightarrow$ Salt + $\text{H}_2 \uparrow$ (test: burning splinter gives a pop sound)

Metal carbonate/bicarbonate + Acid $\rightarrow$ Salt + $\text{CO}_2 \uparrow$ + H_2O (test: CO_2 turns lime water milky)

Acid + Base $\rightarrow$ Salt + Water (neutralisation); ionically just $\text{H}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O}$

Metallic oxide + Acid $\rightarrow$ Salt + Water (metallic oxides are basic in nature)

Non-metallic oxide + Base $\rightarrow$ Salt + Water (non-metallic oxides are acidic in nature)

Strong vs weak: strong acids/bases ionise almost completely (HCl , NaOH); weak ones ionise only partially (CH_3COOH , NH_4OH)

pH scale: 0–14; <7 acidic, =7 neutral, >7 basic; lower pH = higher H^+ concentration

pH matters for: soil health, digestion (stomach HCl), tooth decay (enamel erodes below pH 5.5), and plant/animal survival (narrow pH range)

Water of crystallisation: fixed water molecules per formula unit, e.g. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$, $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$

Common salts: NaCl (table salt), NaOH (chlor-alkali process), $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ (washing soda), NaHCO_3 (baking soda), CaOCl_2 (bleaching powder), $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ (Plaster of Paris)

Bleaching powder: $\text{Ca}(\text{OH})_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$

Plaster of Paris: gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) heated at $\sim 373 \text{ K} \rightarrow \text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O} + 1\frac{1}{2}\text{H}_2\text{O}$

See also: [Extra Questions \(HOTS\)](#) / [Class 10 Science Key Reactions Handbook](#)

How to Use These Notes

These revision notes are meant for quick recall in the last few days before an exam or unit test — they are not a substitute for first reading the full chapter and working through examples in the NCERT textbook. A good routine is: read the chapter once, solve the in-text and end-of-chapter questions using the linked Solutions, then come back to this page a day or two before the exam to refresh the key definitions and formulas without re-reading the whole chapter.

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