

CHAPTER 2

Acids, Bases and Salts

CBSE · Science · Class 10

WHAT THIS CHAPTER DOES

Boards prep that builds confidence, not anxiety.

TODAY'S MISSION

By the end of this chapter you will

WHY THIS MATTERS

Why this chapter matters

TOPIC

A

Part A — Defining acids and bases

TOPIC

Arrhenius definitions — the only definitions you need for Class 10

POINT 1

POINT 2

POINT 3

POINT 4

TRY IT · SOLVE BEFORE YOU PEEK

Quick check — concept of strength

Work it out before you flip the answer.

SOLUTION

TOPIC

Three families of indicators — and what colour goes where

POINT 1

POINT 2

POINT 3

TOPIC

Indicator colour-change cheat strip

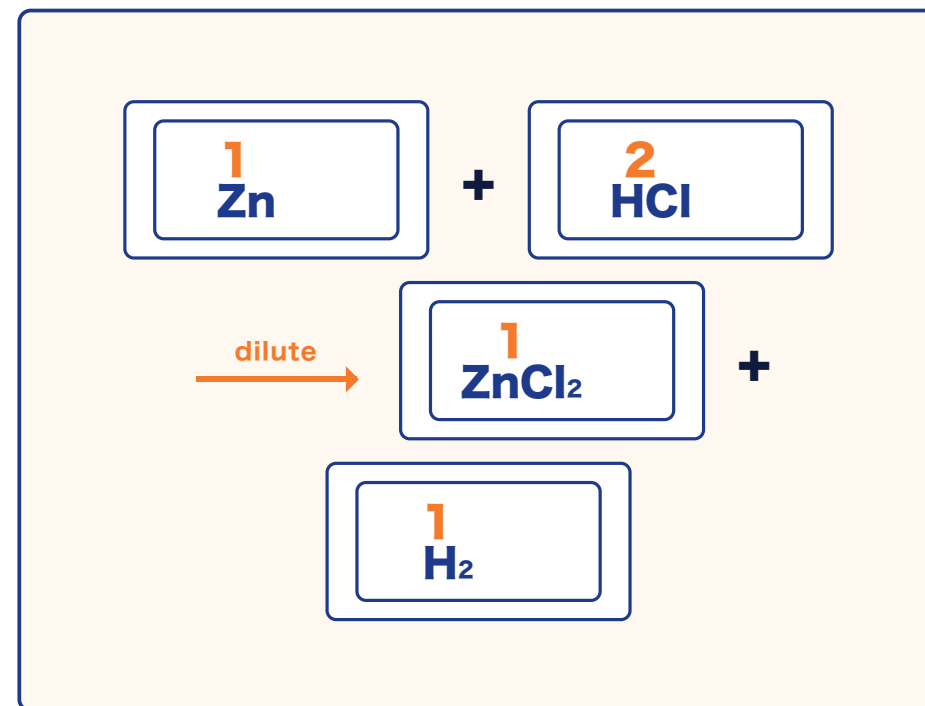
TOPIC

B

Part B — Reactions of acids and bases

WORKED EXAMPLE

Reaction of acid with active metal

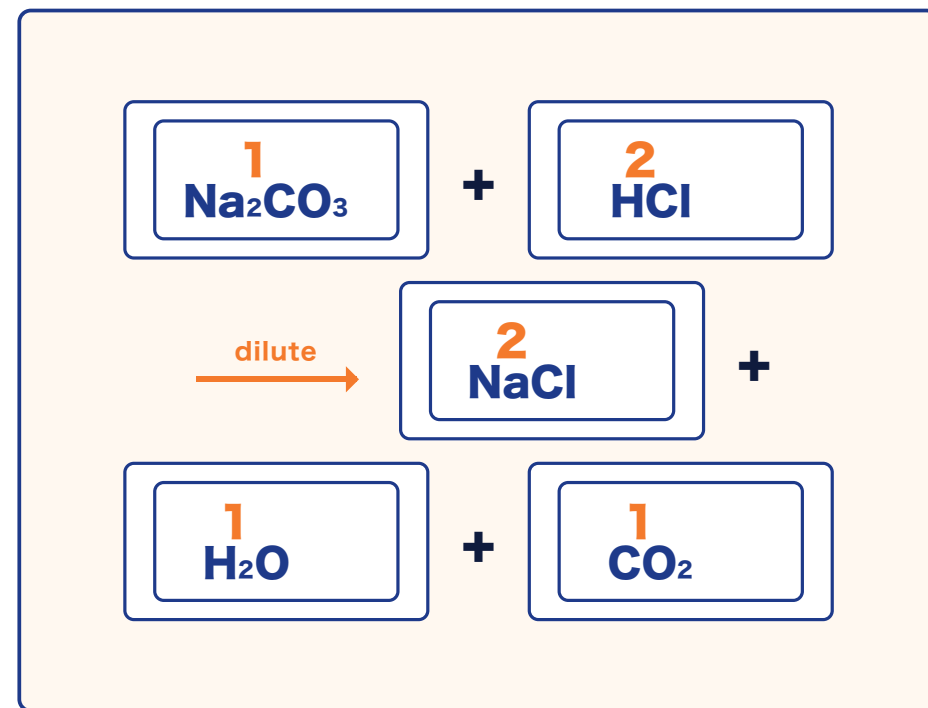


TOPIC

Mid-chapter consolidation — can you do all of these in 60 seconds?

WORKED EXAMPLE

Reaction of acid with metal carbonate — and the lime-water test



TOPIC

Three more reactions you must remember

POINT 1

POINT 2

POINT 3

TRY IT · SOLVE BEFORE YOU PEEK

Quick check — neutralisation in the kitchen

Work it out before you flip the answer.

SOLUTION

TOPIC

C

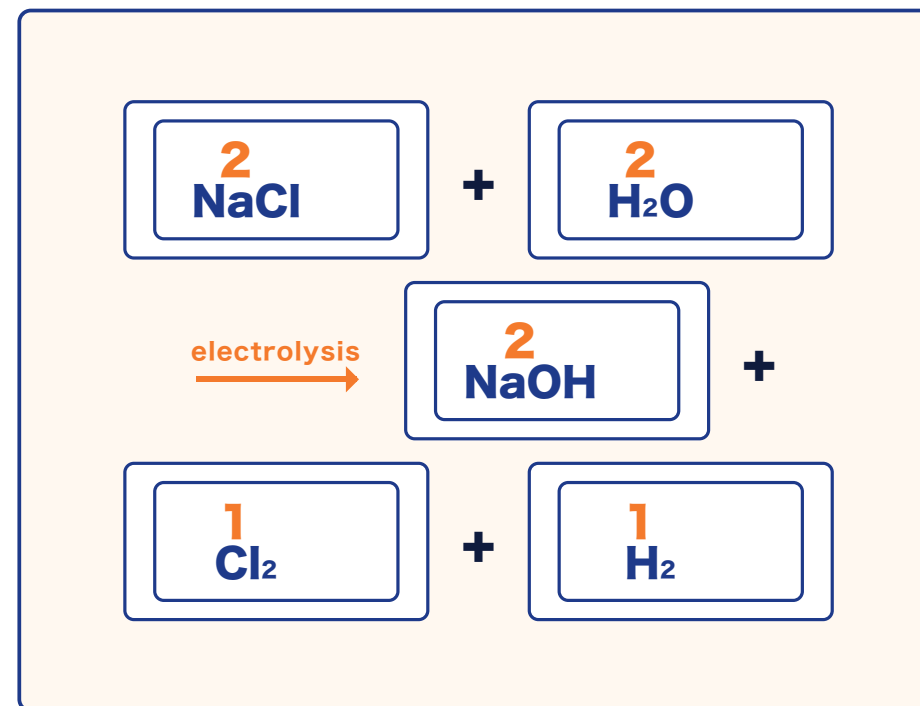
Part C — The pH scale and salts of daily life

TOPIC

The pH scale — anchor values you must know

WORKED EXAMPLE

Chlor-alkali process — the single biggest 5-marker of this chapter



TOPIC

Five everyday salts — formulae and uses (memorise these COLD)

POINT 1

POINT 2

POINT 3

POINT 4

TOPPER TEMPLATE · MARK-BY-MARK

Topper's 5-mark frame — Plaster of Paris

- 1 STEP 1 — CHEMICAL
NAME + FORMULA**
- 2 STEP 2 — PREPARATION
WITH BALANCED
EQUATION AND
CONDITION**
- 3 STEP 3 — TWO USES**
- 4 STEP 4 — STORAGE**

PYQ PATTERNS

What CBSE has actually asked (2018–2024)

MARKS DISTRIBUTION

Where the marks LIVE inside Chapter 2

TOPIC

Last 10-minute checklist before you close the book

PYQ PATTERNS

Top PYQ patterns to drill

#1

Chlor-alkali process: equation + 2 uses each of NaOH, Cl₂, H₂ (5 marks)

88%

#2

pH and everyday life

tooth decay /
acid rain /
stomach
antacids (3
marks) — 95%

#3

Plaster of Paris

preparation,
formula, two
uses, storage (5
marks) — 82%

#4

Bleaching powder

formula and one
preparation
equation (3
marks) — 70%

#5

Test for CO₂ gas (acid + carbonate)

RECAP · MEMORISE THESE

Chapter in one screen

1 Acids release H^+ ;
bases release OH^- ;
salts are formed by
their neutralisation.

2 Four reaction families
of acids: with metals
($\rightarrow \text{H}_2$), with
carbonates ($\rightarrow \text{CO}_2$),
with metal oxides ($\rightarrow$
salt + H_2O), with
bases ($\rightarrow$ salt + H_2O).

3 Strong vs weak is
about DEGREE OF
DISSOCIATION (not
concentration); $\text{pH} =$
 $-\log_{10}[\text{H}^+]$ lies on the
0–14 scale.

4 pH governs daily life
— enamel < 5.5, blood
7.4, stomach 1–3, acid
rain < 5.6.

5 Six salts to memorise
cold: NaCl , NaOH ,
 $\text{Ca}(\text{OCl})\text{Cl}$, NaHCO_3 ,

WHAT'S NEXT

Up next — Chapter 3 — Metals and Non-metals

- How metals react with acids, water and oxygen (you already saw acid + metal here)
- Reactivity series — why Zn pushed H^+ out of HCl in this chapter
- Extraction of metals — and where chlor-alkali plugs into the metal industry

Lock this chapter in tonight

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