

UPDAAN



2025

Bharat Mata Ki Jai ♡

ACIDS, BASES AND SALTS

Salts and Their Types – Part II

CHEMISTRY

Lecture – 07

BY: SUNIL BHAIIYA



Topics

to be covered

- 1 Salts and Their Types – On Basis of pH (✓)
- 2 Common Salt: Occurrence, Extraction and Uses (✓)
- 3 Sodium hydroxide: Manufacturing and Uses (✓)



Knowledge Ride On



Salts and Their Types – On Basis of pH

Knowledge Ride On



Common Salt: Occurrence, Extraction
and Uses

Knowledge Ride On



Sodium hydroxide: Manufacturing and
Uses

Knowledge Ride On



(चेतना)

Insaniyat Ka Gyaan ✓



Hasmukhlal: Ae Simaila tu ek gaana bta skti hai?

Simaila: Arre bilkul baht gaane sunti hu mein waise bhi...

Hasmukhlal: First word of the song is made from chemical symbols of (Hydrogen, Uranium, Sulphur and Nitrogen), second word from chemical symbols of (Tellurium and Radium), third and fourth word from chemical symbols of (Tantalum, Uranium and Barium).

Simaila: Hasmukhlal beta chup chap nikal jao warna bachoge ni...

HUSN TeRa TaUBa TaUBa



Hasmukhlal: Ae Simaila tu ek gaana bta skti hai?

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Simaila: Hasmukhlal beta chup chap nikal jao warna bachoge ni...

HUSN TeRa TaUBa TaUBa

Hasmukhlalians be like:



**THE
BOYS**



Salts and Their Types – On Basis of pH

Ek Aur Ek Aur...



NaCl will be a salt of a strong acid and a strong base.

A. Yes

B. No

(C-I)

Neutralisation

Rxn

(Double displacement rxn)



from acid from base cation anion

(C-II)

Same amount & same concentration of acid & base



Give a Thought

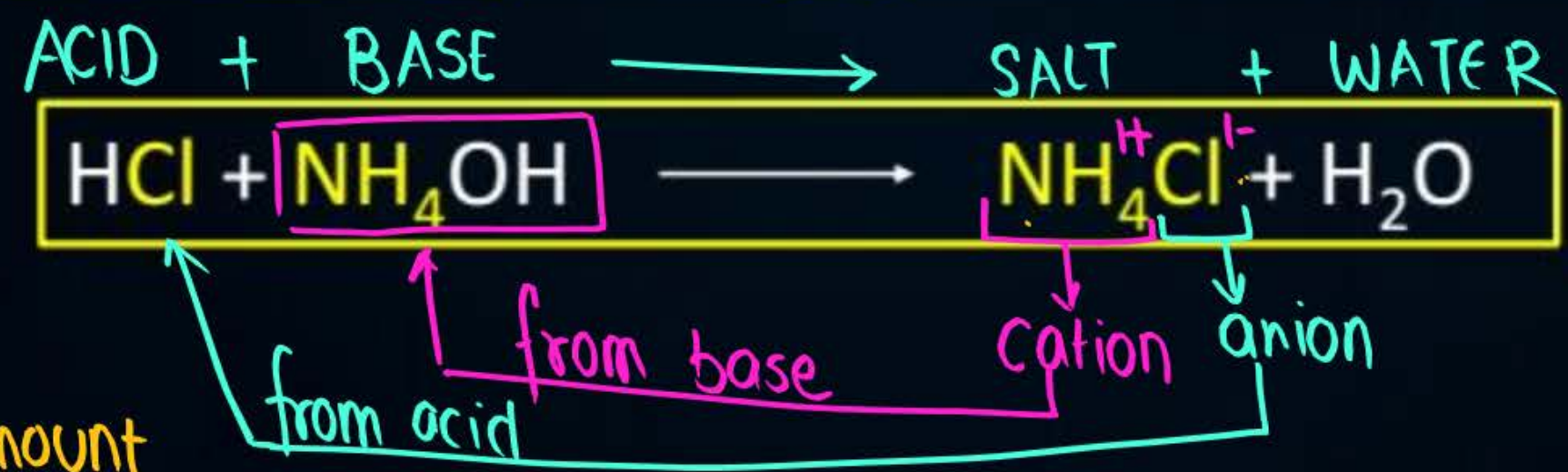


(NCERT Exemplar)

Name of the salt	Formula	Salt obtained from	
		Base	Acid
Ammonium chloride	NH_4Cl	NH_4OH	HCl

Nature of NH_4Cl ?
 ↓
ACIDIC

(C-I)



(C-II)

Same amount & same concentration of acid & base



Give a Thought

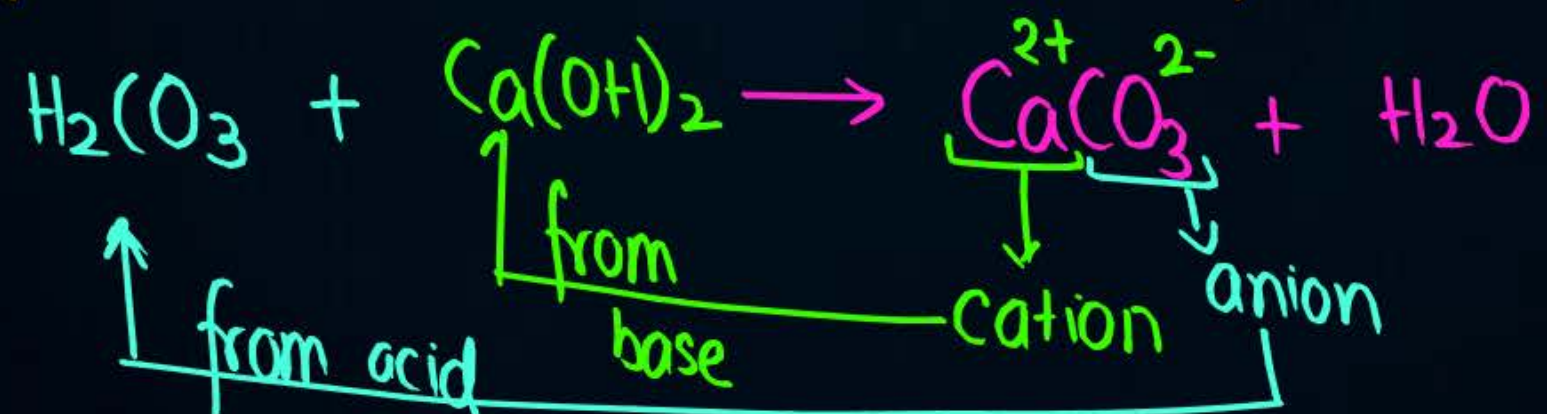


CaCO_3 will be a salt of strong base and weak acid.

A. Yes

B. No

(C-I)



(C-II)

Same amount
& same concentration
of acid & base



CONCLUSION

same amount & same concentration

- (i) Strong acid + Strong base \longrightarrow Neutral salt + Water
- (ii) Weak acid + Weak base \longrightarrow — " —
- (iii) Strong acid + Weak base \longrightarrow Acidic salt + Water
- (iv) Weak acid + Strong base \longrightarrow Basic salt + Water



Give a Thought



Can salts be only formed after neutralisation reactions?

A. Yes

~~B. No~~



Give a Thought



Can salts be only formed after neutralisation reactions?

A. Yes

B. No

No, as they are also formed when metal reacts with dilute acids or bases, metal bicarbonates/carbonates react with acids. etc.

KYA BOLTI PUBLIC





(Common Salt: Occurrence, Extraction and Uses)



Sodium chloride



→ White colour solid
→ m.p. : 800°C

Common
Chemical Name:

→ Common salt / Table salt

Chemical Formula:

→ NaCl

Occurrence and Extraction

(a) Seawater

(b) Rock Salt

(c) Inland lakes

Sodium chloride



highest concentration
 $\text{NaCl} + \text{KCl} + \text{MgCl} + \text{CaCl}_2$ etc.

mixture of different salts

(a) Seawater: Seawater contains different salts dissolved in it, most of which is sodium chloride. It is obtained after the evaporation of seawater.

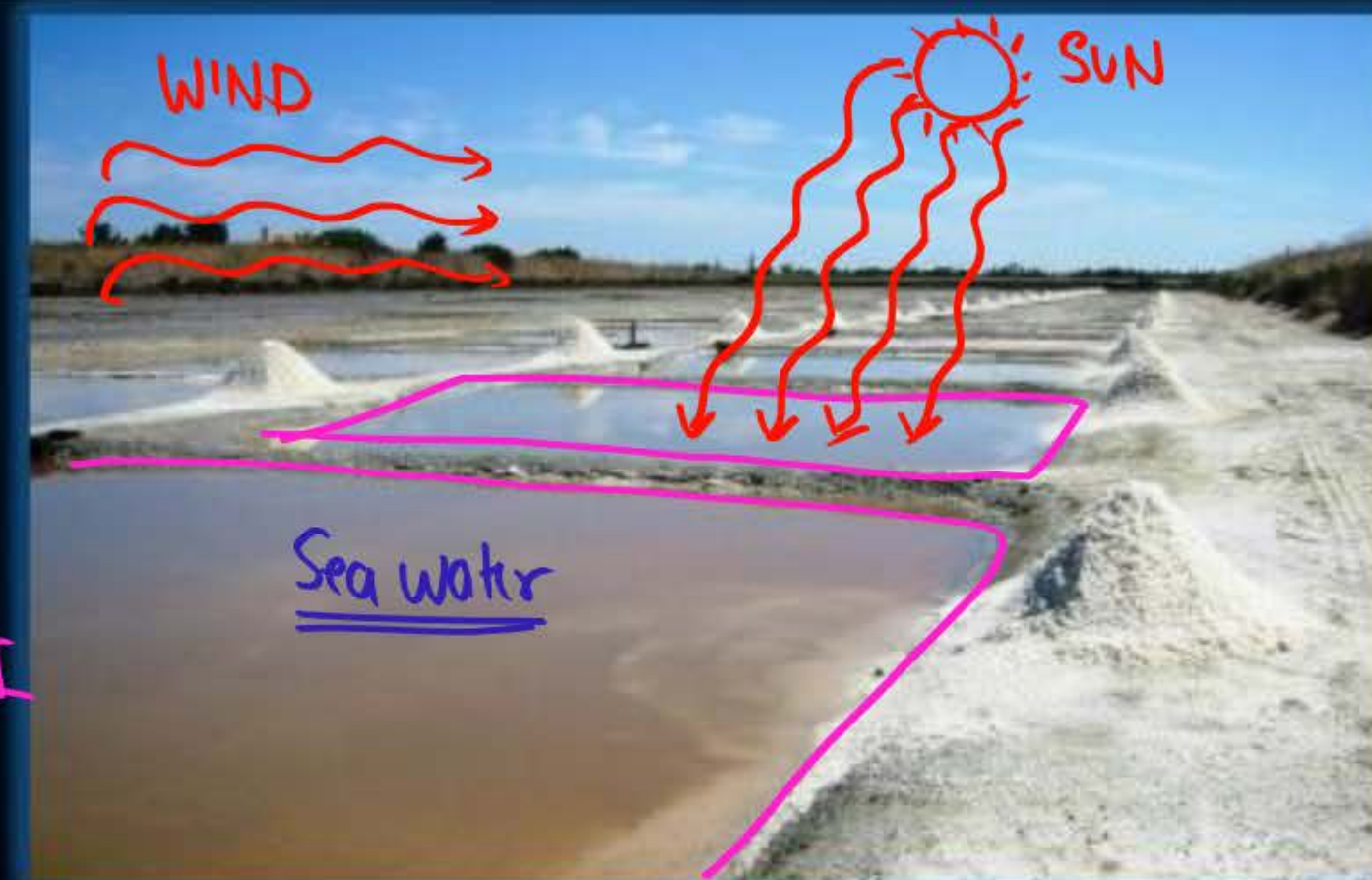
SUN & WIND

Water will evaporate

Mixture of different salts is left

Purified & KI/NaI is added

Sold as
iodised common
salt



Sodium chloride



(चुम्की लवण)

✓(b) **Rock salt:** Common salt is found in the form of solid deposits which are formed when seas of bygone ages dried up. It is brown due to the presence of earthly impurities.

Places where deposits are found:

✓Mandi (In HP) and ✓Khewra of Punjab (In Pakistan).



Sodium chloride



✓ **Inland lakes:** Large quantities of the salt are obtained by the natural evaporation of the water of inland lakes, e.g., Sambhar lake in Rajasthan (India), Great Salt Lake (Utah, USA) etc.





Uses of Common Salt



*maintains blood pressure of body
transportation of nutrients*

- ✓ (a) It is an essential constituent of our diet.
- ✓ (b) It is an important raw material for the production of other materials of daily use such as sodium hydroxide, bleaching powder, baking soda and more.



Sodium hydroxide: Manufacturing and Uses

Sodium hydroxide



Common name:

→ Caustic soda / Lye

Chemical Formula:

→ NaOH

Manufactured by:

→ Chlor-alkali process

↓

Chlorine gas (by-product)

↓

NaOH (main product)

MAIN PRODUCT

→ primary product for which process is done

BY-PRODUCT

→ secondary product(s) formed along with main product



Imp. To Know



① → Oxidation: Loss of electron(s)

OIL

Oxidation is loss of electron(s)

② → Reduction: Gain of electron(s)

RIG

Reduction is gain of electron(s)

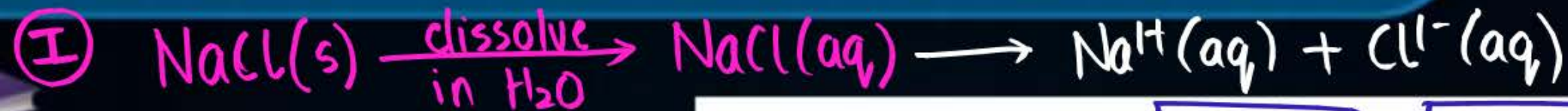
③ → BRINE SOLTN: $[\text{NaCl in H}_2\text{O}]$

④ → Anode [connected to +ve terminal of battery] → OXIDATION

⑤ → Cathode [- " ——— -ve - " ———] → REDUCTION

Manufacturing of Sodium hydroxide

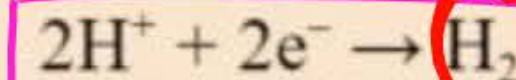
(Membrane Based Process)



(II) Opposite charges attract each other



(IV) At cathode:



hydrogen gas

at anode

At anode:

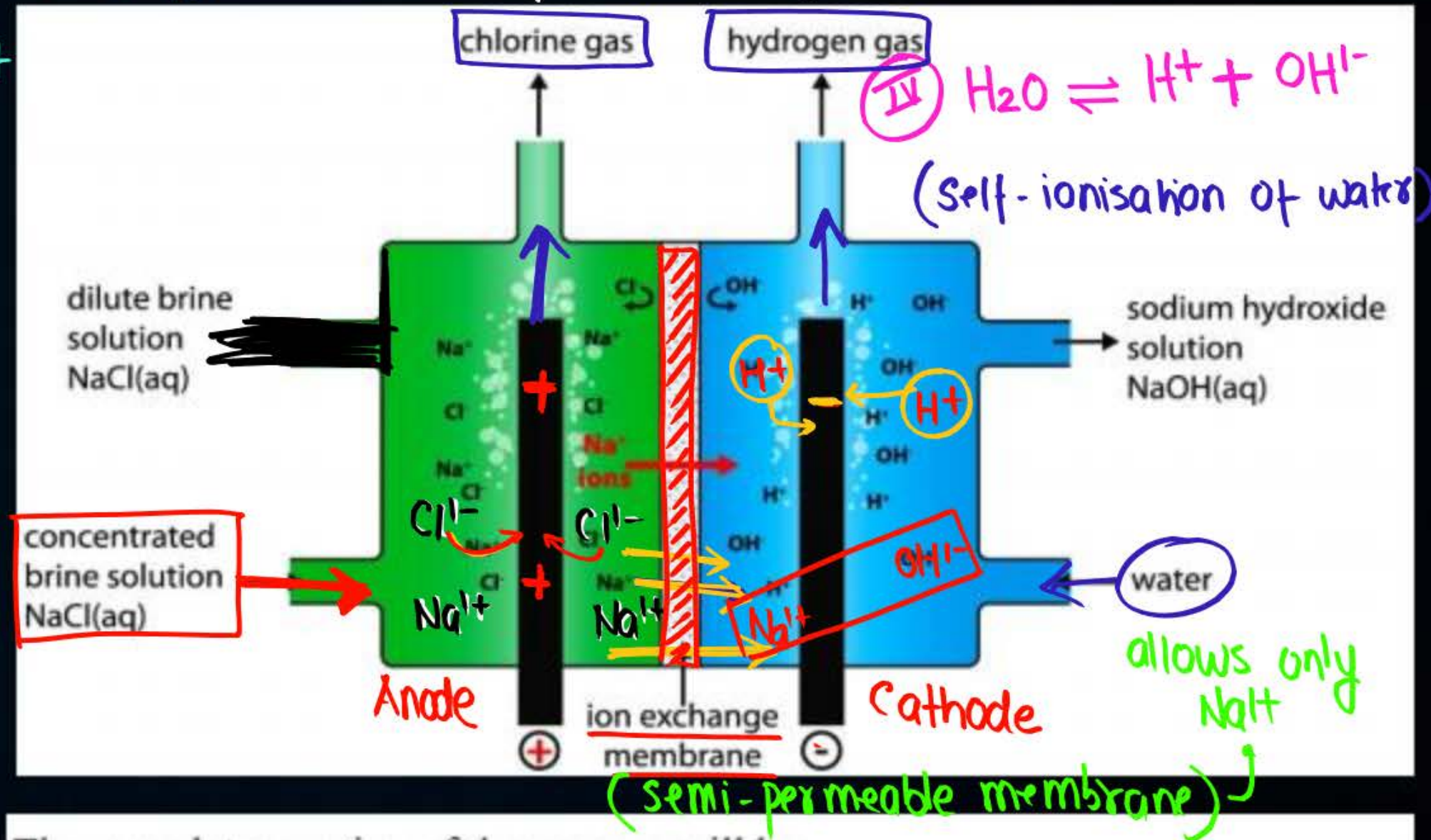


Chlorine gas

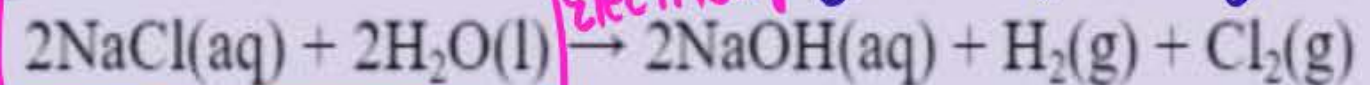
(VI) At anode: Cl_2 gas

At cathode: H_2 gas

Near the cathode: NaOH



The complete reaction of the process will be:





This process is also called ELECTROLYSIS OF
AQUEOUS SODIUM CHLORIDE or electrolysis of brine
soltⁿ.



Let's Practice



PW Ka **ChemStar!**

QUESTION

Identify the correct representation of reaction occurring during chloralkali process

- A $2\text{NaCl}(\text{l}) + 2\text{H}_2\text{O}(\text{l}) \rightarrow 2\text{NaOH}(\text{l}) + \text{Cl}_2(\text{g}) + \text{H}_2(\text{g})$
- B $2\text{NaCl}(\text{aq}) + 2\text{H}_2\text{O}(\text{aq}) \rightarrow 2\text{NaOH}(\text{aq}) + \text{Cl}_2(\text{g}) + \text{H}_2(\text{g})$
- C $2\text{NaCl}(\text{aq}) + 2\text{H}_2\text{O}(\text{l}) \rightarrow 2\text{NaOH}(\text{aq}) + \text{Cl}_2(\text{l}) + \text{H}_2(\text{g})$
- ☒ D $2\text{NaCl}(\text{aq}) + 2\text{H}_2\text{O}(\text{l}) \rightarrow 2\text{NaOH}(\text{aq}) + \text{Cl}_2(\text{g}) + \text{H}_2(\text{g})$

Concept Polish (गृहकार्य)



What is iodised salt? Why it is used?



Insaniyat Ka Gyaan



***Insaniyat Ka Gyaan
Jo Banae Behtar Insan***



SUNIL BHAIYA

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CBSE QUESTION & CONCEPT BANK

Chapter-wise & Topic-wise

Includes Point-wise Answers with Step-wise Marking

CLASS 10th SCIENCE

Chapter-wise
CONCEPT MAPS

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Revision Blue Print & Solved Questions
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CBSE 2024 & 2023 with Handwritten Solutions
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2025
EXAMINATION

👉 Rakshak Dua
👉 Samridhi Sharma
👉 Sunil Vijay Hingorani

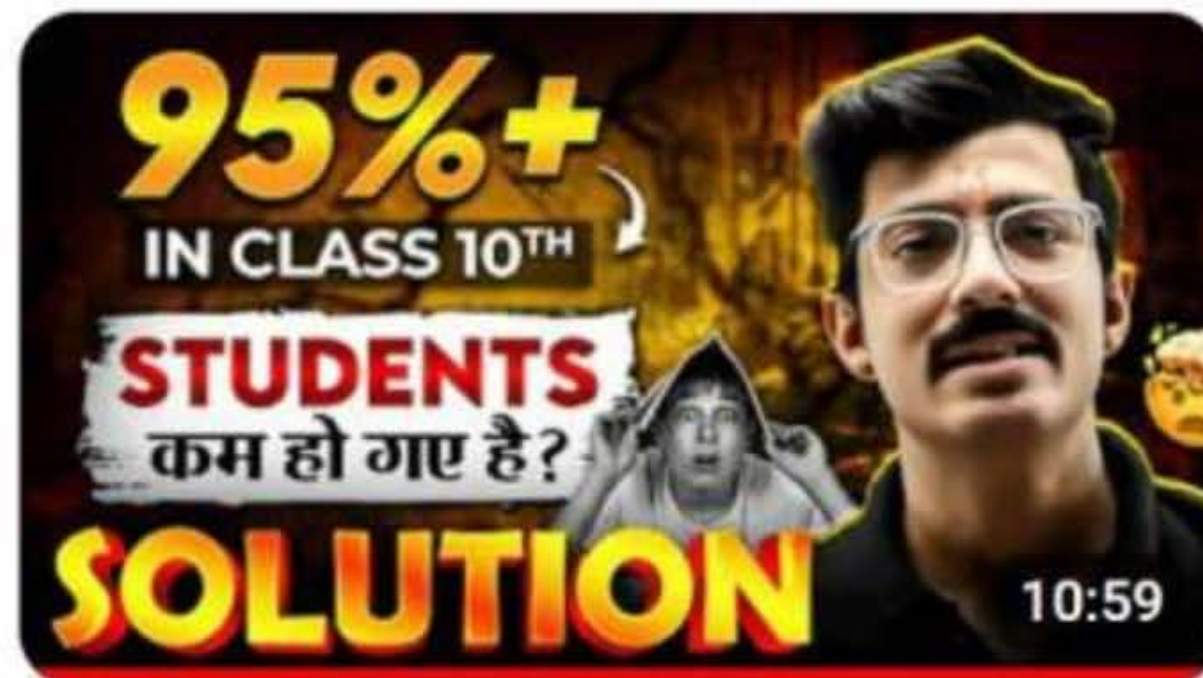


Detailed Review and Importance of
the Book in One Video.

Channel: PW Foundation YouTube



4561-



Class 10th में 95%+ लाने वाले बच्चे घटे ?

🧠 Reason and Solution

SUNIL BHAIYA IS ALWAYS THERE FOR YOU.

#sbsathhai (✓)
#pwsathhai (✓)



THANK
YOU

