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Class - 10

Chapter - 2

ACIDS, BASES AND SALTS

Part-1

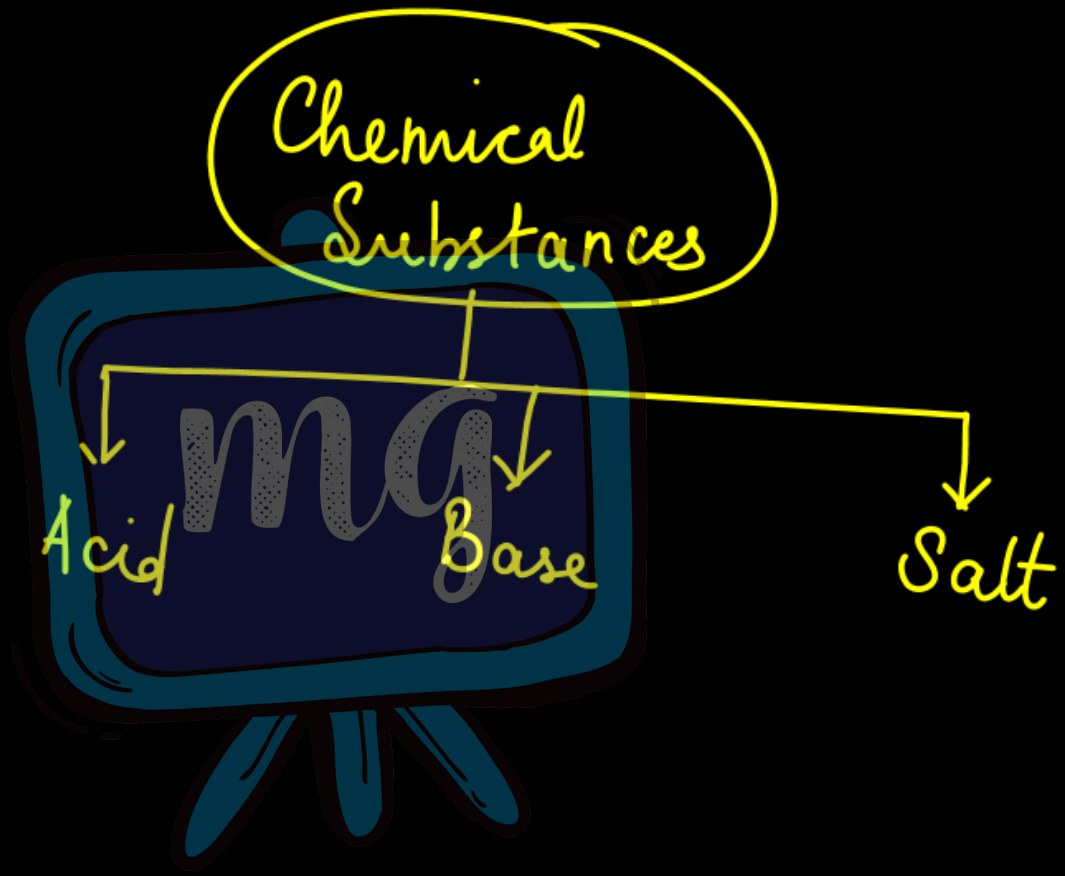
Acids and Bases



Disha Didi (DD)

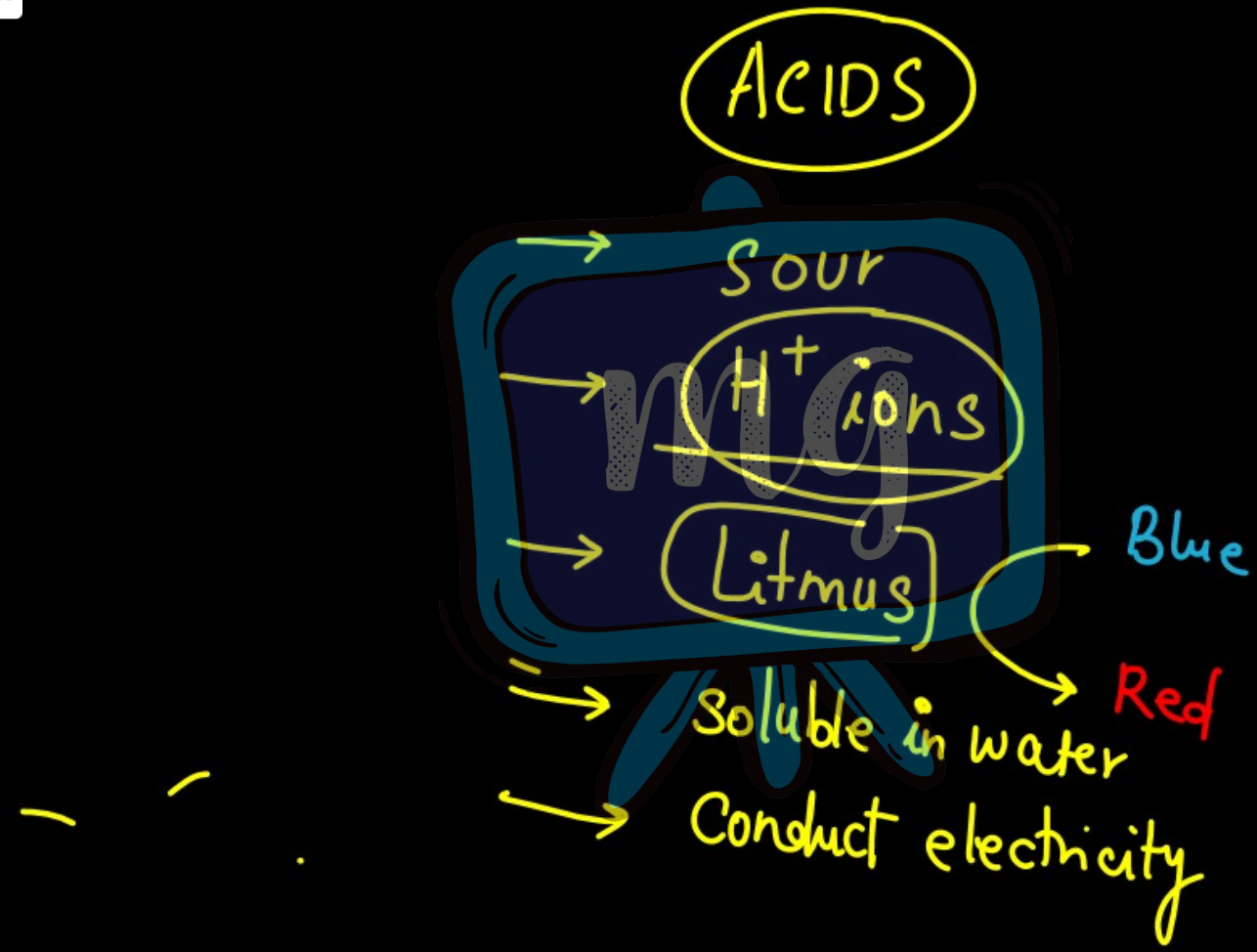
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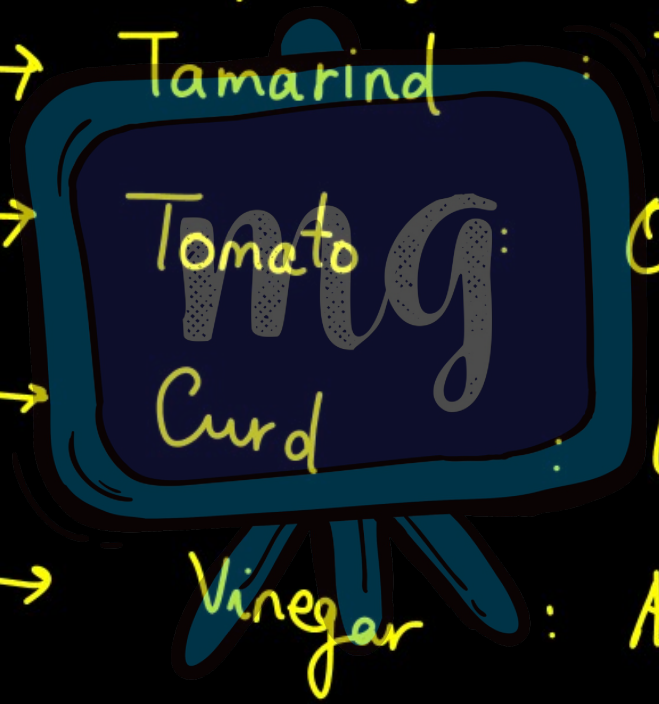
ACIDS

→ Naturally
- → Plants
- → Animals.

→ Man-Made (Mineral)
Earth minerals

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→ Lemon/Orange : Citric Acid

→ Tamarind : Tartaric Acid

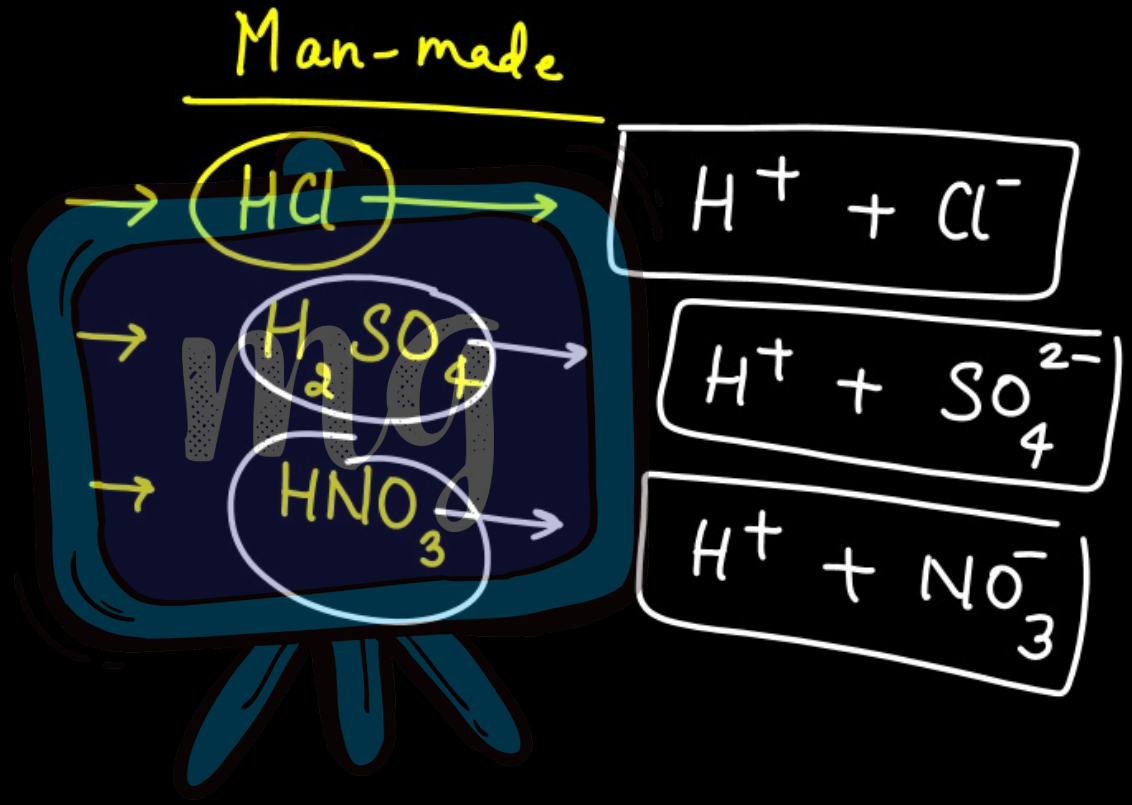
→ Tomato : Oxalic Acid

→ Curd : Lactic Acid

→ Vinegar : Acetic Acid

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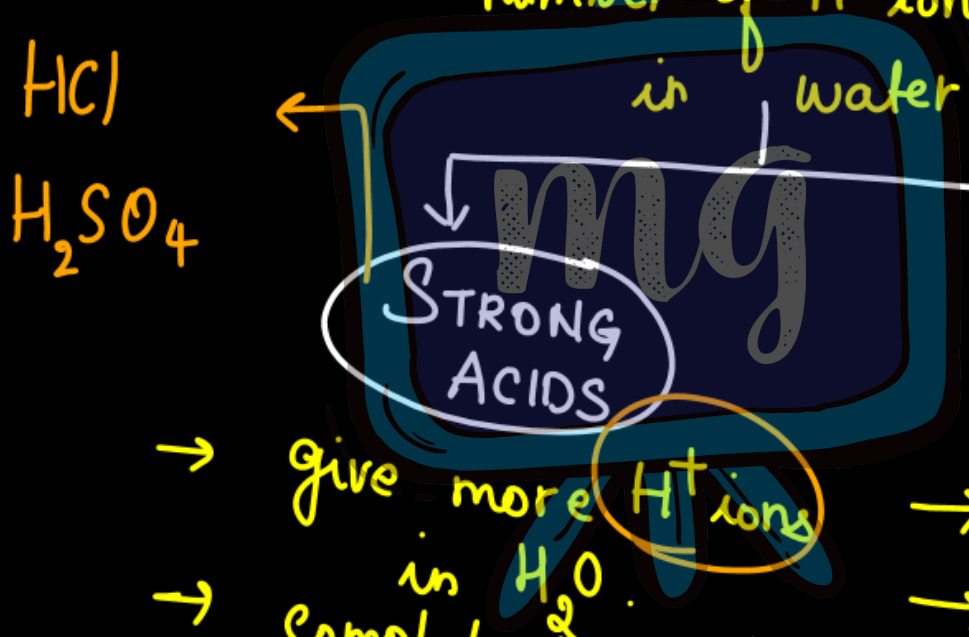


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ACIDS

number of H^+ ions produced in water.



- HCl
- H_2SO_4

- CH_3COOH (acetic acid)

→ give more H^+ ions in H_2O.

→ Complete dissociation

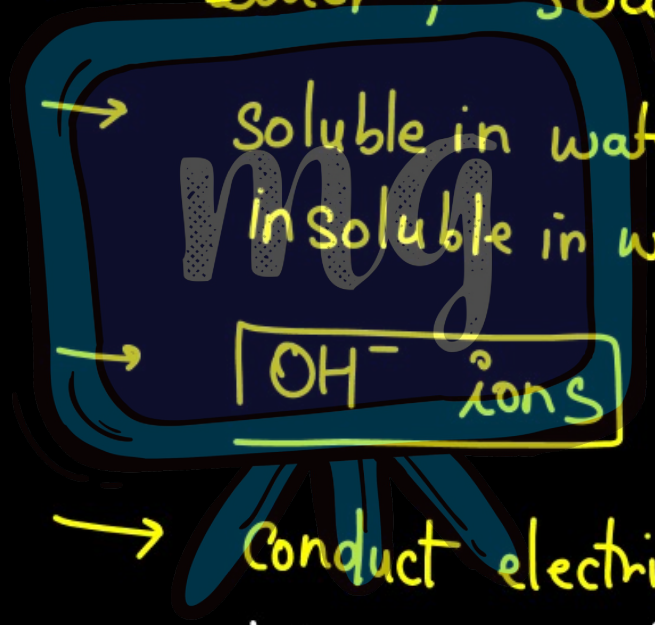
→ give less H^+ ions.

→ partially dissociate

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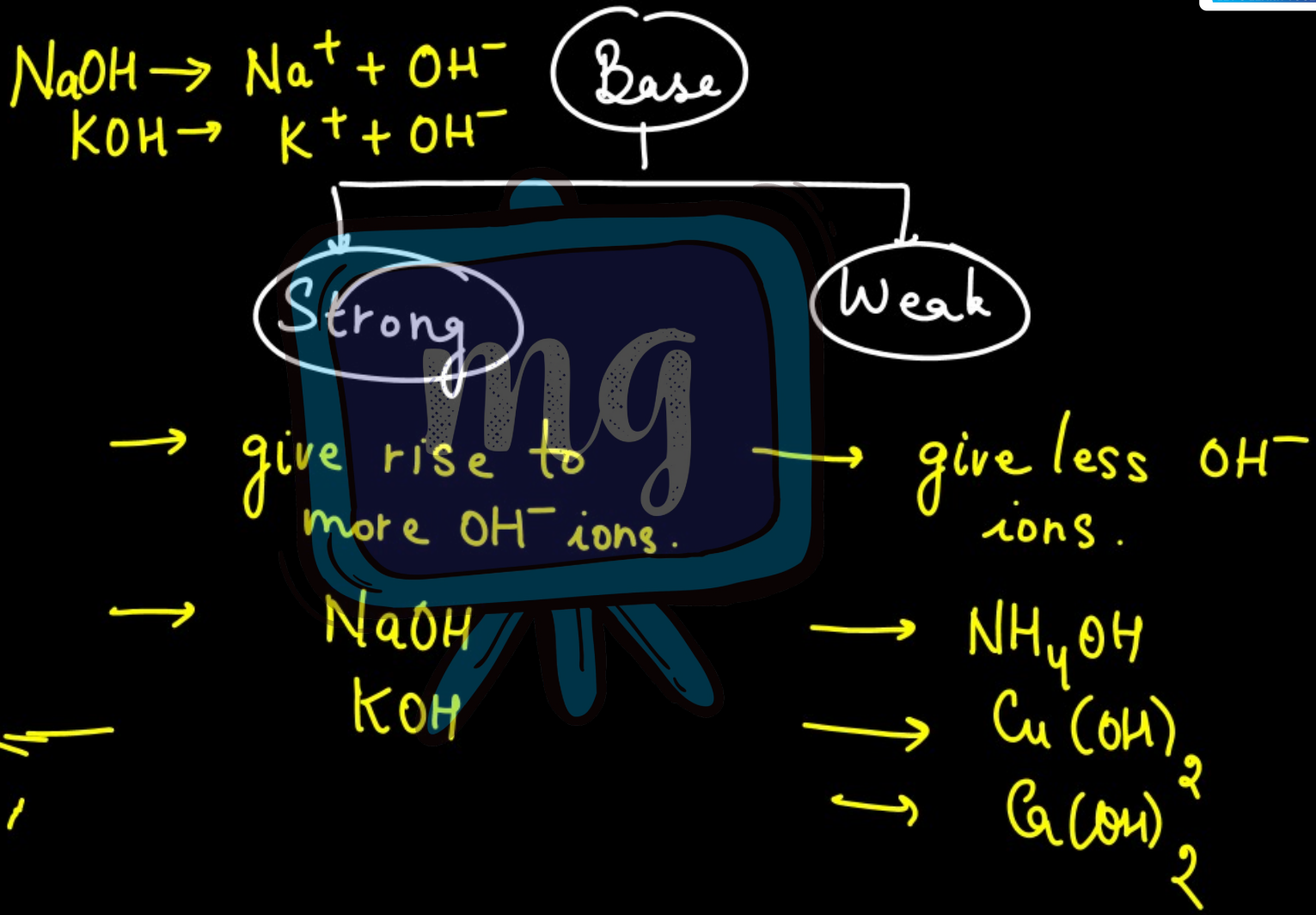
BASES



- bitter ; Soapy
- Soluble in water : Alkali
  Insoluble in water : Insoluble Bases.
- OH^- ions
- Conduct electricity
- Litmus : Red $\xrightarrow{\text{Base}}$ Blue

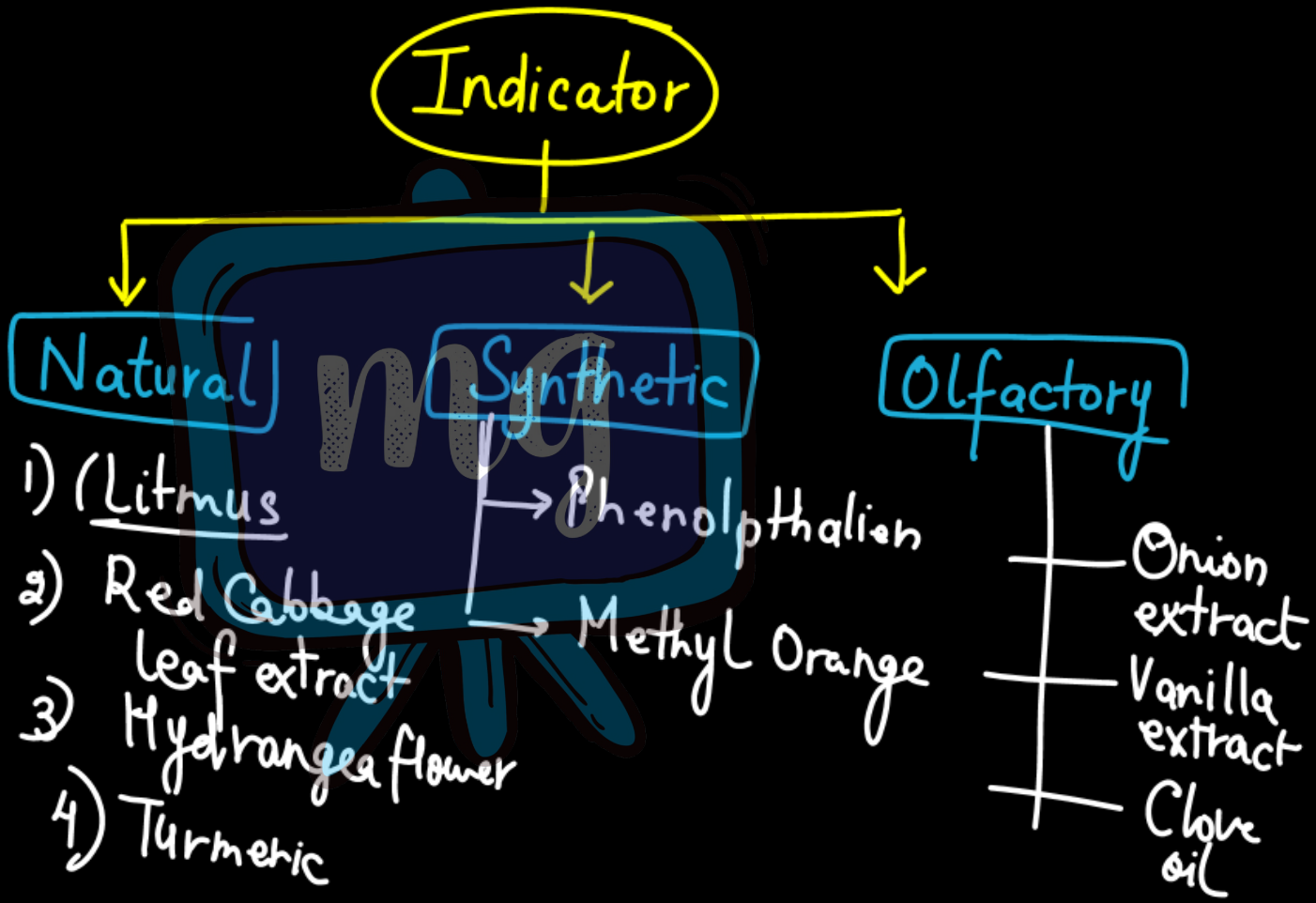
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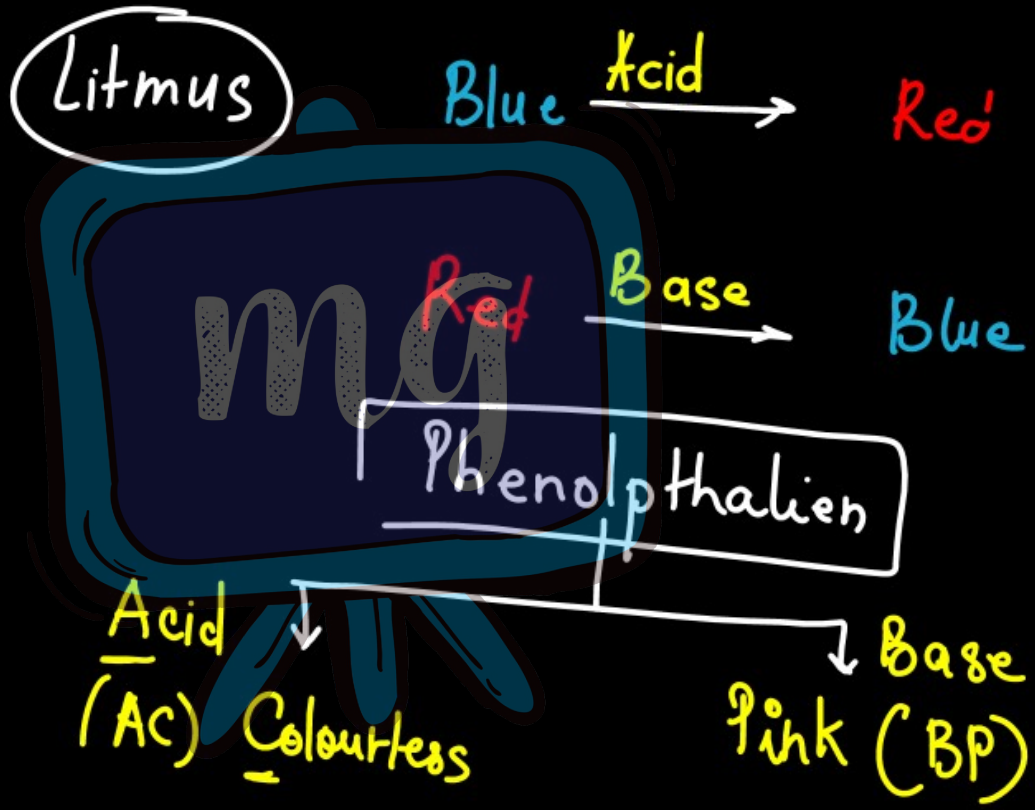
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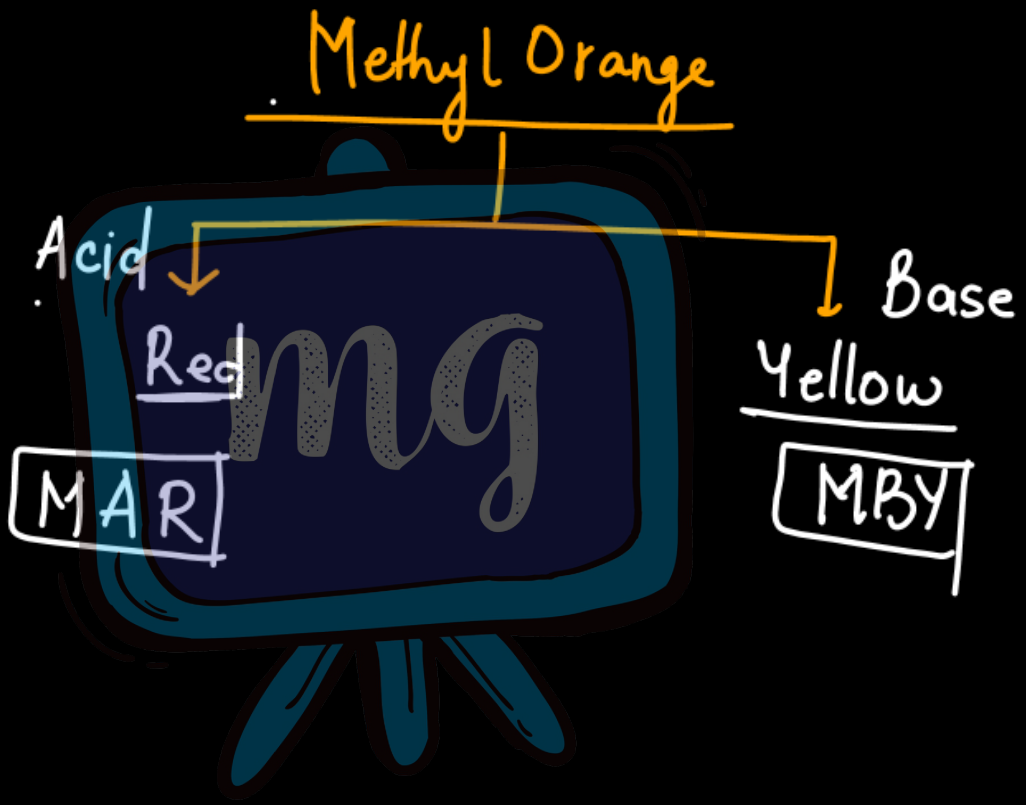
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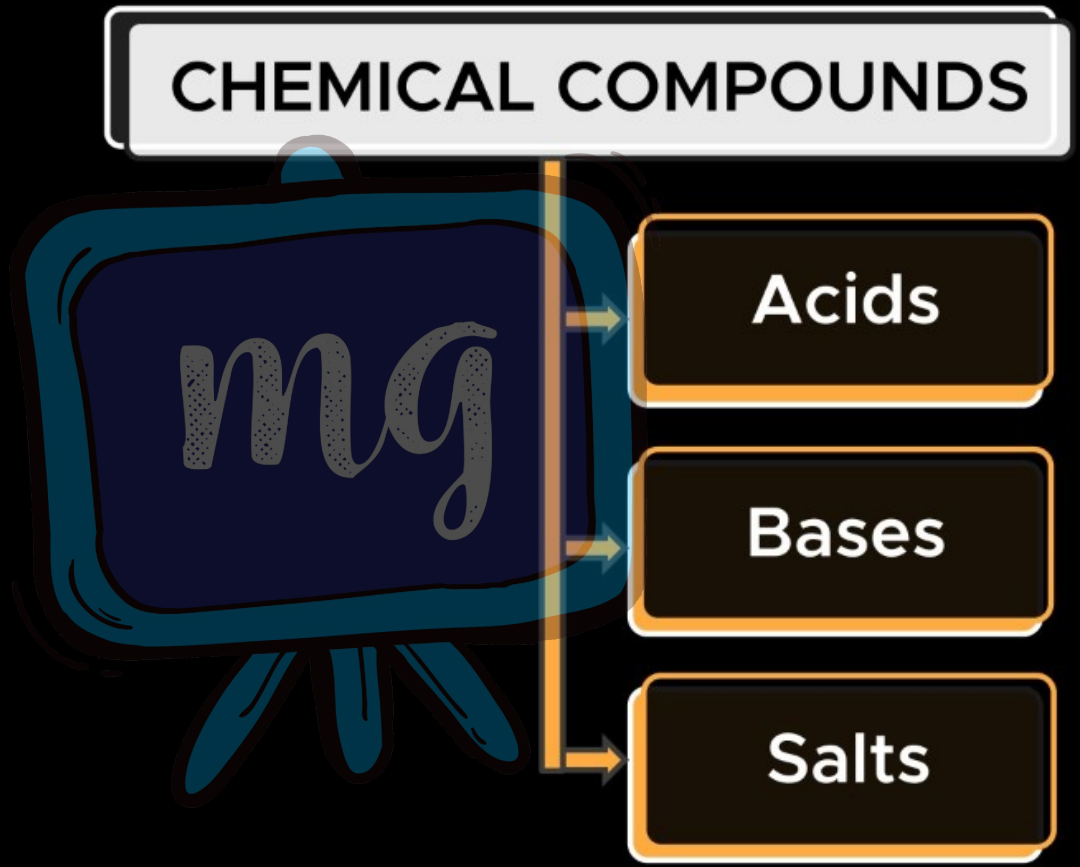
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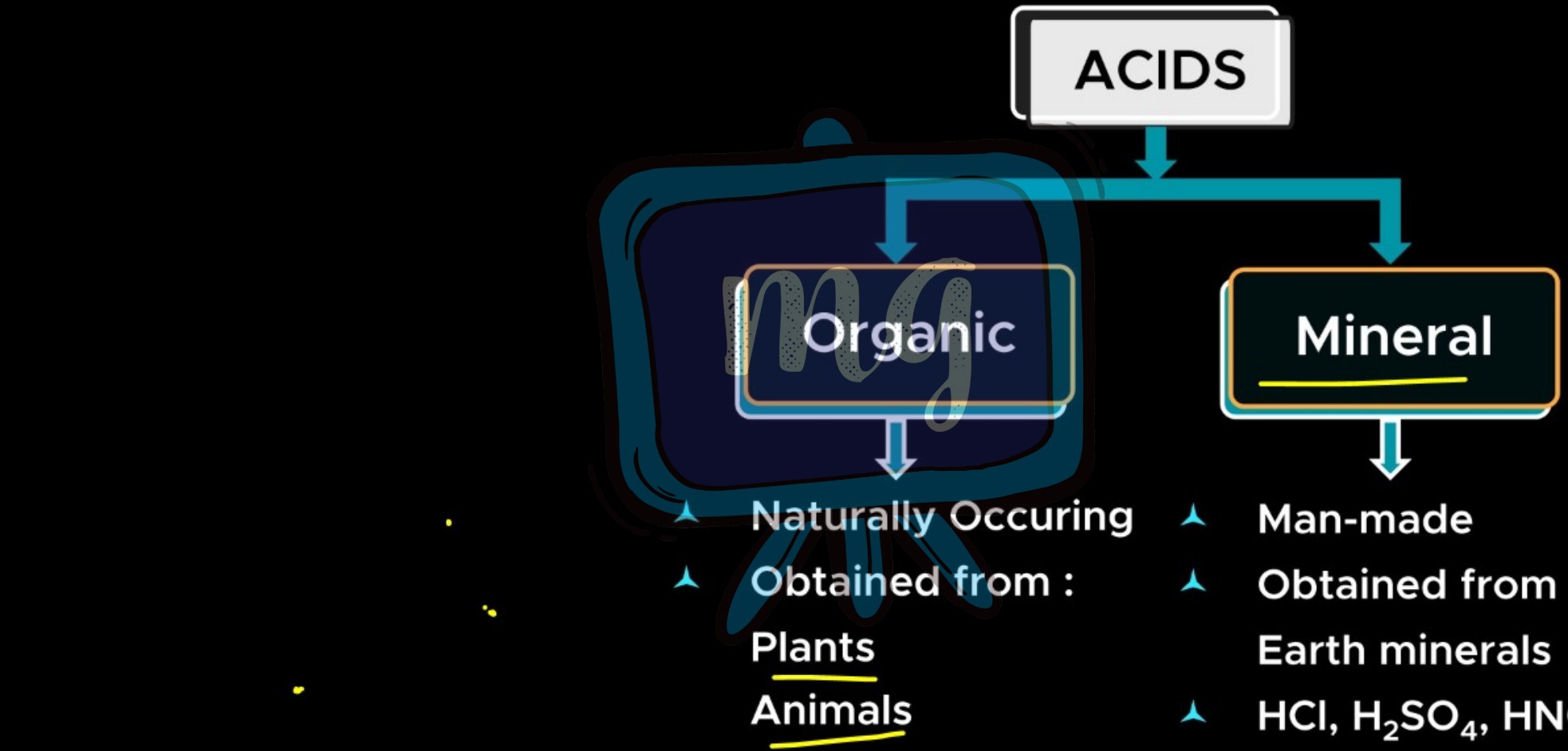
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Characteristic	Acids	Bases
Taste	Sour	Bitter + Soapy
Solubility in Water	Soluble ✓	Alkali – Soluble Others – Not soluble
Ions	Produce H^+ in water	Produce OH^- in water
Electricity	Conducts	Conducts
Litmus	Blue → Red	Red → Blue

ABR
अमिताभ को बच्चा Roya

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ORGANIC ACIDS

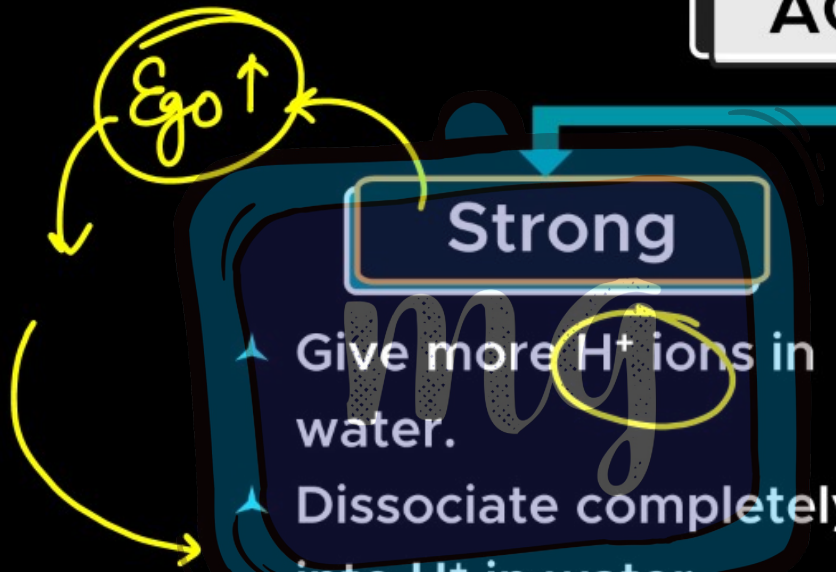
animals

Bacteria

Source	Acid
Curd	Lactic Acid
Tomato	Oxalic Acid
Tamarind	Tartaric Acid
Lemon/Orange	Citric Acid
Vinegar	Acetic Acid
Insect Sting	Methanoic Acid

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ACIDS

Strong

- Give more H^+ ions in water.
- Dissociate completely into H^+ in water.
- Conduct electricity well.
- HCl
  H_2SO_4

Weak

- Give less H^+ ions in water.
- Dissociate partially into H^+ ions in water.
- Conduct electricity weakly.
- CH_3COOH (Acetic acid)
  H_2CO_3 (Carbonic Acid)

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BASES

Strong

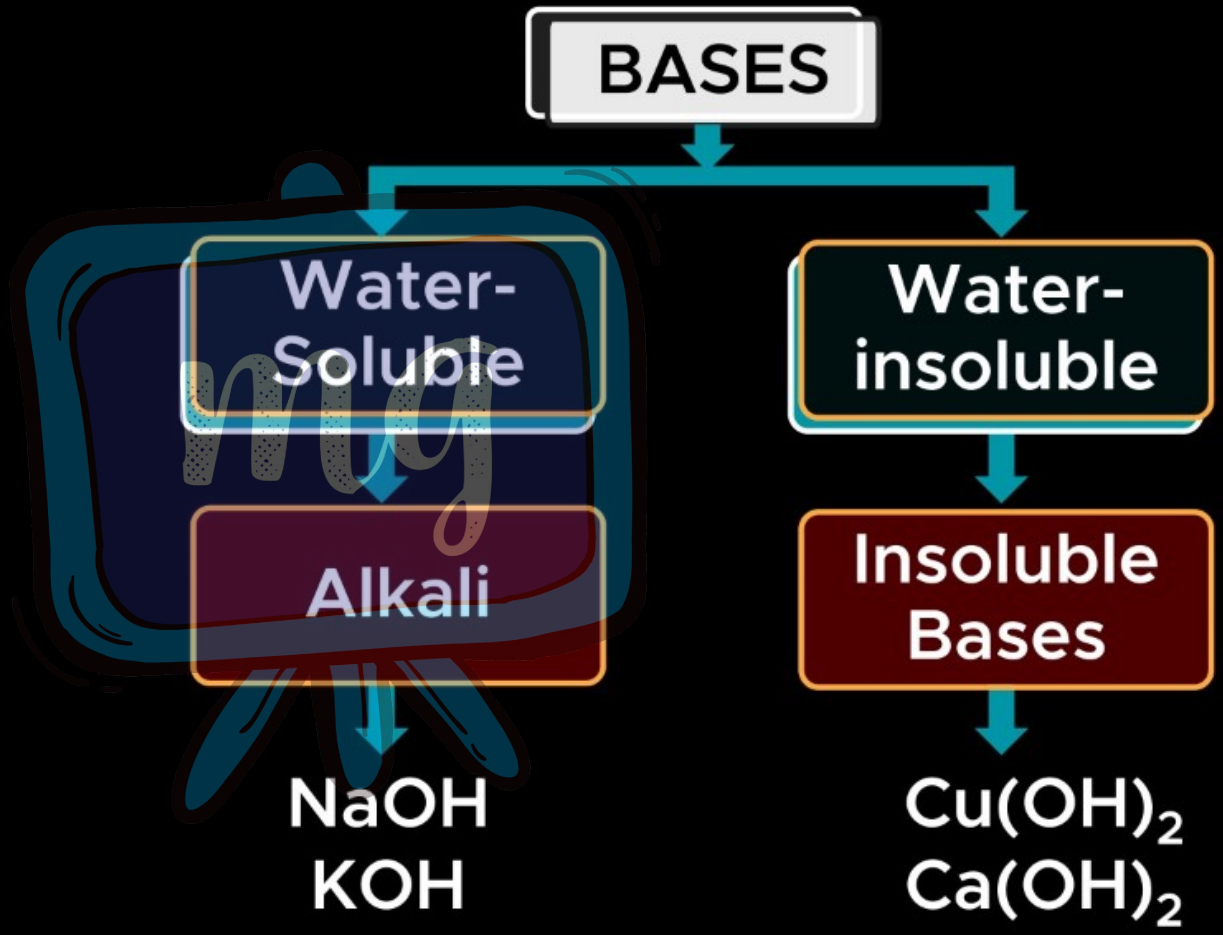
- Produce large amount of OH^- ions.
- Dissociate completely into H^+ in water.
- NaOH
- KOH

Weak

- Produce small amount of OH^- ions.
- Dissociate partially in water.
- $Ca(OH)_2$
- NH_4OH

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INDICATORS

- Indicate acidic or basic nature of the chemical compound by change in colour or odour.

Lichen :

- Purple dye
- Extracted from Lichen division Thallophyta
- Purple when neither acidic nor basic (neutral)