

# Common Bases

Chemical Name	Formula	Common Name	Uses	Strength
sodium hydroxide	NaOH	lye, caustic soda	soap, plastic, petrol refining	Strong
potassium hydroxide	KOH	caustic potash	soap, cotton, electroplating	Strong
calcium hydroxide	Ca(OH) <sub>2</sub>	slaked lime	cement	Strong
sodium bicarbonate	NaHCO <sub>3</sub>	baking soda	cooking, antacid	Weak
magnesium hydroxide	Mg(OH) <sub>2</sub>	milk of magnesia	antacid	Weak
ammonium hydroxide	NH <sub>4</sub> OH, {NH <sub>3</sub> (aq)}	ammonia water	detergent, fertilizer, explosives, fibers	Weak

① सुमोक्षित विकल्प नहीं हैं-

Base + Metal

Reaction  
कौन गैस-

(A)  $O_2$

(B)  $N_2$

(C)  $H_2$

(D)  $CO_2$

① मौलिक अम्ल  $\rightarrow$  सेब

② एस्कार्बिक अम्ल  $\rightarrow$  नींबू व संतरा

③ ऑक्जैलिक अम्ल  $\rightarrow$  अंगूर

④ टार्टरिक अम्ल  $\rightarrow$  इमली

② अम्ल की परिमाणा  
में से कौन सा  
विकल्प सही है

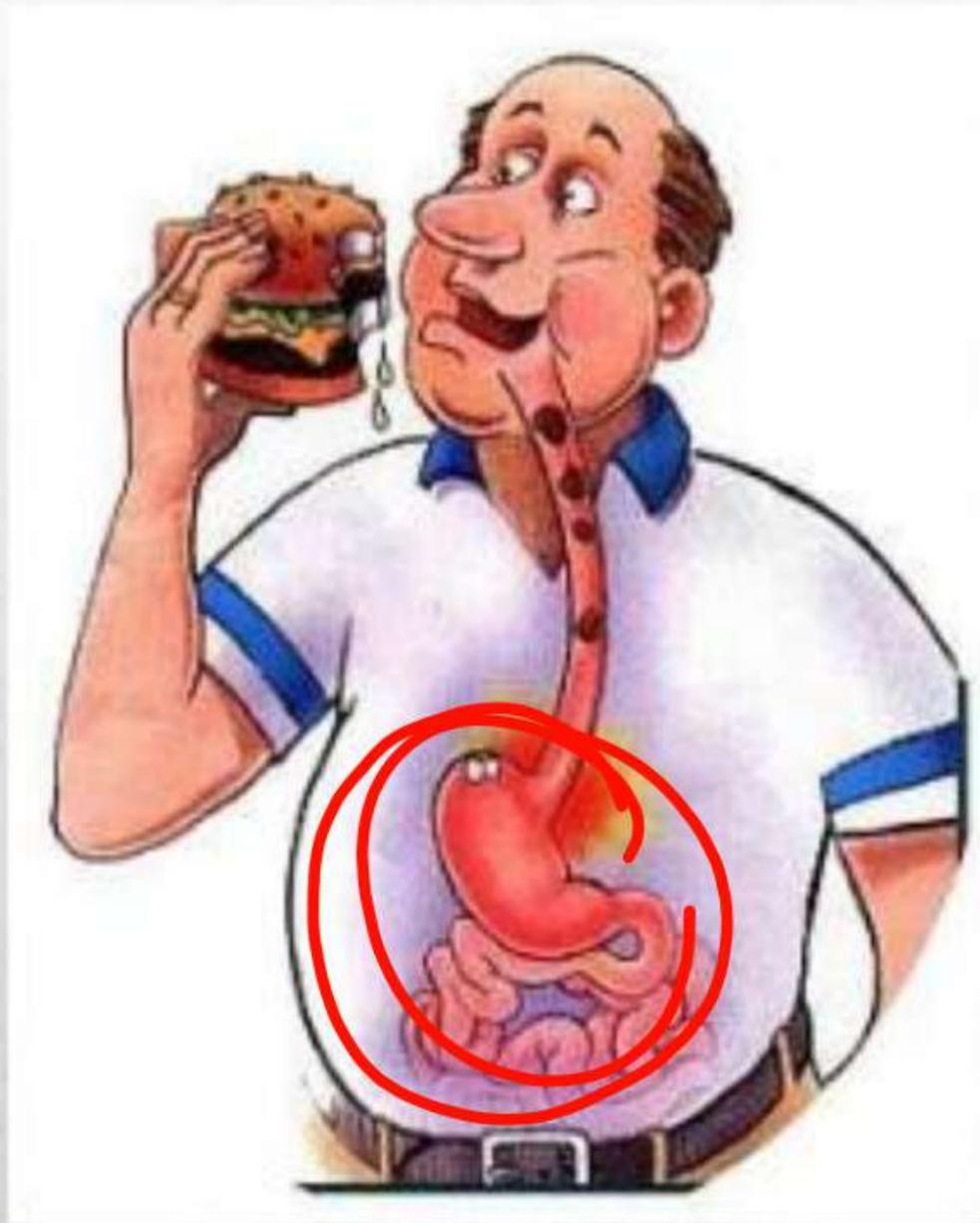
(A) स्वप्न में कार्लोसा

(B) साबुन की तरह  
चिपचिपे

(C) नीले लिटमस को  
लाल

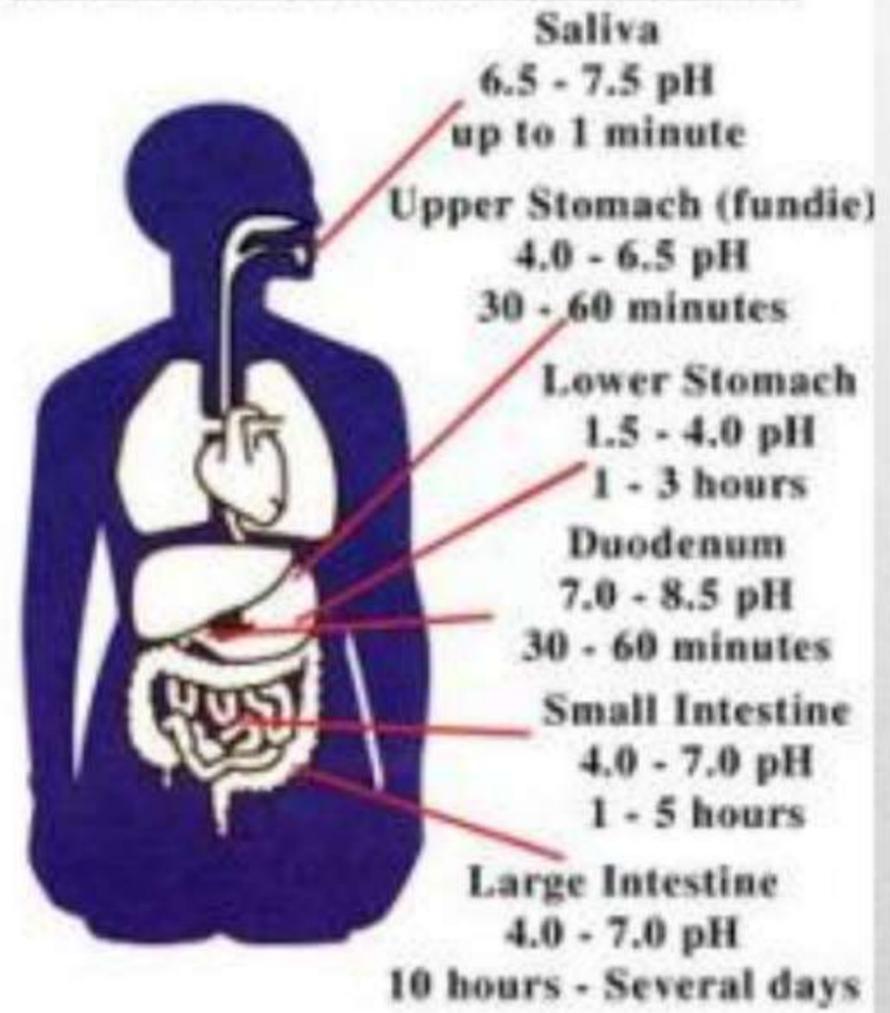
(D) लाल लिटमस को नीला

# Ph Value in our Digestive System and Hydrochloric Acid



Our body  
pH Range.  
**7.0 - 7.8**

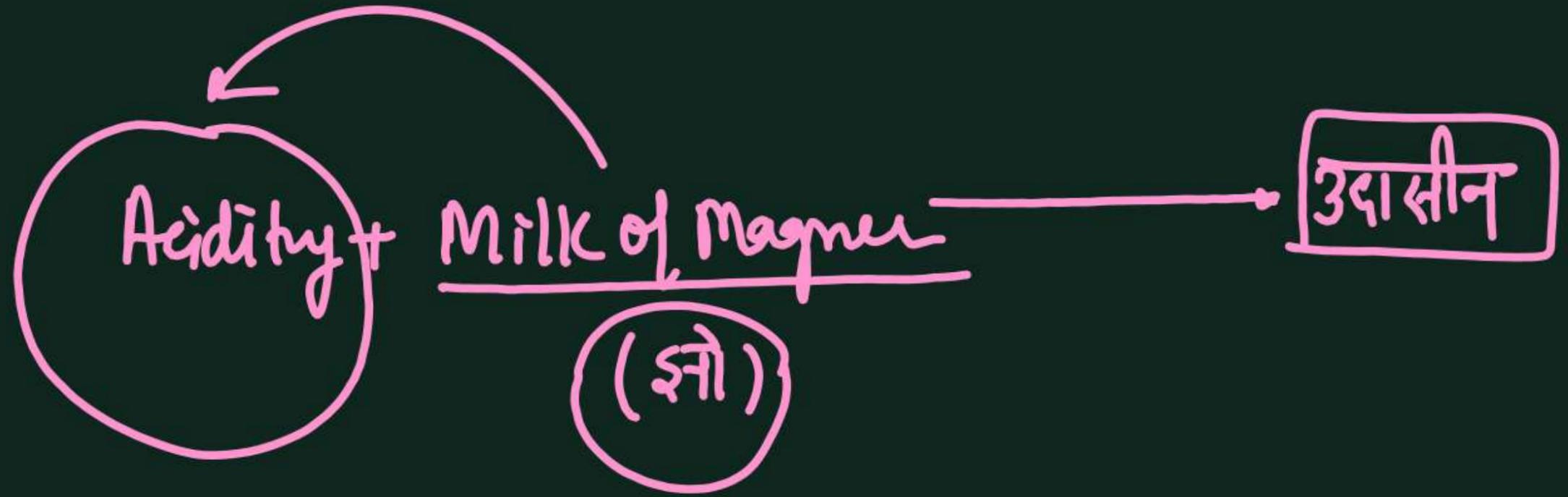
The Human Digestive Tract pH Range Chart



The diagram illustrates the average time food spends in each part of the digestive system along with the average pH.

# मानव पाचनतंत्र





Acidity

Milk of Magnesia

(शो)

उदासीन

# Ph value and tooth decay

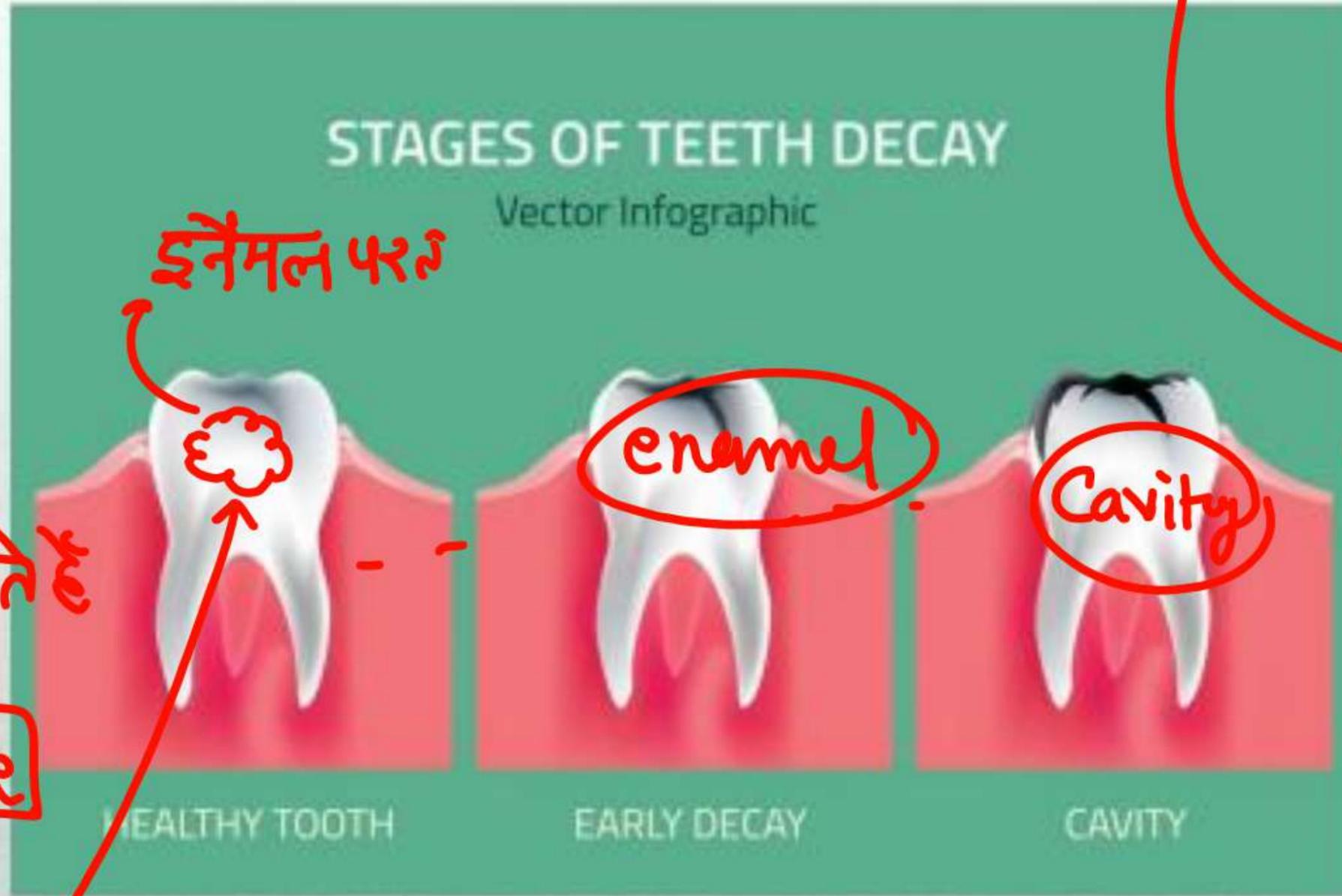
Base

दंत क्षयक pH मान

टूथपेस्ट

3H<sup>+</sup>  
17+

अम्ल प्रभाव को कम करता है



इनेमल परत

enamel

Cavity

भोजन



Part of food



दांत में फंस जाते हैं



Bacteria etc

Acid





मिट्टी  
वोकिंग मोड़ा

बिरनी

तलैया

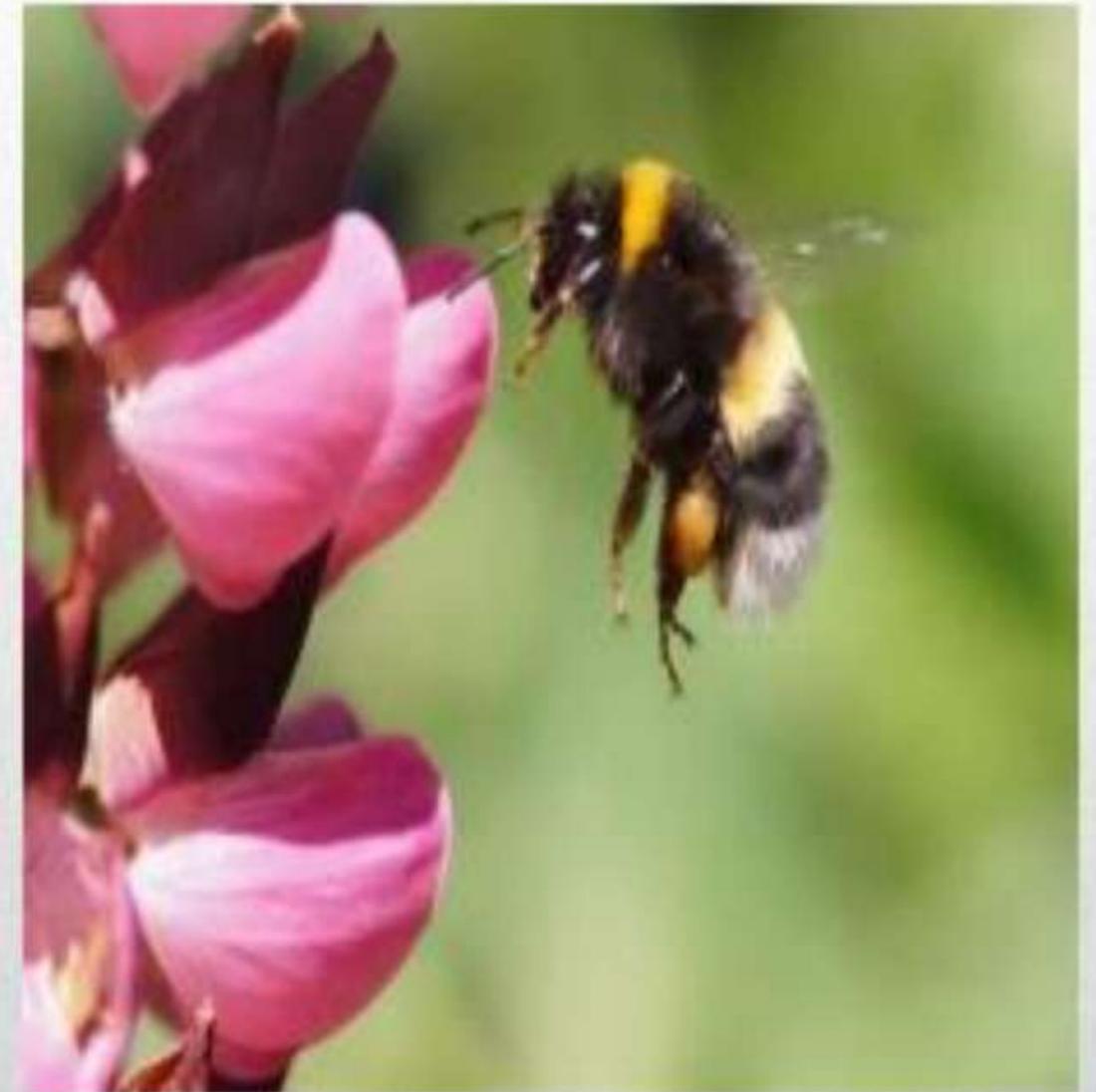
वर

Wasp Bee, Bumblebee



मधुमक्खी

भौरा





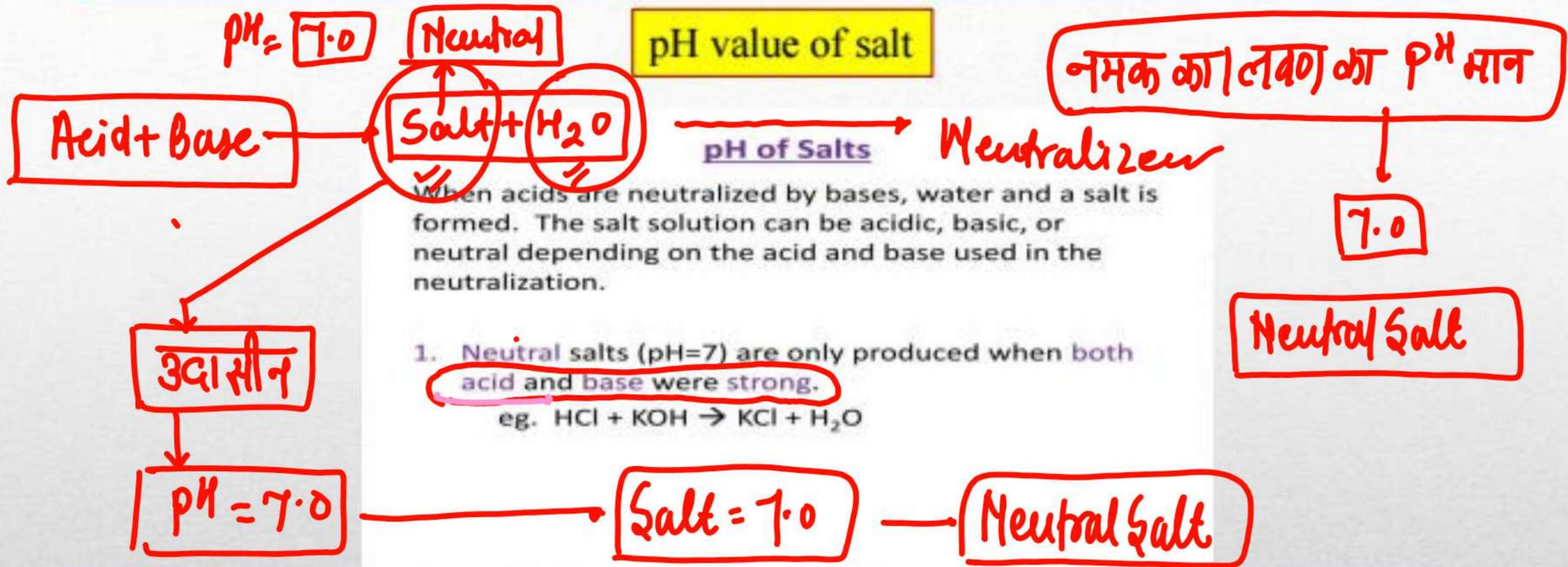
**Nettle plant**

मेथेनाइकभिल  
पौधे

**Dock Plant**

पत्ती





**Salt of strong acid and weak base are acidic which pH value less than 7 and those of strong base and weak acid are basic in nature, with pH value more than 7.**

Strong = प्रबल / Weak = दुर्बल

①

Strong Acid + Strong base  $\Rightarrow$  Salt (Neutral)  
(pH = 7.0)

②

Strong Acid + Weak base.  $\Rightarrow$  Salt (Acidic)  
pH > 7

③

Weak Acid + Strong Base  $\Rightarrow$  Salt (Basic)  
pH < 7

④

Weak Acid + Weak Base  $\Rightarrow$  Salt (Neutral)  
pH  $\approx$  7 (7 के समान)

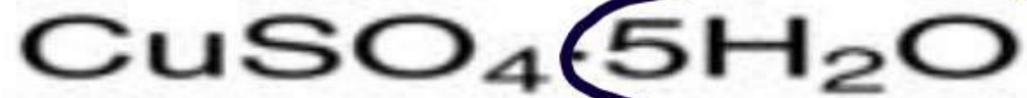
## Crystal of Salt

## लवण के क्रिस्टल

The presence of water molecule within the crystal structure of the certain salt is known as water of crystallization. when these hydrated salt are heated the water of crystallization is driven off, resulting in the salt becoming anhydrous and often changing color .

कुछ निश्चित लवण क्रिस्टल के साथ जल की उपस्थिति होती है जिसे लवण का जलीय क्रिस्टल कहा जाता है। जब इसे गर्म करते हैं तो पानी की मात्रा बाहर निकल जाती है और यह क्रिस्टल "अनहाइड्रस" इस प्रकार, लवण के क्रिस्टल अपना रंग भी बदल देते हैं।

काँपर सल्फेट

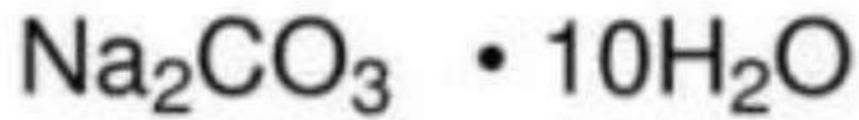


(Copper Sulfate)



Copper sulfate contain five water molecule within its crystal structure . when heated these water molecule are removed, and the salt turns white . however when the anhydrous salt is exposed to moisture it can reabsorb water molecule and regain its original blue color

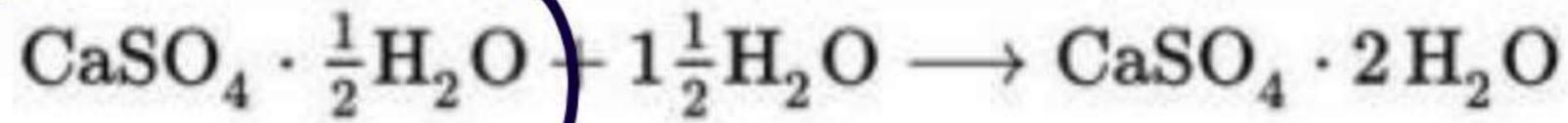
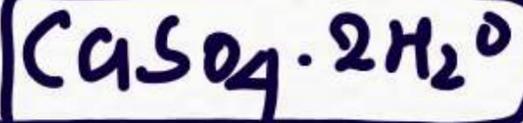
सोडियम कार्बोनेट डेकाहाइड्रेट



क्रिस्टल  
वमीयुक्त

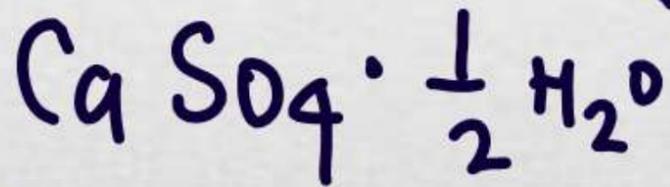
Sodium carbonate decahydrate, which has 10 water molecule as a part of its crystal structure, this salt is indeed wet due to the water of crystallization.

Gypsum



373K

जर्म (Heat)



प्लास्टर ऑफ पेरिस

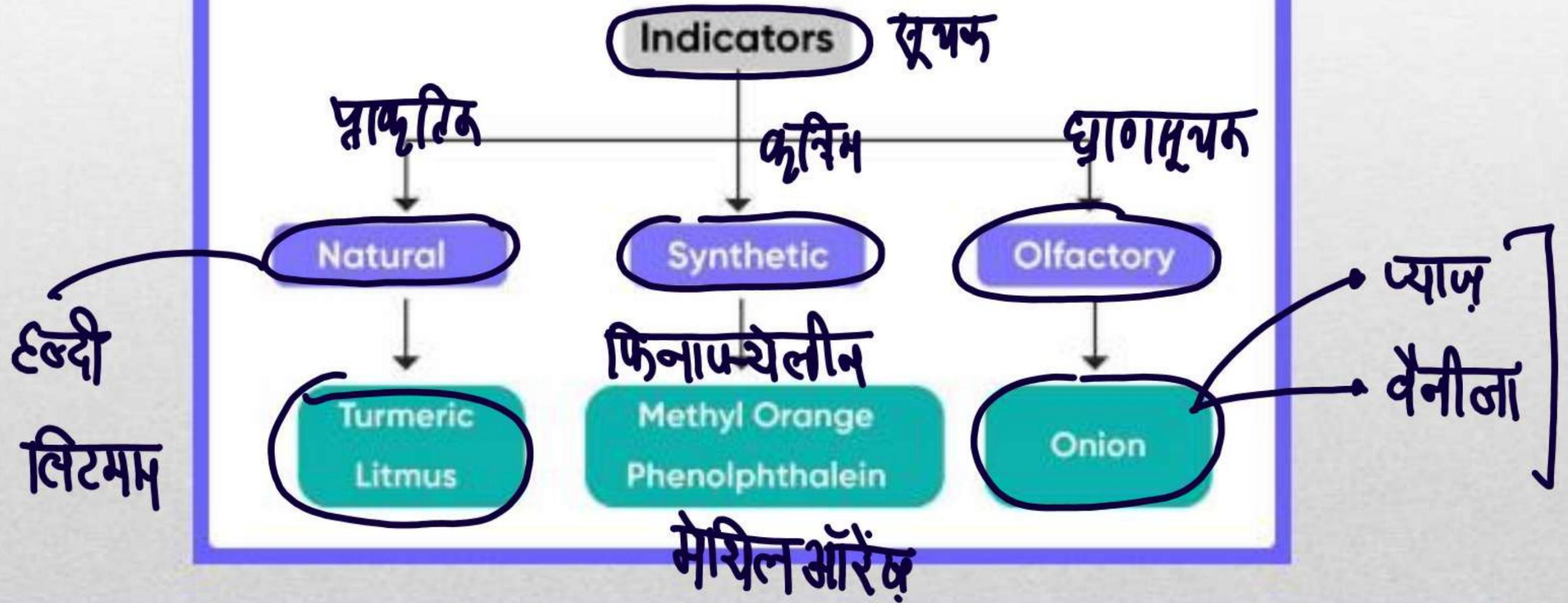
Calcium Sulphate Hemihydrate

कैल्शियम सल्फेट हेमिहाइड्रेट अर्धज



# एसिड बेस संकेतक

## INDICATORS OF ACIDS AND BASES



## Litmus : A natural dye



Acid

Blue litmus turns red



Base

Red litmus turns blue

■ The commonly used natural indicator is Litmus  
derived from lichens. लाइकेन से प्राप्त है

■ In distilled water, it appears with a mauve or purple color

वैगरी

①  
आमृत जल

■ when added to an acidic solution, it changes to Red and in basic solution it turns blue

■ Litmus is available as a solution or in the form of strip called Litmus Paper, typically in red and blue varieties.

■ The solution which do not change in color of either red or blue Litmus are known as neutral solutions.

## China rose petals as indicator

Acidic

Dark pink

Magenta



Basic

Green

The China rose indicator turns acidic solution to dark pink or Magenta and basic solution to Green.

# ACID RAIN

