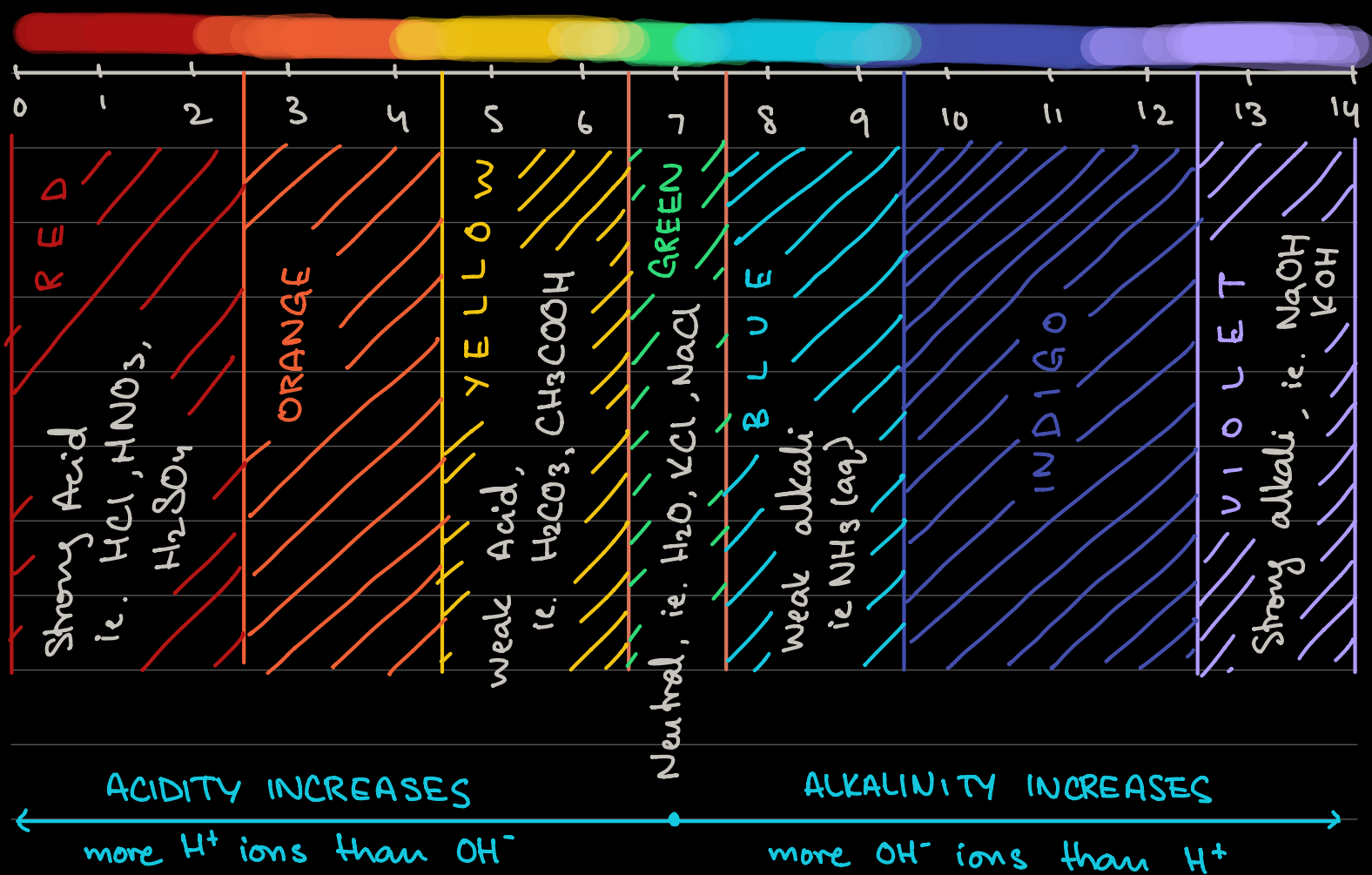
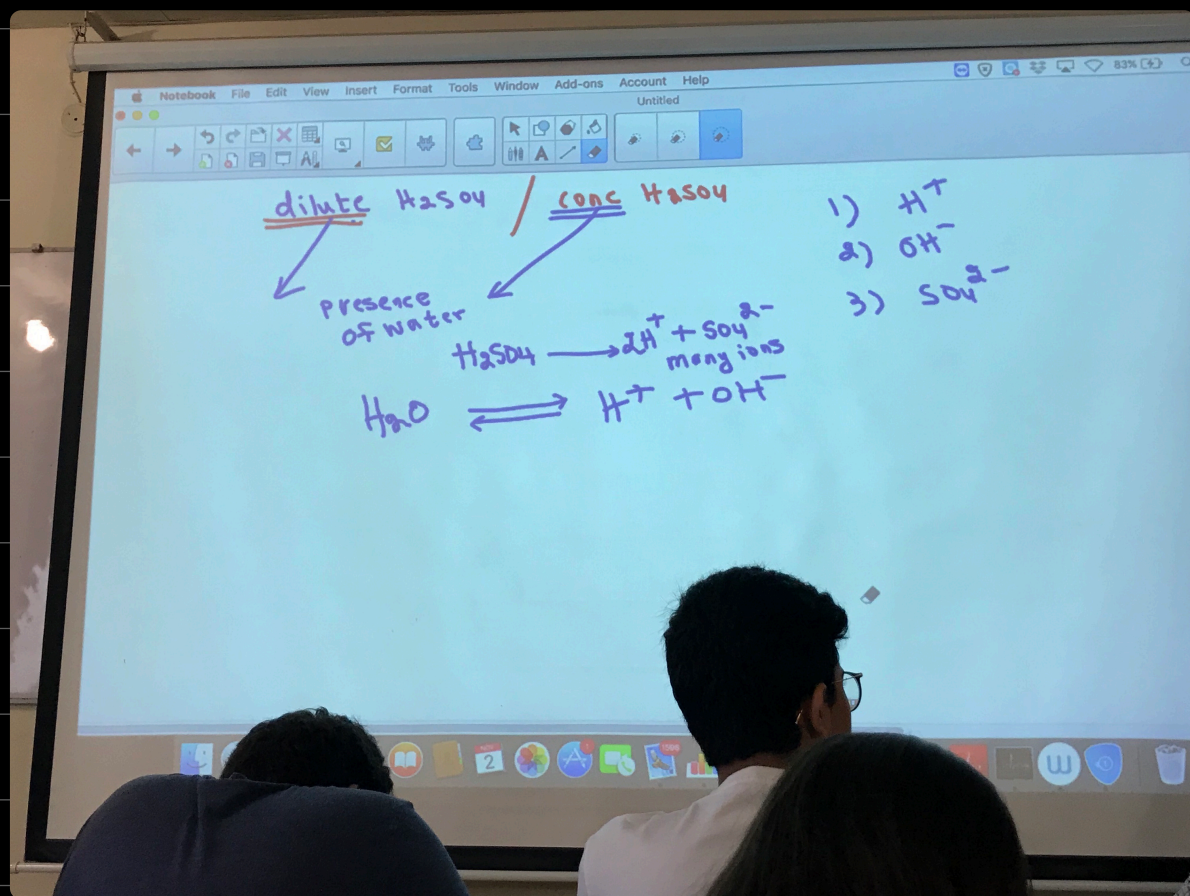
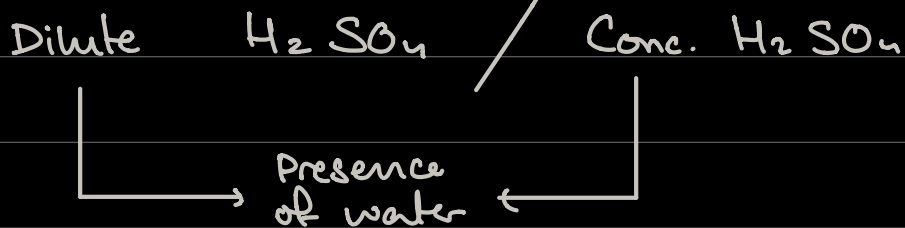


# PH SCALE

- Scale of numbers ranging from 0 to 14 and it is used to determine relative acidity, alkalinity, and neutrality of a solution.
- The pH of a solution can accurately be determined by using a pH meter and approximately by using universal indicator and comparing its colour with a standard colour chart.

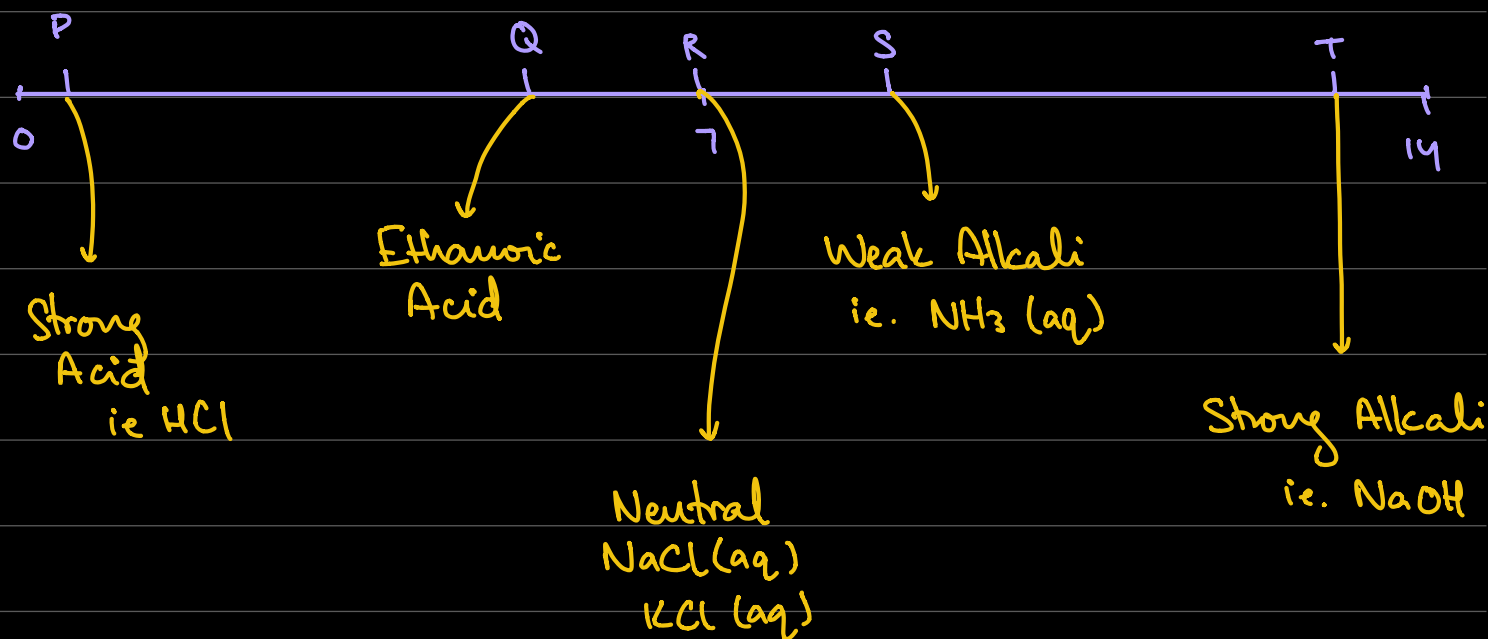




Q. Which ion is found in the least amount in dilute sulfuric acid?  $\text{OH}^-$

↳ or any acid (in this case)

Q. The pH scale below shows the position of five aqueous solutions p, q, r, s, t of equal concentration. What would the solutions be?



Q. The table below gives information about three indicators.

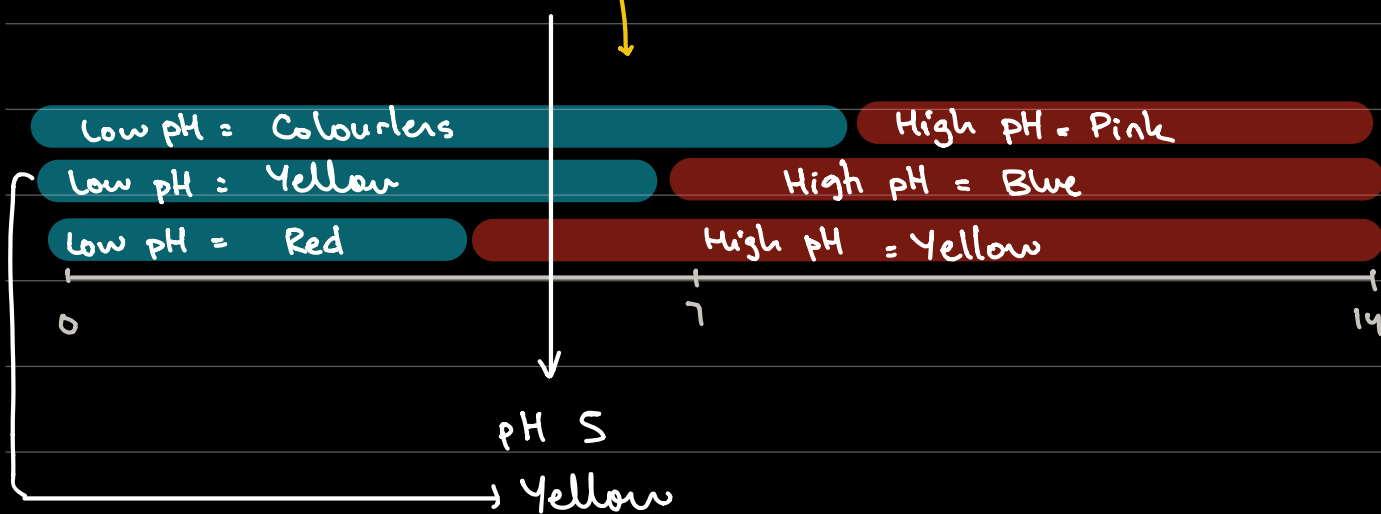
	Indicators	Low pH	high pH	pH at which colour change occurs
1)	Methyl Orange	Red	Yellow	4.0
2)	Bromothyl Blue	Yellow	Blue	6.5
3)	Phenolphthalein	Colourless	Pink	9.0

Q. If equal volumes of these three indicators are mixed, what colour would be observed at pH 5.

- A) Blue
- B) Green

c) Yellow } → Answer

D) Red.



Q. Which set of colour would be obtained if each indicator is added separately to pure water?

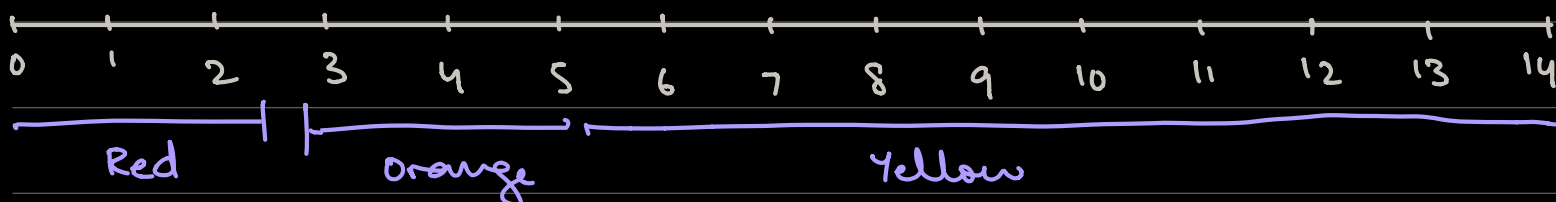
Methyl Orange → Yellow

Bromothymol Blue → Blue

Phenolphthalein → Colourless

At pH = 7

Q. The colour of indicator X in solutions of different pH is shown below.



Indicator x is suitable to distinguish between...

Strong Alkali

pH = 7

A)  $\text{NaOH (aq)}$ ,  $\text{H}_2\text{O (l)}$  → Yellow / same colour

B)  $\text{NaOH (aq)}$ ,  $\text{NH}_3\text{(aq)}$  → Same colour

C)  $\text{H}_2\text{O (l)}$ ,  $\text{NaCl (aq)}$  → same colour

D)  $\text{CO}_2\text{(aq)}$ ,  $\text{HCl (aq)}$

→  $\text{H}_2\text{CO}_3$

Weak  
Acid

Strong  
Acid.