

TRUE or false

1. True

According to definition of acid.

2. False.

Acids turn blue litmus red

3. False

Bases turn red litmus blue

4. True.

$\text{Acid} + \text{Base} \rightarrow \text{salt} + \text{water}$

5. True

Indicators change their colour in acidic or basic sol<sup>n</sup>.

6. False.

Tooth decay is caused by presence of acid.

7. False.

$\text{Ba}(\text{OH})_2$  is a diacidic base.

LEVEL 1

1. (C)

Acids turn blue litmus red.

2. (C)

Bases turn red litmus blue

3. (A)

Bases turn red litmus blue.

4. (C)

Litmus is obtained from lichens

5. (C)

Distilled water is neutral.

6. (A)

Acids do not affect red litmus.

7. (B)

Bases do not affect blue litmus.

8. (D)

Acid + base  $\rightarrow$  salt + water.

9. (D)

Indicators show different colour in acidic or basic solution.

10. (A)

Antacid neutralises acids, so they contain base.

11. (B)

$Mg(OH)_2$  (milk of magnesia) is base.

12. (B)

Ant bite contains acids which is neutralised by applying calamine solution (basic).

13. (A)

Factory wastes contain acids.

14. (A)

Sodium hydroxide ( $NaOH$ ) is a base.

15. (C)

Blue litmus is not affected by bases.

16. (A)

Different type of indicator gives different colour in acidic & basic solutions.

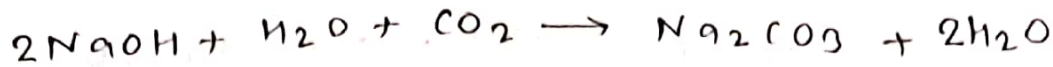
17. (B)

$NaOH$  absorbs moisture from surrounding forming solution.

18. (A)

$H_2SO_4$  is commonly called as oil of vitriol.

19. (C)



20. (D)

Acid + Base Neutralisation  $\rightarrow$  Salt + water.

### LEVEL 2

1. (B)

Acetic acid (Acetum = vinegar) is used in making of vinegar.

2. (B)

$NH_4OH$  is weakest base among all.

3. (A)

Sodium bicarbonate ( $NaHCO_3$ ) is an ingredient of baking powder.

4. (D)

Bleaching powder has disinfectant, bleaching and oxidizing properties.

5. (A)

During hydrolysis heat is released.

6. (B)

Shift in equilibrium point is responsible for colour change of indicators.

7. (C)

Mixed salt & complex salt both are different.  
Mixed salt -  $KCl \cdot MgCl_2 \cdot 6H_2O$  - complex salt  $K_4[Fe(CN)_6]$

## SUBJECTIVE QUESTIONS

1. Classification of acids on the basis of basicity
  - (i) monobasic acid: Acids which contain one  $H^+$  in aqueous solution. e.g.  $HCl$ ,  $HNO_3$
  - (ii) Dibasic acid: Acids which produce two  $H^+$  in aqueous solution e.g.  $H_2SO_4$
  - (iii) Tribasic acid: Acids which produce three  $H^+$  ions in aqueous solution. e.g.  $H_3PO_4$ .
2.
  - (a) citric acid: used as preservative and flavouring agent in food and beverages
  - (b) Acetic acid: used in making of vinegar.
  - (c) Tartaric acid: often used as an acidulant in grape and lime flavored beverages, jams and jellies.
  - (d) Boric acid: used as an antiseptic.
  - (e) Carbonic acid: widely used in the preparation of bubbly drinks such as sodas, soft drinks and other aerated beverages.
  - (f) Oxalic acid: commercially used as laundry rinse, wood bleaching agent and calcium remover.

3. Water soluble bases are known as alkali.  
All alkali are bases but all bases are not alkali

soluble bases -  $\text{NaOH}$ ,  $\text{KOH}$  etc.

Insoluble bases -  $\text{Cu}(\text{OH})_2$ ,  $\text{Fe}(\text{OH})_3$  etc.

4. Term acid is derived from a Latin word 'Acidum' meaning sour taste.

Acids produces  $\text{H}^+$  ions in aqueous sol<sup>n</sup>.

Inorganic acids - Acids which are obtained

from rocks and minerals are called

Inorganic or mineral acids.

e.g.  $\text{HCl}$ ,  $\text{H}_2\text{SO}_4$ ,  $\text{HNO}_3$  etc.

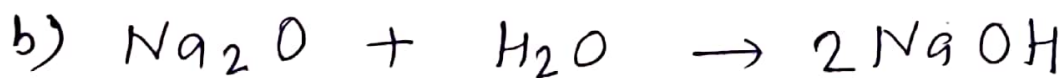
Organic acids : Acids which are present

in animals and plants are known as organic acids.

e.g.  $\text{HCOOH}$ ,  $\text{CH}_3\text{COOH}$  etc.



sodium oxide



sodium hydroxide

6. Hygroscopic substance - conc.  $\text{H}_2\text{SO}_4$

deliquescent substance -  $\text{NaOH}$

efflorescent substance -  $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$