

SUBJECT – SCIENCE

CLASS – VII

CHAPTER – 5, ACIDS, BASES AND SALTS

1 MARK QUESTIONS

1. What is an indicator?

An indicator is a substance that changes its colour in acidic and basic solutions.

2. What are salts?

Salts are substances formed due to neutralisation reaction between an acid and a base.

3. What is litmus?

Litmus is a dye extracted from lichens that changes its colour in acidic and basic solutions.

4. What are the products of a neutralisation reaction?

Salt and water are the products of a neutralisation reaction.

5. What is milk of magnesia?

Milk of magnesia is an antacid which contains magnesium hydroxide.

6. Name the most commonly used natural indicator.

Litmus is the most commonly used natural indicator.

7. Name the acid present in sting of an ant.

Formic acid is present in sting of an ant.

8. Why lemon juice and orange juice tastes sour?

Lemon juice and orange juice tastes sour because they contain acid.

9. Why baking soda tastes bitter?

Baking soda tastes bitter because it contains base.

10. Tina rubs a solution between fingers and feels soapy, what is the nature of that solution?

The solution is basic in nature.

2 MARKS QUESTIONS

11. Why care should be taken while handling laboratory acids and bases?

Care should be taken while handling laboratory acids and bases because they are corrosive in nature, irritating and harmful to skin.

12. Why we do not get the result when we use solid baking soda on dry litmus paper?

We do not get the result when we use solid baking soda on dry litmus paper because in solid states, ions are not free to move.

13. Give some examples of indicators.

- Litmus paper/solution
- China rose
- Phenolphthalein
- Turmeric

14. What is the colour of litmus indicator in acidic and basic solutions?

- In acidic solutions, blue litmus changes to red and red litmus remains red.
- In basic solutions, red litmus changes to blue and blue litmus remains blue.

15. What is the effect of China rose indicator on acidic and basic solutions?

- China rose indicator turns acidic solutions to dark pink and basic solutions to green.

16. What is the colour of turmeric indicator in acidic and basic solutions?

- In acidic solutions, the colour of turmeric indicator remains same (yellow).
- In basic solutions, the colour of turmeric indicator changes to red.

17. What is the colour of phenolphthalein indicator in acidic and basic solutions?

- In acidic solutions, the phenolphthalein indicator remains colourless.
- In basic solutions, the colour of phenolphthalein indicator changes to pink.

18. Why organic matter is added in basic soil?

Organic matter is added in basic soil because organic matter releases acid which neutralises the basic nature of the soil.

19. Why do we use indicators?

We cannot taste all the substances, so indicators are used to differentiate between acids, bases and salt.

20. What are neutral solutions?

The solutions which do not change the colour of red and blue litmus are known as neutral solutions. These solutions are neither acidic nor basic.

3 MARKS QUESTIONS

21. Give three examples of everyday materials which contain an acid.

- Curd contains lactic acid.
- Vinegar contains acetic acid
- Orange contains citric acid

22. Give three examples of everyday materials which contain a base.

- Lime water contains calcium hydroxide
- Window cleaner contains ammonium hydroxide

- Soap contains sodium hydroxide or potassium hydroxide

23. Why does a turmeric stain on a white shirt turn red when washed with soap?

Turmeric is a natural indicator that changes to red colour in basic solutions. As soap contains sodium hydroxide or potassium hydroxide which is basic in nature, so turmeric stain turns red when washed with soap.

24. How does slaked lime helps in the treatment of acidic soil?

Slaked lime (calcium hydroxide) is basic in nature. When the acidic soil is treated with slaked lime then slaked lime being basic in nature neutralise the effect of acid present in soil and makes it neutral.

25. Will the reaction mixture become hot when dilute sulphuric acid is added to lime water?

Yes, the reaction mixture will become hot because when dilute sulphuric acid is added to lime water then neutralisation reaction takes place between them and heat is evolved. The evolved heat raises the temperature of the reaction mixture.

26. What is an acid rain? What is the cause of acid rain?

The rain containing excess of acids is called an acid rain. When carbon dioxide, sulphur dioxide and nitrogen dioxide which are released into the air as pollutants dissolve in rain drops and form carbonic acid, sulphuric acid and nitric acid then acid rain occurs.