



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society

WORKSHEET NO. 1

Printed pages: (07) seven

SUB: SCIENCE

CHAPTER – ACIDS, BASES AND SALTS

CLASS-VII

I. Multiple-choice Questions

(10X1=10)

1. The correct way of making a solution of acid in water is to

- (a) add water to acid.
- (b) add acid to water.
- (c) mix acid and water simultaneously.
- (d) add water to acid in a shallow container.

2. Products of a neutralisation reaction are always

- (a) an acid and a base.
- (b) an acid and a salt.
- (c) salt and water.
- (d) a salt and a base

3. Turmeric is a natural indicator. On adding its paste to acid and base separately, which colours would be observed.

- (a) Yellow in both acid and base.
- (b) Yellow in acid and red in the base.
- (c) Pink in acid and yellow in the base.
- (d) Red in acid and blue in the base.

4. Phenolphthalein is a synthetic indicator, and its colours in acidic and basic solutions, respectively, are

- (a) red and blue.
- (b) blue and red.
- (c) pink and colourless.
- (d) colourless and pink

5. When the soil is too basic, plants do not grow well in it. To improve its quality what must be added to the soil?

- (a) Organic matter
- (b) Quick lime
- (c) Slaked lime
- (d) Calamine solution

6. 'Litmus', a natural dye, is an extract of which of the following?

- (a) China rose (Gudhal)
- (b) Beetroot
- (c) Lichen
- (d) Blueberries (Jamun)

7. A neutralisation reaction is a

- (a) physical and reversible change.
- (b) a physical change that cannot be reversed.
- (c) chemical and reversible change.
- (d) the chemical change that cannot be reversed.

8. A solution changes the colour of the turmeric indicator from yellow to red.

The solution is

- (a) basic
- (b) acidic
- (c) neutral
- (d) either neutral or acidic

9. Which of the following set of substances contain acids?

- (a) Grapes, lime water
- (b) Vinegar, soap
- (c) Curd, milk of magnesia
- (d) Curd, vinegar

10. Which of the following is an acid-base indicator?

- (a) Vinegar
- (b) Lime water
- (c) Turmeric
- (d) Baking soda

I. Give short answers for the following questions: (10X1=10M)

1. Ammonia is found in many household products, such as window cleaners. It turns red litmus blue. What is its nature? 1M

2. Name the source from which litmus solution is obtained. 1M

3. What is the use of Litmus solution? 1M

4. Is the distilled water acidic/basic/neutral? 1M
5. How would you verify the nature of distilled water? 1M
6. Mark 'T' if the statement is true and 'F' if it is false.
- (i) Nitric acid turns red litmus blue. (T/F) 1M
- (ii) Sodium hydroxide turns blue litmus red. (T/F) 1M
- (iii) Sodium hydroxide and hydrochloric acid neutralise each other and form salt and water. (T/F) 1M
- (iv) Indicator is a substance which shows different colours in acidic and basic solutions. (T/F) 1M
- (v) Tooth decay is caused by the presence of a base. (T/F) 1M
- II. Answer the following questions in two or three sentences:
7. Describe the process of neutralisation with the help of an example. 2M
8. Why do we take antacid tablet when we suffer from acidity? 2M
9. Red litmus paper is dipped in a solution. It remains Red. What is the nature of the solution? Explain. 2M
10. Why Calamine solution is applied on the skin when an ant bites? 2M
11. Factory waste is neutralised before disposing it into the water bodies. Give reason. 2M
12. Give any TWO characteristics of acids. 2M
13. Give any TWO characteristics of Bases. 2M
14. What are salts? 2M
15. Name TWO natural indicators. 2M

16. Name TWO synthetic indicators. 2M

IV. Answer the following questions in detail:

17. Dorji has a few bottles of soft drinks in his restaurant. But, unfortunately, these are not labelled. He has to serve the drinks on the demand of customers. One customer wants an acidic drink, another wants a basic drink, and the third one wants a neutral drink. How will Dorji decide which drink is to be served to whom? 3M

18. Three liquids are given to you. One is hydrochloric acid, another is sodium hydroxide, and the third is a sugar solution. How will you identify them? You have only turmeric indicator. 3M

19. While playing in a park, a child was stung by a wasp. Some elders suggested applying the paste of baking soda and other lemon juice as the remedy. Which remedy do you think is appropriate and why? 3M

20. A farmer was unhappy because of his low crop yield. He discussed the problem with an agricultural scientist and realised that the soil of his field was either too acidic or too basic. What remedy would you suggest the farmer to neutralise the soil? 3M

21. Name the acids used for /in the following

- Food preservation
- Aerated drinks
- As a foaming agent in fire extinguishers 3M

22 . Give some uses of Neutralisation in everyday life. 5M

23. Look at the given Figure which shows solutions taken in test tubes A, B, C and D. What colour is expected when a piece of red litmus paper is dropped in each test tube? The nature of the solutions is given in the table for your help. 5M

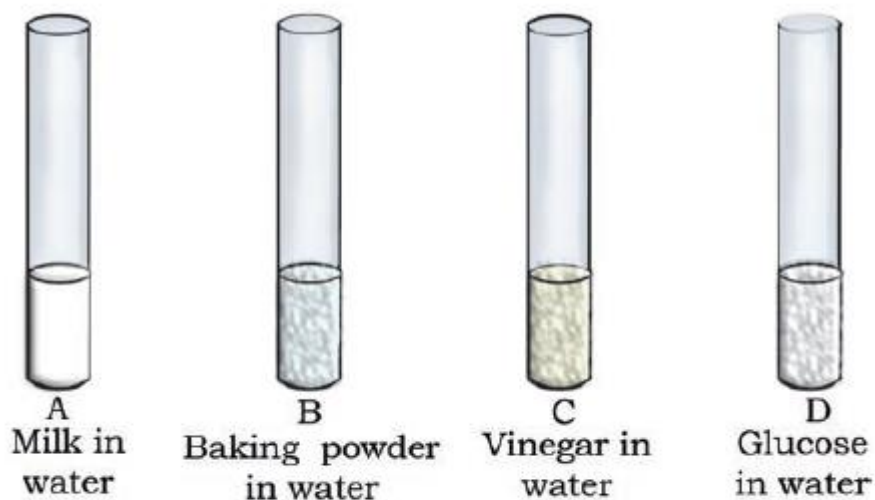


Fig. 5.1

24. Match the substances in Column I with those in Column II. 5M

Column I	Column II
a) Tartaric acid	i) Soap
b) Calcium hydroxide	ii) Curd
c) Formic acid	iii) Unripe mangoes
d) Sodium Hydroxide	iv) Ant's sting
e) Lactic acid	v) Lime water

25. Boojho, Paheli and their friend Golu were provided with a test tube, each containing China rose solution, which was pink in colour. Boojho added two drops of solution 'A' in his test tube and got a dark pink colour. Paheli added 2 drops of solution 'B' to her test tube and got green colour. Golu added 2 drops of solution 'C' but could not get any change in colour. Suggest the possible cause for the variation in their results. 5M

26. Paheli observed that most of the fish in the pond of her village were gradually dying. She also observed that the waste of a factory in their village was flowing into the pond, which probably caused the fish to die.

(a) Explain why the fish were dying.

(b) If the factory waste is acidic in nature, how can it be neutralised?
