

M.C.Q. : Write option with correct statement (1 * 5 = 5)

1. Which of the following observations is correct when testing with turmeric paper?
 - a) Acid turns it red
 - b) Base turns it reddish-brown
 - c) Neutral turns it red
 - d) Acid turns it blue
2. A solution turns phenolphthalein pink but does not change blue litmus. The solution is:
 - a) Acidic
 - b) Basic
 - c) Neutral
 - d) Cannot be determined
3. Which of the following will not show acidic properties?
 - a) Vinegar diluted with water
 - b) Lemon juice mixed with water
 - c) Sugar solution in water
 - d) Orange juice
4. A student accidentally spills an acidic solution on the table. Which of the following is the best immediate action?
 - a) Add more acid
 - b) Add a base like baking soda
 - c) Add sugar
 - d) Leave it as it is
5. A student adds water to concentrated lemon juice. What will happen to its acidic nature?
 - a) It becomes basic
 - b) It remains unchanged
 - c) Its acidity decreases but remains acidic
 - d) It becomes neutral

Choose the correct option: (1 * 5 = 5) { Write option only }

- a) Both A and R are true and R is the correct explanation
 - b) Both A and R are true but R is not the correct explanation
 - c) A is true but R is false
 - d) A is false but R is true
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6. Assertion (A): Phenolphthalein turns pink in acidic solution.
Reason (R): It is a synthetic indicator.
 7. Assertion (A): Strong bases are more dangerous than weak bases.
Reason (R): They react more vigorously with acids.
 8. Assertion (A): Toothpaste is basic in nature.
Reason (R): It helps neutralize acids formed in the mouth.

9. Assertion (A): A base can neutralize an acid.
Reason (R): Neutralization produces salt and water.
10. Assertion (A): Turmeric turns red in basic solution.
Reason (R): Turmeric is a natural indicator.

Case Study (5 marks)

Read the situation carefully and answer the questions in one word.

Riya was helping her mother in the kitchen. She noticed that lemon juice, baking soda, and tap water were kept on the table. She tested them using litmus paper. Lemon juice turned blue litmus red, baking soda turned red litmus blue, and tap water did not change the color of any litmus paper.

Questions:

11. What type of substance is lemon juice?
12. What does the result of baking soda indicate?
13. Why did tap water not change the color of litmus paper?
14. Name one natural indicator that Riya could use instead of litmus.
15. Give one example of a base used in daily life.