

ICSE Living Science CHEMISTRY

Class 10



Multiple-Choice Questions

CHAPTER 3: ACIDS, BASES AND SALTS

1. The basicity of an acid is related to the number of present in a molecule of that acid.
(a) hydrogen atoms (b) ionisable hydrogen atoms
(c) hydroxyl ions (d) hydronium ions
Ans: b
2. Which of these qualifies as a weak acid?
(a) Nitric acid (b) Hydrochloric acid (c) Acetic acid (d) Sulphuric acid
Ans: c
3. The solution from the options whose pH is above 7 is
(a) vinegar. (b) milk. (c) dil. acetic acid. (d) ammonia.
Ans: d

4. Match the Columns.

Column A

- (i) Hydrogen
- (ii) Carbon dioxide
- (iii) Sulphur dioxide
- (iv) Hydrogen sulphide

Column B

- (A) Smells of rotten eggs and turns lead acetate paper Black
- (B) Extinguishes a burning splinter, turns lime water milky and turns acidified potassium dichromate solution green.
- (C) Extinguishes a burning splinter, turns lime water milky and has no effect on acidified potassium dichromate solution.
- (D) Burns with a pale blue flame and a pop sound.

Choose the correct option.

- (a) (i)-(B), (ii)-(C), (iii)-(A), (iv)-(D) (b) (i)-(A), (ii)-(D), (iii)-(C), (iv)-(B)
 - (c) (i)-(D), (ii)-(C), (iii)-(B), (iv)-(A) (d) (i)-(C), (ii)-(A), (iii)-(D), (iv)-(B)
- Ans: b
5. Which acid present in the gastric juice released by stomach walls helps in the digestion of food?
(a) Nitric acid (b) Hydrochloric acid (c) Acetic acid (d) Sulphuric acid
Ans: b
6. Which acid-base indicator is it which is a colourless substance and remains colourless in an acidic solution but in basic solution, it turns the solution pink?
(a) Methyl orange (b) Universal indicator
(c) Phenolphthalein (d) Litmus paper
Ans: c

7. Bee sting can be treated with
 (a) baking soda. (b) vinegar. (c) potassium hydroxide. (d) lemon juice.
 Ans: a
8. Bases soluble in water are called alkalis. Which of the following bases is/are alkalis?
 (i) NaOH (ii) CuO (iii) KOH
 (iv) Fe(OH)₂ (v) NH₄OH
 Select the correct option.
 (a) (i) and (v) (b) (i), (ii) and (iv) (c) (i) and (iv) (d) (i), (iii) and (v)
 Ans: d
9. Bleaching powder is produced by the action of chlorine on
 (a) Calcium hydroxide. (b) Calcium carbonate.
 (c) Sodium hydroxide. (d) Sodium hydrogen carbonate.
 Ans: a
10. Which of the following statements is correct about an aqueous solution of an acid and of a base?
 (i) Higher the pH, stronger the acid (ii) Higher the pH, weaker the acid
 (iii) Lower the pH, stronger the base (iv) Lower the pH, weaker the base
 Choose the correct option.
 (a) (i) and (iii) (b) (ii) and (iii) (c) (i) and (iv) (d) (ii) and (iv)
 Ans: d
11. Which of the following substance will not give carbon dioxide on treatment with dilute acid?
 (a) Marble (b) Limestone (c) Lime (d) Baking soda
 Ans: c
12. A salt formed by the partial replacement of the ionisable hydrogen ions of an acid by a metal ion is called a/an
 (a) basic salt. (b) acidic salt. (c) double salt. (d) complex salt.
 Ans: b
13. Which of the following salts is insoluble in water?
 (a) Sodium carbonate (Na₂CO₃) (b) Potassium carbonate (K₂CO₃)
 (c) Ammonium carbonate [(NH₄)₂CO₃] (d) Silver chloride (AgCl)
 Ans: d
14. Which of the following statements is not correct?
 (a) All metal carbonates react with acid to give a salt, water and carbon dioxide.
 (b) All metal oxides react with water to give salt and acid.
 (c) Some metals react with acids to give salt and hydrogen.
 (d) Some non-metal oxides react with water to form an acid.
 Ans: b
15. Which of the following statements is true for acids?
 (a) Bitter and change red litmus to blue (b) Sour and change red litmus to blue
 (c) Sour and change blue litmus to red (d) Bitter and change blue litmus to red
 Ans: c
16. Which of the following is a double salt?
 (a) Potash alum (b) Sodium phosphate (c) Calcium sulphate (d) Silver chloride
 Ans: a

17. Fresh milk is slightly acidic with a pH of around

- (a) 3.5–3.7 (b) 5.5–5.7 (c) 7.5–8.7 (d) 6.5–6.7

Ans: d

18. When a drop of methyl orange is added to an acidic solution, it turns the solution and a basic solution to

- (a) orange, blue. (b) red, yellow.
(c) green, pink. (d) orange, yellow.

Ans: b

19. Which of the following is wrongly matched?

- (a) Tartaric acid – Curd (b) Acetic acid – Vinegar
(c) Formic acid – Soft drink (d) Oxalic acid – Tomato

Ans: a

20. A statement of assertion followed by a statement of reason is given below. Mark the correct choice.

Assertion: Farmers add powdered lime and calcium hydroxide to acidic soil.

Reason: The lime neutralizes the acid and makes the soil slightly alkaline.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

Ans: a