
📘 Chapter 2 – Acids, Bases and Salts

30 Important Q&A

Basic Concepts

Q1. Define an acid.
Ans: A substance that produces H^+ ions in aqueous solution.

Q2. Define a base.
Ans: A substance that produces OH^- ions in aqueous solution.

Q3. What is a salt?
Ans: A compound formed when an acid reacts with a base or metal.

Q4. Give one example of a strong acid.
Ans: HCl (Hydrochloric acid)

Q5. Give one example of a weak base.
Ans: NH_4OH (Ammonium hydroxide)

Reactions & Observations

Q6. Reaction of hydrochloric acid with sodium hydroxide produces:
Ans: NaCl + H_2O (Neutralisation reaction)

Q7. Reaction of acid with metal carbonate produces:
Ans: Salt + CO_2 + H_2O

Q8. Write the reaction of HCl with Na_2CO_3.
Ans: $Na_2CO_3 + 2HCl \rightarrow 2NaCl + H_2O + CO_2$

Q9. Reaction of acid with metal produces:
Ans: Salt + Hydrogen gas (H_2)

Q10. Write the reaction of Zn with H_2SO_4.
Ans: $Zn + H_2SO_4 \rightarrow ZnSO_4 + H_2\uparrow$

Indicators

Q11. Which indicator turns red in acidic solution?
Ans: Litmus paper

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Q12. Which indicator turns pink in basic solution?
Ans: Phenolphthalein

Q13. Which indicator turns yellow in basic solution?
Ans: Methyl orange

Q14. Which indicator is neutral to acids and bases?
Ans: Phenolphthalein is colourless in neutral solution

Q15. Which natural indicator is extracted from red cabbage?
Ans: Anthocyanin

Salts & Their Uses

Q16. Give the formula of washing soda.
Ans: $Na_2CO_3 \cdot 10H_2O$

Q17. Give the formula of baking soda.
Ans: $NaHCO_3$

Q18. Give the formula of bleaching powder.
Ans: $CaOCl_2$

Q19. Which salt is used for disinfecting drinking water?
Ans: Bleaching powder ($CaOCl_2$)

Q20. Which salt is used in making glass and soap?
Ans: Washing soda ($Na_2CO_3 \cdot 10H_2O$)

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pH & Strength

Q21. What is the pH of a neutral solution?
Ans: 7

Q22. What is the pH range of acids?
Ans: 0–6

Q23. What is the pH range of bases?
Ans: 8–14

Q24. Which is stronger: 0.1 M HCl or 0.1 M CH_3COOH?
Ans: 0.1 M HCl (strong acid vs weak acid)

Q25. Which is stronger: NaOH or NH_4OH?
Ans: NaOH (strong base vs weak base)

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Reasoning / Real-Life Applications

Q26. Why is lemon juice acidic?
Ans: It contains citric acid which produces H^+ ions in water.

Q27. Why is milk of magnesia used as an antacid?
Ans: $Mg(OH)_2$ neutralises excess stomach acid.

Q28. Why is baking soda used in baking?
Ans: It produces CO_2 on heating, making dough rise.

Q29. Why is plaster of Paris used in making toys and idols?
Ans: It sets quickly when mixed with water, forming a hard structure.

Q30. Why is washing soda added to hard water?
Ans: It removes hardness by precipitating calcium and magnesium ions.

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