

1. Name the gas evolved when sodium hydrogen carbonate is made to react with dilute hydrochloric acid. How will you test the gas?
2. Metal compound A reacts with dilute hydrochloric acid to produce effervescence. The gas evolved to extinguish a burning candle. Write a balanced chemical equation for the reaction if one of the compounds formed is calcium chloride.
3. Which gas is usually liberated when an acid reacts with a metal? Illustrate with an example. How will you test for the presence of this gas?
4. (a) Define olfactory indicators. Name two substances which can be used as olfactory indicators.
(b) Choose strong acids from the following:
 CH_3COOH , H_2SO_4 , H_2CO_3 , HNO_3
5. Explain the action of dilute hydrochloric acid on the following with chemical equation:
(i) Magnesium ribbon (ii) Sodium hydroxide (iii) Crushed egg shells
6. State the chemical properties on which the following uses of baking soda are based:
(i) as an antacid
(ii) as a soda acid fire extinguisher
(iii) to make bread and cake soft and spongy.
7. Why does an aqueous solution of an acid conduct electricity?
8. A blue colour salt becomes white on heating. Give a reason for the above observation. What happens when we add water to the salt which is obtained after heating? Identify the salt and write its formula also.
9. Name the acids found in:
(a) Vinegar (b) Tamarind (c) Lemon (d) Nettle sting

10. A knife, which is used to cut fruit, was immediately dipped into water containing drops of blue litmus solution. If the colour of the solution is changed to red, what inference can be drawn about the nature of the fruit and why?
11. Write observation with the chemical equation for the following reaction: carbon dioxide is made to pass through lime water.
12. Why are acids never stored in metal containers? What types of containers are used to store acids?
13. State in brief the preparation of washing soda from baking soda. Write a balanced chemical equation of the reaction involved.
14. What can you say about the pH of salts?
15. What is bleaching powder chemically called? Give reaction involved in its preparation. State one of its uses.
16. What is a neutralisation reaction? Give an example.
17. Explain the behaviour of an acid on being dissolved in water.
18. When electricity is passed through a common salt solution, sodium hydroxide is produced along with the liberation of two gases 'X' and 'Y'. 'X' burns with a pop sound whereas, 'Y' is used for disinfecting drinking water.
 - (i) Identify X and Y.
 - (ii) Give the chemical equation for the reaction stated above.
 - (iii) State the reaction of Y with dry slaked lime.
19. What is the chemical formula of Gypsum? How many molecules of water of crystallisation are present in its one molecule?
20. What happens to the orange colour of Methyl orange when treated with a base and an acid?
21. Give the common name of the following:
 - (i) Na_2CO_3
 - (ii) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
 - (iii) NaHCO_3
 - (iv) CaCO_3

22. What happens when acids react with metals? Give an example.
23. In terms of acidic strength, which one of the following is in the correct increasing order?
- (a) Water < Acetic acid < Hydrochloric acid
 - (b) Water < Hydrochloric acid < Acetic acid
 - (c) Acetic acid < Water < Hydrochloric acid
 - (d) Hydrochloric acid < Water < Acetic acid
24. Explain how antacid works.
25. What are amphoteric oxides? Give two examples of amphoteric oxides.
26. (i) Name the compound which is obtained from baking soda and is used to remove permanent hardness of water. (ii) Write its chemical formula.
27. Which of the following is used for disinfecting drinking water to make it free from germs?
- 1) O_2
 - 2) $NaHCO_3$
 - 3) $CaOCl_2$
 - 4) CO_2