

## Acids, Bases & Salts

1. Why do  $\text{HCl}$ ,  $\text{HNO}_3$ , etc., show acidic characters in aqueous solutions while solutions of compounds like alcohol and glucose do not show acidic characters?
2. Why does an aqueous solution of an acid conduct electricity?
3. Why does dry  $\text{HCl}$  gas not change the color of the dry litmus paper?
4. While diluting an acid, why is it recommended that the acid should be added to water and not water to the acid?
5. How is the concentration of hydronium ions ( $\text{H}_3\text{O}^+$ ) affected when a solution of an acid is diluted?
6. How is the concentration of hydroxide ions ( $\text{OH}^-$ ) affected?
7. A solution turns red litmus blue, its pH is likely to be  
(a) 1 (b) 4 (c) 5 (d) 10
8. A solution reacts with crushed egg-shells to give a gas that turns lime-water milky. The solution contains  
(a)  $\text{NaCl}$  (b)  $\text{HCl}$  (c)  $\text{LiCl}$  (d)  $\text{KCl}$
9. 10 mL of a solution of  $\text{NaOH}$  is found to be completely neutralised by 8 mL of a given solution of  $\text{HCl}$ . If we take 20 mL of the same solution of  $\text{NaOH}$ , the amount  $\text{HCl}$  solution (the same solution as before) required for neutralisation will be  
(a) 4 mL (b) 8 mL (c) 12 mL (d) 16 mL
10. Which one of the following types of medicines is used for treating indigestion?  
(a) Antibiotic  
(b) Analgesic  
(c) Antacid  
(d) Antiseptic
11. Write word equations and then balanced equations for the reaction taking place when –  
(a) dilute sulphuric acid reacts with zinc granules.  
(b) dilute hydrochloric acid reacts with magnesium ribbon.  
(c) dilute sulphuric acid reacts with aluminium powder.  
(d) dilute hydrochloric acid reacts with iron filings.
12. Compounds such as alcohols and glucose contain hydrogen but are not categorized as acids. Describe an Activity to prove it.
13. Why does distilled water not conduct electricity, whereas rain water does?
14. A milkman adds a very small amount of baking soda to fresh milk.  
(a) Why does he shift the pH of the fresh milk from 6 to slightly alkaline?  
(b) Why does this milk take a long time to set as curd?
15. Plaster of Paris should be stored in a moisture-proof container. Explain why?
16. What is a neutralization reaction? Give two examples.
15. Give two important uses of washing soda and baking soda.