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Worksheet: Acids, Bases and Salts

1. A white powder is added while baking cakes to make it soft and spongy. Name its main ingredients. Explain the function of each ingredient. Write the chemical reaction taking place when the powder is heated during baking.
2. Explain why: (a) An antacid tablet is taken when you suffer from acidity (b) Calamine solution is applied on the skin when an ant bites. (c) Factory waste is neutralised before disposing it into the water bodies.
3. Why does an aqueous solution of an acid conduct electricity ?
4. Why should curd and sour substances not be kept in brass and copper vessels ?
5. Dorji has a few bottles of soft drink in his restaurant. But, unfortunately, these are not labelled. He has to serve the drinks on the demand of customers. One customer wants acidic drink, another wants basic and third one wants neutral drink. How will Dorji decide which drink is to be served to whom?
6. How is plaster of Paris prepared? What reaction takes place when it sets to a hard mass?
7. Write the chemical formula of hydrated copper sulphate and anhydrous copper sulphate. Giving an activity illustrate how these two are interconvertible.
8. What are anhydrous and hydrated salts? Explain with a suitable example of each.
9. Describe the process of neutralisation with the help of an example.
10. Name and describe giving chemical equation the process used for producing sodium hydroxide. Why is this process so named?
11. Is the distilled water acidic/basic/neutral? How would you verify it?
12. Write chemical names and formulae of plaster of Paris and Gypsum.
13. Why do HCl, HNO3, etc show acidic characters in aqueous solutions while solutions of compounds like alcohol and glucose do not show acidic character ?
14. Name the source from which litmus solution is obtained. What is the use of this solution?
15. Write the names of the product formed when zinc reacts with NaOH. Also write the balanced chemical equation for the reaction involved. Write a test to confirm the presence of the gas evolved during this reaction.
16. Define water of crystallisation. Give the chemical formula for two compounds as examples. How can it be proved that the water of crystallisation makes a difference in the state and colour of the compounds?

17. You have been provided with three test tubes. One of them contains distilled water and the other two contain an acidic solution and a basic solution, respectively. If you are given only red litmus paper, how will you identify the contents of each test tube ?

18. Blue litmus paper is dipped in a solution. It remains blue. What is the nature of the solution? Explain.

19. Define an acid-base indicator. Mention one synthetic acid-base indicator.

20. State differences between acids and bases.