NCERT Solutions for Class 6, 7, 8, 9, 10, 11 and 12

## MCQs Chapter 2 Acids Bases and Salts

1. What happens when a solution of an acid is mixed with a solution of a base in a test tube?  
(i) Temperature of the solution decreases  
(ii) Temperature of the solution increases  
(in) Temperature of the solution remains the same  
(iv) Salt formation takes place  
(a) (i) and (iv)  
(b) (i) and (iii)  
(c) (ii) only  
(d) (ii) and (iv)

**Answer**

2. When hydrogen chloride gas is prepared on a humid day, the gas is usually passed through the guard tube containing calcium chloride. The role of calcium chloride taken in the guard tube is to  
(a) absorb the evolved gas  
(b) moisten the gas  
(c) absorb moisture from the gas  
(d) absorb Cl– ions from the evolved gas

**Answer/ Explanation**

3. Which one of the following salts does not con-tain water of crystallisation?  
(a) Blue vitriol  
(b) Baking soda  
(c) Washing soda  
(d) Gypsum

**Answer**

4. 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

**Answer**

5. What is formed when zinc reacts with sodium hydroxide?  
(a) Zinc hydroxide and sodium  
(b) Sodium zincate and hydrogen gas  
(c) Sodium zinc-oxide and hydrogen gas  
(d) Sodium zincate and water

**Answer/ Explanation**

6. Tomato is a natural source of which acid?  
(a) Acetic acid  
(b) Citric acid  
(c) Tartaric acid  
(d) Oxalic acid

**Answer**

7. Brine is an  
(a) aqueous solution of sodium hydroxide  
(b) aqueous solution of sodium carbonate  
(c) aqueous solution of sodium chloride  
(d) aqueous solution of sodium bicarbonate

**Answer**

8. Na2CO3 . 10H2O is  
(a) washing soda  
(b) baking soda  
(c) bleaching powder  
(d) tartaric acid

**Answer**

9. At what temperature is gypsum heated to form Plaster of Paris?  
(a) 90°C  
(b) 100°C  
(c) 110°C  
(d) 120°C

**Answer**

10. How many water molecules does hydrated cal-cium sulphate contain?  
(a) 5  
(b) 10  
(c) 7  
(d) 2

**Answer/ Explanation**

11. Sodium carbonate is a basic salt because it is a salt of a  
(a) strong acid and strong base  
(b) weak acid and weak base  
(c) strong acid and weak base  
(d) weak acid and strong base

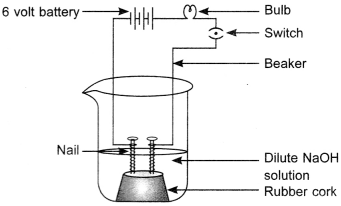
**Answer**

12. Alkalis are  
(a) acids, which are soluble in water  
(b) acids, which are insoluble in water  
(c) bases, which are insoluble in water  
(d) bases, which are soluble in water

**Answer**

13. 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  
(in) Lower the pH, stronger the base  
(iv) Lower the pH, weaker the base  
(a) (i) and (iii)  
(b) (ii) and (iii)  
(c) (i) and (iv)  
(d) (ii) and (iv)

**Answer/ Explanation**

14. The apparatus given in the adjoining figure was set up to demonstrate electrical conductivity.  
  
Which of the following statement(s) is (are) correct?  
(i) Bulb will not glow because electrolyte is not acidic.  
(ii) Bulb will glow because HCl is a strong acid and furnishes ions for conduction.  
(iii) Bulb will not glow because circuit is incomplete.  
(iv) Bulb will not glow because it depends upon the type of electrolytic solution.  
(a) (i) and (iii)  
(b) (ii) and (iv)  
(c) (ii) only  
(d) (iv) only

**Answer**

15. Lime water reacts with chlorine to give  
(a) bleaching powder  
(b) baking powder  
(c) baking soda  
(d) washing soda

**Answer/ Explanation**

16. Nettle sting is a natural source of which acid?  
(a) MetiWanoic acid  
(b) Lactic acid  
(c) Citric acid  
(d) Tartaric acid

**Answer**

17. Tooth enamel is made up of  
(a) calcium phosphate  
(b) calcium carbonate  
(c) calcium oxide  
(d) potassium

**Answer**

18. What is the pH range of our body?  
(a) 7.0 – 7.8  
(b) 7.2 – 8.0  
(c) 7.0 – 8.4  
(d) 7.2 – 8.4

**Answer**

19. Rain is called acid rain when its:  
(a) pH falls below 7  
(b) pH falls below 6  
(c) pH falls below 5.6  
(d) pH is above 7

**Answer**

20. Sodium hydroxide is a  
(a) weak base  
(b) weak acid  
(c) strong base  
(d) strong acid

**Answer/ Explanation**

21. An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change?  
(a) Baking powder  
(b) Lime  
(c) Ammonium hydroxide solution  
(d) Hydrochloric acid

**Answer**

22. When copper oxide and dilute hydrochloric acid react, colour changes to  
(a) white  
(b) bluish-green  
(c) blue-black  
(d) black

**Answer/ Explanation**

23. Sodium hydroxide is used  
(a) as an antacid  
(b) in manufacture of soap  
(c) as a cleansing agent  
(d) in alkaline batteries

**Answer**

24. Sodium hydroxide turns phenolphthalein solution  
(a) pink  
(b) yellow  
(c) colourless  
(d) orange

**Answer**

25. Chemical formula of washing soda is  
(a) Na2C03 . 7H2O  
(b) Na2C03 . 5H2O  
(c) Na2C03 . 2H2O  
(d) Na2C03 . 10H2O

**Answer**

Fill in the blanks

1. Acids turn …………. litmus solution…………. .  
2. pH of basic solution is always …………. than 7.  
3. …………. are the products obtained when bleaching powder reacts with dilute sulphuric acid.  
4. Potassium nitrate has pH value equal to …………. .  
5. …………. is the fixed number of water molecules chemically attached to each formula unit of a salt in its crystalline form.  
6. …………. is one of the raw materials for the production of baking soda.  
7. The salts of a strong acid and weak base are …………. with pH value …………. than 7.  
8. Use of mild base like …………. on the bee-stung area gives relief.  
9. During indigestion the stomach produces too much …………. and this causes pain and irritation.  
10. The presence of …………. Ca in acids is responsible for their acidic properties.  
11. Mixing an acid or base with water results in decrease in the concentration of per unit volume.  
This process is called  
12. Among HCl, H2SO4 and CH3COOH, …………. is a weak acid.

Answers

1. blue, red  
2. more/greater  
3. CaSO4, Cl2, H2O  
4. 7 or seven  
5. Water of crystallisation  
6. Sodium chloride  
7. acidic, less  
8. baking soda  
9. acid (HCl)  
10. H+  
11. OH– ions/H3O+ ions, dilution  
12. CH3COOH