



## CHEMISTRY

### BOOKS - NCERT EXEMPLAR CHEMISTRY (HINGLISH)

#### ACIDS, BASES AND SALTS

##### Mcqs

1. What happens when a solution of an acid is mixed with a solution of a base in a test tube ?

- (i) The temperature of the solution increases
- (ii) The temperature of the solution decreases
- (iii) The temperature of the solution remains the same.
- (iv) Salt formation takes place.

- A. Only (i)
- B. (i) and (iii)
- C. (ii) and (iii)
- D. (i) and (iv)

**Answer: D**



**Watch Video Solution**

2. 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: D**

 [Watch Video Solution](#)

3. During the preparation of hydrogen chloride gas 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: C**



[Watch Video Solution](#)

4. Which of the following salts does not contain water of crystallization?

- A. Blue vitriol
- B. Baking soda
- C. washing soda
- D. Gypsum

**Answer: B**



[Watch Video Solution](#)

5. Sodium carbonate is a basic salt because it is a salt of

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: D**



**Watch Video Solution**

**6.** Calcium phosphate is present in tooth enamel. Its nature is

A. basic

B. acidic

C. neutral

D. amphoteric

**Answer: A**

 [Watch Video Solution](#)

7. A sample of soil is mixed with water and allowed to settle. The clear supernatant solution turns the pH paper yellowish - orange. Which of the following would change the colour of this pH paper to greenish- blue?

- A. Lemon juice
- B. Vinegar
- C. Common salt
- D. An antacid

**Answer: D**

 [Watch Video Solution](#)

8. Which of the following gives the correct increasing order of acid strength?

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: A**



[Watch Video Solution](#)

9. If a few drops of a concentrated acid accidentally spills over the hand of student what should be done?

- A. wash the hand with saline solution
- B. wash the hand immediately with plenty of water and apply a paste of sodium hydrogen carbonate
- C. After washing with plenty of water apply solution of sodium hydroxide on the hand
- D. Neutralise the acid with a strong alkali

**Answer: B**



[Watch Video Solution](#)

**10.** Sodium hydrogen carbonate when added to acetic acid evolves a gas. Which of the following statements are true about the gas evolved?

(i) It turns lime milky



(ii) It extinguishes a burning splinter

(iii) It dissolves in a solution of sodium hydroxide

(iv) It has a pungent odour.

A. (i) and (ii)

B. (i), (ii) and (iii)

C. (ii), (iii) and (iv)

D. (i) and (iv)

**Answer: B**

 [Watch Video Solution](#)

**11.** Common salt, besides being used in kitchen, can also be used as the raw material for making

(i) washing soda, (ii) bleaching powder, (iii) baking soda, (iv) slaked lime

A. (i) and (ii)

B. (i), (ii) and (iv)

C. (i), (ii) and (iii)

D. (i), (iii) and (iv)

**Answer: C**



**Watch Video Solution**

**12.** One of the constituents of baking powder is sodium hydrogen carbonate, the other constituent is

A. hydrochloric acid

B. tartaric acid

C. acetic acid

D. sulphuric acid

**Answer: B**

 [Watch Video Solution](#)

**13.** To protect tooth decay we are advised to brush our teeth regularly. The nature of the tooth paste commonly used is

- A. acidic
- B. neutral
- C. basic
- D. corrosive

**Answer: C**

 [Watch Video Solution](#)

14. Which of the following statements is correct about an aqueous solution of an acid and a base?

- (i) higher the pH stronger the acid
- (ii) Higher the pH, weaker the acid
- (iii) 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: D**



**Watch Video Solution**

15. The pH of the gastric juices released during digestion is

- A. less than 7
- B. more than 7
- C. equal to 7
- D. equal to 0

**Answer: A**



**Watch Video Solution**

16. Which of the following phenomena occur, when a small amount of acid is added to water?

(i) Ionisation, (ii) Neutralisation, (iii) Dilution, (iv) Formation

- A. (i) and (ii)

B. (i) and (iii)

C. (ii) and (iii)

D. (ii) and (iv)

**Answer: B**



**Watch Video Solution**

17. Which one of the following can be used as an acid base indicator by a visually impaired student?

A. Litmus

B. Turmeric

C. Vanilla essence

D. Petunia leaves

**Answer: C**



**Watch Video Solution**

**18.** Which of the following substances will not give carbon dioxide on treatment with dilute acid ?

A. Marble

B. Limestone

C. Baking soda

D. Lime

**Answer: D**



**Watch Video Solution**

19. Which of the following is acidic in nature ?

A. Lime juice

B. Human blood

C. Lime water

D. Antacid

**Answer: A**

 [Watch Video Solution](#)

20. In an attempt to demonstrate electrical conductivity through an electrolyte, the apparatus set up is given. Which among the following statement (s) is (are) correct ?



(i) Bulb will not glow because electrolyte is not acidic



(ii) Bulb will glow because HCl is 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. Only (ii)

D. Only (iv)

**Answer: C**



**Watch Video Solution**

**21.** Which of the following is used for dissolution of gold?

(a) Hydrochloric acid (b) Sulphuric acid

(c ) Nitric acid ,(d) Aqua regia



[View Text Solution](#)

## Acids Bases And Salts

1. Which of the following is not a mineral acid?

A. Hydrochloric acid

B. citric acid

C. sulphuric acid

D. Nitric acid

**Answer: B**



[Watch Video Solution](#)

2. Which among the following is not a base?

A. NaOH

B. KOH

C.  $NH_4OH$

D.  $C_2H_5OH$

**Answer: D**



**Watch Video Solution**

3. Which of the following statements is not correct?

A. All metal carbonates react with acid to give a salt, water and carbon dioxide

B. All metal oxides react with water to give salt and acid

C. Some metals react with acids to give salt and hydrogen

D. Some non-metal oxides react with water to form an acid

**Answer: B**



**Watch Video Solution**

4. Match the chemical substances given in column I with their appropriate application given in column II

Column I	Column II
A. Bleaching powder	1. Preparation of glass
B. Baking soda	2. Production of $H_2$ and $Cl_2$
C. Washing soda	3. Decolourisation
D. Sodium chloride	4. Antacid

A.  $A \ B \ C \ D$   
2 1 4 3

B.  $A \ B \ C \ D$   
3 2 4 1

C.  $\begin{matrix} A & B & C & D \\ 3 & 4 & 1 & 2 \end{matrix}$

D.  $\begin{matrix} A & B & C & D \\ 2 & 4 & 1 & 3 \end{matrix}$

**Answer: C**

 [Watch Video Solution](#)

5. Equal volumes of hydrochloric acid and sodium hydroxide solutions of same concentration are mixed and the pH of the resulting solution is checked with a pH paper. What would be the colour obtained ?

A. Red

B. Yellow

C. Yellowish green

D. Blue

**Answer: C**

 [Watch Video Solution](#)

6. Which of the following is /are true when  $HCl$  (g) is passed through water ?

(i) It does not ionise in the solution as it is a covalent compound.

(ii) It ionises in the solution.

(iii) It gives both hydrogen and hydroxyl ion in the solution.

(iv) It forms hydronium ion in the solution due to the combination of hydrogen ion with water molecule.

A. Only (i)

B. Only (iii)

C. (ii) and (iv)

D. (iii) and (iv)

**Answer: C**

 [Watch Video Solution](#)

7. Which of the following statement is true for acids?

A. Bitter and change red litmus to blue

B. sour and change red litmus to blue

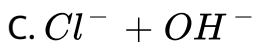
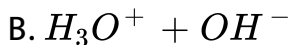
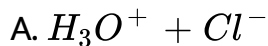
C. sour and change blue litmus to red

D. Bitter and change blue litmus to red

**Answer: C**

 [Watch Video Solution](#)

8. Which of the following are present in a dilute aqueous solution of hydrochloric acid?



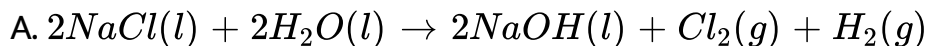
D. Unionised HCl

**Answer: A**



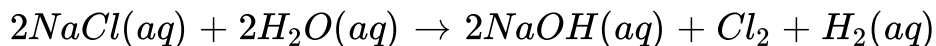
**Watch Video Solution**

9. Identify the correct representation of reaction occurring during chloralkali process.

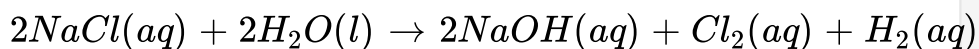




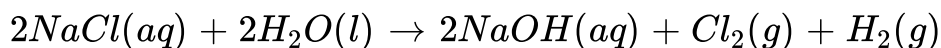
B.



C.



D.



**Answer: D**



**Watch Video Solution**

**10.** Match the acids given in Coplumn I with their correct source given in column II

Column I		Column II	
A.	Lactic acid	1.	Tomato
B.	Acetic acid	2.	Lemon
C.	Citric acid	3.	Vinegar
D.	Oxalic acid	4.	Curd

 [Watch Video Solution](#)

11. Match the important chemicals given in column I with the chemical formula given in column II.

Column I		Column II	
A.	Plaster of Paris	1.	$\text{Ca}(\text{OH})_2$
B.	Gypsum	2.	$\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$
C.	Bleaching powder	3.	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
D.	Slaked lime	4.	$\text{CaOCl}_2$

 [Watch Video Solution](#)

12. What will be the action of the following substances on litmus paper? Dry HCl gas, moistened  $NH_3$  gas, lemon juice, carbonated soft drink, curd, soap solution.

 [Watch Video Solution](#)

13. Name the acid present in ant sting and give its chemical formula. Also give the common method to get relief from the discomfort caused by the ant sting.

 [Watch Video Solution](#)

14. What happens when nitric acid is added to egg shell ?

 [Watch Video Solution](#)

15. A student prepared solutions of (i) an acid and (ii) a base in two separate beakers. She forgot to label the solutions and litmus paper is not available in the laboratory. Since both the solutions are colourless how will she distinguish between the two ?

 [Watch Video Solution](#)

16. How would you distinguish between baking powder and washing soda by heating ?

 [Watch Video Solution](#)

17. Salt 'P', commonly used in bakery products, on heating gets converted into another salt 'Q' which itself is used for the removal of hardness of water and a gas 'R' is evolved. The gas 'R'

when passed through freshly prepared lime water turns milky. Identify 'P', 'Q' and 'R', giving chemical equation for the justification of your answer.

 [Watch Video Solution](#)

**18.** In one of the industrial processes for manufacture of sodium hydroxide a gas X is formed as by product. The gas X reacts with lime water to give a compound Y which used as a bleaching agent in chemical industry. Identify X and Y giving the chemical equation of the reactions involved

 [Watch Video Solution](#)

19. Fill in the missing data in the given table

	Name of the salt	Formula	Salt obtained from	
			Base	Acid
(i)	Ammonium chloride	$\text{NH}_4\text{Cl}$	$\text{NH}_4\text{OH}$	-
	Copper sulphate	-	-	$\text{H}_2\text{SO}_4$
(ii)	Sodium chloride	$\text{NaCl}$	$\text{NaOH}$	-
(iv)	Magnesium nitrate	$\text{Mg}(\text{NO}_3)_2$	-	$\text{HNO}_3$
(v)	Potassium sulphate	$\text{K}_2\text{SO}_4$	-	-
(vi)	Calcium nitrate	$\text{Ca}(\text{NO}_3)_2$	$\text{Ca}(\text{OH})_2$	-

 [Watch Video Solution](#)

20. What are strong and weak acids? In the following list of acids separate strong acids from weak acids.

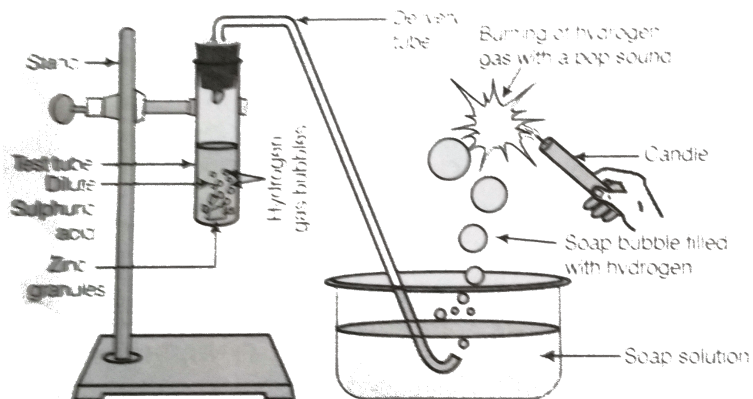
Hydrochloric acid, citric acid, acetic acid, nitric acid, formic acid, sulphuric acid.

 [Watch Video Solution](#)

21. When zinc metal is treated with a dilute solution of a strong acid, a gas is evolved which is utilized in the hydrogenation of oil. Name the gas evolved. Write the chemical equation of the reaction involved and also write a test to detect the gas formed.

 [Watch Video Solution](#)

22. In the following schematic diagram for the preparation of hydrogen gas as shown in the figure what would happen if the following changes are made?



(a) In place of zinc granules, same amount of zinc dust is taken

in the test tube

(b) Instead of dilute sulphuric acid, dilute hydrochloric acid is taken.

(c) In place of zinc, copper turnings are taken

(d) Sodium hydroxide is taken in place of dilute sulphuric acid and the tube is heated.



[Watch Video Solution](#)

**23.** For making cake, baking powder is taken. If at home your mother uses baking soda instead of baking powder in cake.

(a) How will it affect the taste of the cake and why?

(b) How can baking soda be converted in to baking powder ?

(c) What is the role of tartaric acid added to baking soda?



[Watch Video Solution](#)



24. A metal carbonate X on reacting with an acid gives a gas which when passed through a solution Y gives the carbonate back. On the other hand, a gas G that is obtained at anode during electrolysis of brine is passed on dry Y, it gives a compound Z, used for disinfecting drinking water . Identify X,Y,G and Z.

 [Watch Video Solution](#)

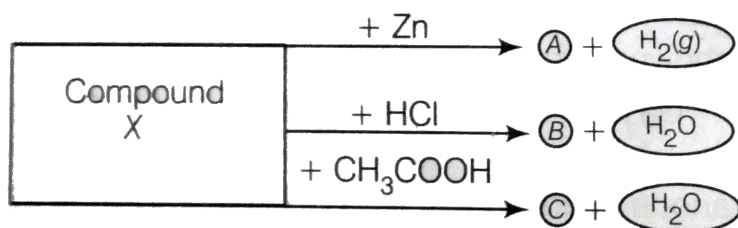
25. A dry pellet of a common base B, when kept in open absorbs moisture and turns sticky. The compound is also a by product of chloralkali process. Identify B, what type of reaction occurs when B is treated with an acidic oxide? Write a balanced chemical equation for one such solution

 [Watch Video Solution](#)

26. A sulphate salt of group 2 element of the periodic table is a white soft substance which can be moulded into different shapes by making its dough. When this compound is left in open for some time, it becomes a solid mass and cannot be used for moulding purposes. Identify the sulphate salt and why does it show such a behaviour? Give the reaction involved.

 [Watch Video Solution](#)

27. Identify the compound X on the basis of the reactions given below. Also, write the name and chemical formulae of A, B and C



 [Watch Video Solution](#)

