



CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

TYPES OF CHEMICAL REACTIONS

In Text Solve Problems

1. Calculate the pH of 0.01 M HNO_3 ?



View Text Solution

2. The hydroxyl ion concentration of a solution is 1×10^{-9} M. What is the pOH of the solution?



[View Text Solution](#)

3. Solution has a pOH of 11.76 What is the pH of this solution?



[View Text Solution](#)

4. Calculate the pH of 0.001 molar solution of HCl.



[View Text Solution](#)

5. What would be the pH of an aqueous solution of sulphuric acid which is $5 \times 10^{-5} \text{ mol litre}^{-1}$ in concentration.



[View Text Solution](#)

6. Calculate the pH of 1×10^{-4} molar solution of NaOH.



[View Text Solution](#)

7. Calculate the pH of a solution in which the concentration of the hydrogen ions is $1.0 \times 10^{-8} \text{ mol litre}^{-1}$



[View Text Solution](#)

8. If the pH of a solution is 4.5, what is its pOH?



[View Text Solution](#)

Textual Evaluation Solved Choose The Correct Answer

1. $H_2(g) + Cl_{(g)} \rightarrow 2HCl_{(g)}$ is a.....

A. Decomposition Reaction

B. Combination Reaction

C. Single Displacement Reaction

D. Double Displacement Reaction

Answer: Combination Reaction



View Text Solution

2. Photolysis is a decomposition reaction caused by.....

A. heat

B. Electricity

C. Light

D. Mechanical energy

Answer: Light

3. A reaction between carbon and oxygen is reaction is represented by $C_{(s)} + O_{2(g)} \rightarrow CO_{2(g)} + \text{Heat}$ in which of the type (S), the above reaction can be classified?

(i) Combination Reaction (ii) Combustion Reaction
(iii) Decomposition Reaction (iv) Irreversible Reaction

A. I and ii

B. I and iv

C. I, ii and iii

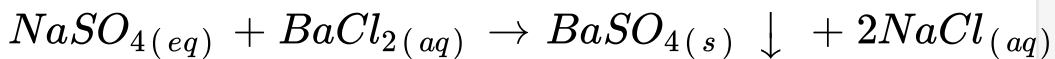
D. I, ii and iv

Answer: I,ii and iv



View Text Solution

4. The chemical equation



represent which of the following types of reaction?

- A. Neutralisation
- B. Combustion
- C. Precipitation
- D. Single displacement

Answer: Precipitation



[View Text Solution](#)

5. Which of the following statements are correct about a chemical equilibrium?

(i) It is dynamic in nature (ii) The rate of the forward and backward reactions are equal at equilibrium

(iii) Irreversible reactions do not attain chemical equilibrium

(iv) The concentration of reactants and products may be different

A. i, ii and iii

B. i, ii and iv

C. ii, iii and iv

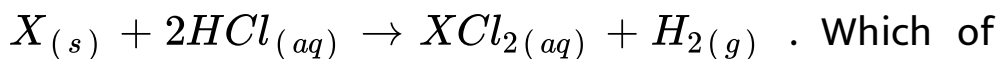
D. I,iii and iv

Answer: I,ii and iii



View Text Solution

6. A single displacement reaction is represented by



the following (s) could be X?

(i)Zn (ii)Ag (iii)Cu (iv)Mg choose the best pair.

A. I and ii

B. ii and iii

C. iii and iv

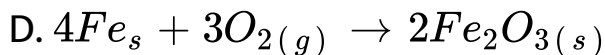
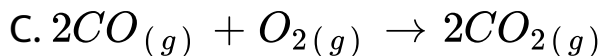
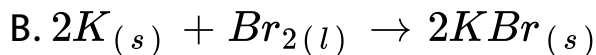
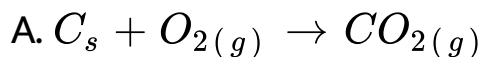
D. I and iv

Answer: I and iv



View Text Solution

7. Which of the following is not an "element+element to compound" type reaction?

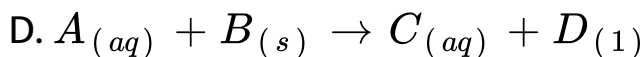
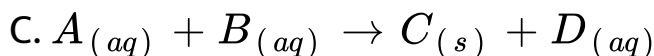
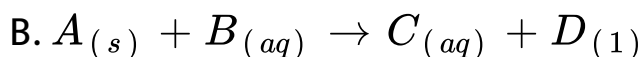
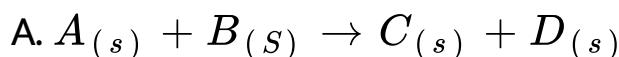


Answer: $2\text{CO}_{(g)} + \text{O}_{2(g)} \rightarrow 2\text{CO}_{2(g)}$



View Text Solution

8. Which of the following represents a precipitation reaction?



Answer: $A_{(aq)} + B_{(aq)} \rightarrow C_{(s)} + D_{(aq)}$



View Text Solution

9. The pH of a solution is 3. Its $[OH^-]$ concentration is....

A. $1 \times 10^{-3} M$

B. 3M

C. $1 \times 10^{-11} M$

D. 11M

Answer: $1 \times 10^{-11} M$



View Text Solution

10. Powdered CaCO_3 reacts more rapidly than flaky CaCO_3 because of.....

- A. Large surface area
- B. High pressure
- C. High concentration
- D. High pressure

Answer: Large surface area



View Text Solution

Textual Evaluation Solved Fill In The Blanks

1. A reaction between an acid and a base is called.....



[View Text Solution](#)

2. When lithium metal is placed in hydrochloric acid,.....gas is evolved.



[View Text Solution](#)

3. The equilibrium attained during the melting of ice is known as.....



[View Text Solution](#)

4. The pH of a fruit juice is 5.6 .If you add slaked lime to this juice ,its pH.....(increase/decrease)



View Text Solution

5. The value of ionic product of water at 25°C is.....



View Text Solution

6. Electrolysis is type ofreaction



View Text Solution

7. Chemical volcano is an example for.....typw of reaction.



[View Text Solution](#)

8. The ion formed by dissolution of H^+ in water is called.....



[View Text Solution](#)

True Or False If False Give The Correct Statement

1. Silver metal can displace hydrogen gas from nitric acid



View Text Solution

2. At the equilibrium of a reversible reaction, the concentration of the reactants and the products will be equal.



View Text Solution

Textual Evaluation Solved Short Answer Questions

1. When an aqueous solution of potassium chloride is added to an aqueous solution of silver nitrate, a white precipitate is formed. Give the chemical equation for this reaction.



[View Text Solution](#)

2. Why does the reaction rate of a reaction increase on raising the temperature?



[View Text Solution](#)

3. Define combination reaction. Give one example for an exothermic combination reaction.



[View Text Solution](#)

4. Differentiate reversible and irreversible reactions.



[View Text Solution](#)

Textual Evaluation Solved Answer In Detail

1. What are called thermolysis reactions?



[View Text Solution](#)

2. Explain the types of double displacement reactions with examples.



View Text Solution

3. Explain the factors influencing the rate of a reaction.



View Text Solution

4. How does pH play an important role in everyday life?



View Text Solution

5. What is a chemical equilibrium ?What are its characteristics?



[View Text Solution](#)

Textual Evalution Solved Hot Questions

1. A solid compound 'A' decomposes on heating into'B' and a gas 'C' .On passing the gas 'C' through water,it becomes acidic .Identify A,B and C.



[View Text Solution](#)

2. Can a nickel spatula be used to stir sulphate solution? Justify your answer.



View Text Solution

Textual Evaluation Solved Solve The Following Problems

1. Lemon juice has a pH 2, what is the concentration of H^+ ions?



View Text Solution

2. Calculate the pH of 1.0×10^{-4} molar solution of HNO_3



[View Text Solution](#)

3. What is the pH of 1.0×10^{-5} molar solution of KOH?



[View Text Solution](#)

4. The hydroxide ion concentration of a solution is $1 \times 10^{-11} M$. What is the pH of the solution?



[View Text Solution](#)

Additional Question Solved Choose The Best Answer

1. Methane + oxygen to A+ Water. Identify A.

A. Carbon monoxide

B. Carbon dioxide

C. ethane

D. LPG

Answer: Carbon dioxide



View Text Solution

2. As the molecule is dissociated by the absorption of heat It is otherwise called as

A. Thermolysis

B. Photolysis

C. Electrolysis

D. None of these

Answer: Thermolysis



View Text Solution

3. Decomposition of molecule occurs on passing electric current through its aqueous solution. This

process is termed as....

- A. Thermolysis
- B. Photolysis
- C. Electrolysis
- D. None of these

Answer: Elecrolysis



View Text Solution

4. As the decomposition is caused by light, this kind of reaction is called....

- A. Thermolysis

B. Photolysis

C. Electrolysis

D. None of these

Answer: Photolysis



View Text Solution

5. Which one of the following is more reactive element?

A. Cu

B. Li

C. Zn

D. Pb

Answer: Li



View Text Solution

6. Which one of the following is least reactive element?

A. Au

B. Fe

C. Ca

D. Na

Answer: Au



[View Text Solution](#)

7. Double displacement reaction is also called as.....

A. metasis

B. Metathesis

C. Methanolysis

D. Metalysis

Answer: A



[View Text Solution](#)

8. KI and $Pb(NO_3)_2$ solutions are mixed to give a precipitate. What is the colour of the precipitate?

A. White

B. Brown

C. Red

D. Yellow

Answer:



View Text Solution

9. Reaction of sodium hydroxide with hydrochloric acid is an example for

- A. Combination reaction
- B. Thermolysis reaction
- C. Neutralization reaction
- D. Precipitation reaction

Answer: A::C



View Text Solution

10. Most of the reactions go faster at....

- A. Low temprature
- B. Moderate temprature
- C. $0^{\circ}C$
- D. High temperature

Answer: A



View Text Solution

11. The role of manganese dioxide in the decomposition of potassium chlorate is

- A. Act as a reactant
- B. Act as a catalyst

C. Act as a reagent

D. Act as a reaction medium

Answer: A::C



View Text Solution

12. The ionic product of water K_W is.....

A. $K_W = [H_3O^+][OH^+]$

B. $K_W = \frac{[H_3O^+]}{[OH^-]}$

C. $K_W = [H_3O^+][OH^-]$

D. $K_W [H_3O^-][OH^+]$

Answer: C



View Text Solution

13. Unit of ionic product of water is.....

A. $\text{mol}^{-2}\text{dm}^{-6}$

B. $\text{mol}^2\text{dm}^{-6}$

C. $\text{mol}^2\text{dm}^{-6}$

D. mol dm^{-3}

Answer: B::D



View Text Solution

14. What is the value of ionic product of water?

A. 1×10^{-4}

B. 1×10^{-1}

C. 1×10^{-14}

D. 1×10^{-10}

Answer: C



View Text Solution

15. pH of milk of magnesia is.....

A. 10

B. 15

C. 14

D. 10.5

Answer: A



View Text Solution

16. What is the relationship between pH and pOH?

A. $\text{pH} - \text{pOH} = 14$

B. $\text{pH} + \text{pOH} = 14$

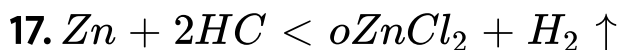
C. $\text{pH} / \text{pOH} = 14$

D. $\text{pH} + \text{pOH} = 1.4$

Answer: A::D



[View Text Solution](#)



The above reaction is an example of...

- A. Combination reaction
- B. Double displacement reaction
- C. Displacement reaction
- D. Decomposition reaction

Answer: A::C::D



View Text Solution

18. A student test the pH of pure water using a pH paper .It shows green colouro.If a pH paper is after adding lemon juice to water,What colour will he observe?

A. Green

B. Red

C. Yellow

D. Pink

Answer: D



View Text Solution

19. When aqueous solution of silver nitrate and sodium chloride are mixed,.....precipitate is immediately formed.

A. White

B. Yellow

C. Red

D. Black

Answer:

[View Text Solution](#)

20. $\text{pH} = -\log_{10} [H^+]$. The pH of a solution containing hydrogen ion concentration of 0.001 M solution is

A. 3

B. 11

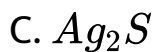
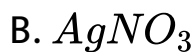
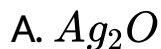
C. 14

D. 15

Answer: C

[View Text Solution](#)

21. Silver anklet has got tarnished due to the formation of.....



Answer: A::B



View Text Solution

22. The colour of the precipitate formed by the reaction of lead nitrate with potassium iodine is.

A. White

B. Yellow

C. Black

D. Red

Answer:



View Text Solution

23. The reaction of calcium oxide with water is a..... reaction.

A. Exothermic

B. Endothermic

C. Isothermic

D. Adiabatic

Answer: C



View Text Solution

24. The gas released when calcium carbonate reacts with dilute hydrochloric acid is ..

A. NO_2

B. CO

C. CO_2

D. H_2

Answer: B::C



View Text Solution

25. The chemical used in white washing on the walls is...

A. CaO

B. CaCl_2

C. CaCOCl_2

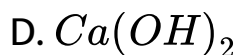
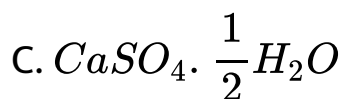
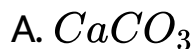
D. $\text{Ca}(\text{OH})_2$

Answer: A::B::C



View Text Solution

26. The chemical formula of marble is.....



Answer: A::C



[View Text Solution](#)

27. Combustion of coal is an example ofreaction.

A. Displacement

B. Reduction

C. Decomposition

D. Combination

Answer: A::B::C



View Text Solution

28. The colour change take place when copper carbonate is strongly heated is.....

A. Green to black

B. Green to blue

C. Blue to green

D. Blue to black

Answer: A::B::C



View Text Solution

29. The reaction of heat on copper carbonate into copper(II) oxide isreaction.

A. Combination

B. Decomposition

C. Displacement

D. redox

Answer: C::D



View Text Solution

30. The dissolution of glucose in water is an
Reaction

- A. Exothermic
- B. Endothermic
- C. Neutralisation
- D. Combination

Answer: C::D



View Text Solution

31. All combination reactions are.....reactions.

A. Combination reaction

B. Exothermic

C. Endothermic

D. neutralisation

Answer: C



View Text Solution

32. The factor that affect the rate of the chemical reaction is..

A. Temprature

B. Concentration

C. Catalyst

D. All the above

Answer: A::B::C::D



View Text Solution

33. Magnesium ribbon reacts at a very rate wirh....acid.

A. Hydrochloric

B. Acetic

C. Formic

D. oxalic

Answer: C::D



View Text Solution

34. Our body metabolism is carried out by mean ofsecreted in our stomach.

A. Sulphuric acid

B. Hydrochloric acid

C. Nitric acid

D. Acetic acid

Answer: A::C::D



View Text Solution

35. Which metals do not liberate gas on reaction with acids?

A. Zn, Mg

B. Ag, Cu

C. Na, K

D. Cr, Al

Answer: A::C



View Text Solution

36. When CO_2 is passed through lime water, it turns.....

A. Milky

B. Black

C. red

D. Blue

Answer:



View Text Solution

37. The physical form of calcium carbonate is

A. Limestone

B. Chalk

C. Marble

D. All the above

Answer: A::B::C::D



View Text Solution

38. The colour change takes place when copper (II) oxide reacts with dilute hydrochloric acid is....

- A. Blue to green
- B. Black to green
- C. Green to black
- D. Green to blue

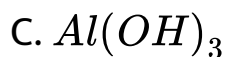
Answer: A::B::C



View Text Solution

39. Which of the following is a strong base?

- A. NH_4OH
- B. $Ca(OH)_2$



Answer: A



View Text Solution

40. Zinc reacts with sodium hydroxide to form.....



Answer: A::B::C::D



View Text Solution

41.Reacts with sodium hydroxide.

A. Cu

B. Ag

C. Cr

D. Zn

Answer:



View Text Solution

42.is used as a medicine for stomach disorder.

- A. Sodium hydroxide
- B. Ammonium hydroxide
- C. Magnesium hydroxide
- D. Calcium hydroxide

Answer: A::D



View Text Solution

43. The pH of stomach fluid is

- A. 12

B. 14

C. 2

D. 7

Answer: B



View Text Solution

44. The hardest substance in the human body is

A. Bone

B. Enamel coating of teeth

C. Brain

D. liver

Answer: A::C



View Text Solution

45. Sugarcane requires.....soil

A. Acidic

B. Alkaline

C. neutral

D. Amphoteric

Answer: A



[View Text Solution](#)

46. Rice requires.....soil

A. Acidic

B. basic

C. Alkaline

D. neutralisation

Answer: A::C::D



[View Text Solution](#)

47.is a double salt.

A. Sodium chloride

B. Washing soda

C. Potash alum

D. Bleaching powder

Answer: A



View Text Solution

Additional Question Solved Fill In The Blanks

1. During chemical changes.....are formed and these changes are morethan physical changes



[View Text Solution](#)

2. Calcium oxide reacts with water to produceand the reaction is.....



[View Text Solution](#)

3. During white washing,.....reacts slowly with carbon dioxide in air to form a thin layer of.....on the walls.



[View Text Solution](#)

4. When copper carbonate is heated ,the products formed are.....,.....and change of colour from.....tois observed.



View Text Solution

5. When lead nitrate is heated ,the gas liberated is.....and its colour is



View Text Solution

6. copper sulphate solution changes its blue colour into.....colour when iron nail is added to it and it

acquires.....colour.



[View Text Solution](#)

7. When barium chloride reacts with sodium sulphate ,the product formed is.....and it is aprecipitate.



[View Text Solution](#)

8. Powderedreacts more quikly with hydrochloric acid than marble chips.



[View Text Solution](#)

9.is a substance which furnishes H^{+} ions when dissolved in water and a is a substance which furnishes OH^{-} ions in water.



[View Text Solution](#)

10. Acids present in plants and animals are..... And the acids in rocks and minerals are.....



[View Text Solution](#)

11. Metal displaces.....gas from dilute acid and the flame goes off with asound



[View Text Solution](#)

12.is used in the manufacturing of soap and..... Is used in white washing buildings.



[View Text Solution](#)

13. pH scale was introduced by.....and the pH of the solution is 7,it is a.....solution.



[View Text Solution](#)

14. The pH of a normal healthy human skin isand the pH of the stomach fluid is.....



View Text Solution

15. The ideal pH for blood isand pH of the mouth falls below



View Text Solution

16. All photo decomposition reaction are.....reactions.



View Text Solution

17. Precipitation reaction gives an.....as the product.



View Text Solution

18. Most of the combination reactions are.....in nature.



View Text Solution

19. Silicon dioxide reacts with calcium oxide to form.....



View Text Solution

20. A.....is a substance that which increase the reaction rate.



[View Text Solution](#)

21. The pH of a solution can be determined by using aindicator



[View Text Solution](#)

22. pH is.....



[View Text Solution](#)

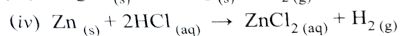
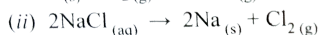
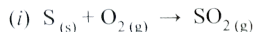
23. White enamel coating of our teeth is



[View Text Solution](#)

Additional Question Solved Match The Following

1. Match the following.



(a) Electrolytic decomposition reaction

(b) Combination reaction

(c) Single displacement reaction

(d) Photo decomposition reaction



[View Text Solution](#)

2. Match the following.

Sample	pH
(i) Oranges	(a) 8
(ii) Grapes	(b) 7
(iii) Pure water	(c) 3.5
(iv) Egg white	(d) 4



View Text Solution

3. Match the following.

Sample	pH
(i) Sour milk	(a) 4.2
(ii) Tomato juice	(b) 4.5
(iii) Sea water	(c) 12
(iv) Lime water	(d) 8



[View Text Solution](#)

4. Match the following.

(i) Citrus fruits	(a) Neutral soil
(ii) Rice	(b) pH = 7
(iii) Sugarcane	(c) alkaline soil
(iv) Rain water	(d) acidic soil



[View Text Solution](#)

5. Match the following.

- | | |
|--------------------------|--------------------------|
| (i) Sodium hydroxide | (a) medicine |
| (ii) Calcium hydroxide | (b) stain remover |
| (iii) Ammonium hydroxide | (c) soap |
| (iv) Magnesium hydroxide | (d) white washing |



View Text Solution

6. Match the following.

- | | |
|--------------------------|--------------------------|
| (i) Gain of electrons | (a) Oxidation reaction |
| (ii) Loss of electrons | (b) Combination reaction |
| (iii) Combustion of coal | (c) Redox reaction |
| (iv) Rusting of iron | (d) Reduction reaction |



View Text Solution

Additional Question Solved State True Or False If False Give The Statement

1. Chemical changes are reversible changes.



[View Text Solution](#)

2. The silver anklet has got tarnished when exposed to air due to the formation of silver oxide(Ag_2O)



[View Text Solution](#)

3. The chemical formula for marble is $CaCl_2$



[View Text Solution](#)

[View Text Solution](#)

4. A reaction in which a single product is formed from two or more reactants is known as displacement reaction



[View Text Solution](#)

5. Any reaction that produces a precipitate is called a redox reaction.



[View Text Solution](#)

6. The chemical reactions which take place with the evolution of heat energy are called endothermic reaction.



[View Text Solution](#)

7. All combustion reactions are endothermic reactions



[View Text Solution](#)

8. Our body metabolism is carried out by means of sulphuric acid secreted in our stomach.



[View Text Solution](#)

9. Limestone ,chalk and marble are different physical forms of calcium oxide.



[View Text Solution](#)

10. The atmosphere of earth is made up of thick white and yellowish clouds of sulphuric acid.



[View Text Solution](#)

11. Bond breaking releases energy whereas bond formation absorbs energy



[View Text Solution](#)

12. Irreversible reaction is relatively slow.



[View Text Solution](#)

Additional Question Solved Assertion And Reason

1. Assertion (A): The lustrous white colour of the silver anklet slowly changes into slightly black colour.

Reason (R): Silver anklet reacts with H_2S in the air to form Ag_2S (silver sulphide) which is black in colour.

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: A



View Text Solution

2. Assertion (A):The reaction of calcium oxide with is an exothermic reaction.

Reason(R):The reaction is accompanied by a hissing sound and formation of bubbles leading to the absorption of considerable amount of heat.

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: C



View Text Solution

3. Assertion(A): During the reaction of calcium carbonate with dilute with dilute hydrochloric acid, brisk effervescence takes place.

Reason (R):Brisk effervescence is due to the evolution of carbondioxide gas

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: B



View Text Solution

4. Assertion(A): When copper carbonate is heated strongly ,the green colour is changed into black colour
Reason(R):The colour change is due to the decomposition of copper carbonate into copper oxide.

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: A



View Text Solution

5. Assertion(A):When lead nitrate is heated the gas released has red orange colour and it is lead oxide.

Reason (R):Lead nitrate on heating undergoes combination reaction.

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: B



View Text Solution

6. Assertion(A):Iron is more reactive than copper.

Reason(R):Iron is displaced from than sulphate by copper.

- A. Both (A) and (R) correct

B. (A) is correct but (R) is wrong

C. Both (A) and (R) are wrong

D. (A) is wrong but (R) is correct

Answer: B



View Text Solution

7. Assertion(A): Copper displaces zinc (or)lead from salt solution.

Reason (R):Copper is more reactive than zinc and lead.

A. Both (A) and (R) correct

B. (A) is correct but (R) is wrong

C. Both (A) and (R) are wrong

D. (A) is wrong but (R) is correct

Answer: D



View Text Solution

8. Assertion(A):All combustion reactions are exothermic reactions.

Reason (R):During combustion reaction,heat energy is liberated.

A. Both (A) and (R) correct

B. (A) is correct but (R) is wrong

C. Both (A) and (R) are wrong

D. (A) is wrong but (R) is correct

Answer: A



View Text Solution

9. Assertion (A):When glucose is kept on our tongue,a cooling effect is felt.

Reason (R):It is an endothermic reaction in which heat is absorbed.

A. Both (A) and (R) correct

B. (A) is correct but (R) is wrong

C. Both (A) and (R) are wrong

D. (A) is wrong but (R) is correct

Answer: A



View Text Solution

10. Assertion(A): Powdered calcium carbonate reacts more quickly with hydrochloric acid than marble chips.

Reason(R): Powdered calcium carbonate offers large surface area than marble chips .Because greater the surface area,the greater is the rate of the reaction.

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: B



View Text Solution

11. Assertion(A):Combination reaction are exothermic in nature.

Reason (R):During the formation of new bonds, releases a huge amount of energy in the form of heat.

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: A



View Text Solution

12. Assertion(A)When glucose is kept on our tongue ,a cooling effect is felt.

Reason(R):It is an endothermic reaction in which heat is absorbed .

- A. Both (A) and (R) correct
- B. (A) is correct but (R) is wrong
- C. Both (A) and (R) are wrong
- D. (A) is wrong but (R) is correct

Answer: A



View Text Solution

Additional Question Solved Short Answer Questions

1. What type of chemical reaction takes place when (i) limestone is heated, (ii) a magnesium ribbon is burnt in

air?



View Text Solution

2. Identify the wrong statements and correct them.

(i) Sodium benzoate is used in food preservative

(ii) Nitric acid is not used as fertilizer in agriculture.

(iii) Sulphuric acid is called the king of chemicals

(iv) The pH of acid is greater than 7

(v) Acetic acid is used in aerated drinks.



View Text Solution

3. Take two conical flasks. Label them as I and II. Take a small amount of copper sulphate solution in the first conical flask. Take a small amount of granulated zinc in the second conical flask. Allow the copper sulphate solution to react with the zinc.

(i) Name the type of reaction.

(ii) Say whether the metal zinc is more reactive or less reactive.

(iii) Write the complete and balanced reaction.

(iv) Say whether this change is reversible or irreversible.



View Text Solution

4. When lead powder is added to copper chloride solution, a displacement reaction occurs and solid copper is formed.

(i) Write the equation for the reaction.

(ii) Why does the displacement reaction occur?



View Text Solution

5. What happens when lead nitrate with potassium iodide solution?



View Text Solution

6. Differentiate Exothermic reaction and Endothermic reaction.

 [View Text Solution](#)

7. What is meant by combination reaction? Give example.

 [View Text Solution](#)

8. What is meant by decomposition reaction? Give example.

 [View Text Solution](#)

9. Define -Displacement reaction.Give example.



View Text Solution

10. What is meant by double displacement reaction?

Give example.



View Text Solution

11. Can copper displace zinc or lead from their salt solutions?



View Text Solution

12. What happens to food containing fat and oil kept open for a long time?



View Text Solution

13. Define rate of a chemical reaction.



View Text Solution

14. Define catalyst.



View Text Solution

15. What happens during a chemical reaction?



[View Text Solution](#)

16. What is balanced chemical equation?



[View Text Solution](#)

17. What are the main classes of decomposition reactions?



[View Text Solution](#)

18. What are thermal decomposition reactions?



View Text Solution

19. What are Electrolytic decomposition reactions?



View Text Solution

20. What are photo decomposition reaction?



View Text Solution

21. What is Metathesis reaction?



[View Text Solution](#)

22. What is precipitation reaction?



[View Text Solution](#)

23. How will you distinguish between combination and decomposition reactions?



[View Text Solution](#)

24. What is neutralization reaction?



[View Text Solution](#)

25. What is Combustion reaction?



View Text Solution

26. What are reversible and irreversible reaction?



View Text Solution

27. Why is reaction rate important?



View Text Solution

Additional Question Solved Long Answer Questions

1. Two acids 'A' and 'B' were kept in breakers .Acid 'A' undergoes partial dissociation in water,whereas acid 'B' undergoes complete dissociation in water.

(i)Of the two acids 'A' and 'B', which is weak acid and which is strong acid?

(ii)What is a weak acid?

(iii)What is a strong acid?

(iv)Give one example each.



View Text Solution

2. Observe the given chemical change and answer the following:

(i) Identify 'A' and 'B'.

(ii) Write the commercial name of calcium hydroxide.

(iii) Identify products 'C' and 'D' ,When HCl is allowed to react with calcium oxide.

(iv) Say whether calcium oxide is acidic or basic.



View Text Solution

3. Take copper nitrate in a test tube heat it over the flame.

(i) What is the colour of cupric nitrate ?

(ii) What do you observe ?

(iii) Name the type of reaction that takes place.

(iv) Write the balanced equation.



View Text Solution

4. Redox reactions are reaction during which reaction during which electron transfer takes place. Here magnesium atom transfers two electrons one each to the two chlorine atoms.

(i) What are the products of this reaction?

(ii) Write the balanced equation for the complete reaction.

(iii) Which element is being oxidized?

(iv) Which element is being reduced?

(v) Write the reduction part of the reaction.



[View Text Solution](#)

5. Suggest a reason for each observation given below.

(i) In firework, powdered magnesium is used rather than 'magnesium ribbon.

(ii) Zinc and dilute H_2SO_4 react much more quickly when a few drops of copper sulphate solutions are added.

(iii) Zinc and dilute H_2SO_4 react much more quickly when a few drops of copper sulphate solutions are

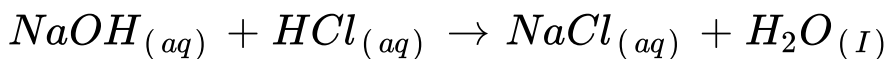
added.

(iii) The reaction between magnesium carbonate and dilute hydrochloric acid speeds up when some concentrated HCl is added.



View Text Solution

6. Sodium hydroxide and hydrochloric acid react as shown in this equation.



(i) Which type of chemical reaction is this?

(ii) The reaction is exothermic. Explain what that means.

(iii) Differentiate exothermic reaction and endothermic reaction.

(iv) What happens to the temperature of the solution as the solution as the chemicals react?



[View Text Solution](#)

Additional Question Solved Hot Questions

1. Equal lengths of magnesium ribbons are taken in test tubes A and B. Hydrochloric acid is added to test tube A, while acetic acid is added to test tube B. The amount and concentration taken for both the acids are same. In which test tube does the reaction occur more vigorously and why?



[View Text Solution](#)

2. When solution of silver nitrate and potassium bromide are mixed a pale yellow precipitate is formed.

(i)(a)What is the name of the pale yellow precipitate?

(b)Is it soluble or insoluble?

(ii)Is the formation of silver bromide precipitate,a result of redox reaction or not"Justify your answer.

(iii)What is this type of reaction called?



View Text Solution

3. What is the chemical reaction taken place in the tarnishing of silver anklet?



View Text Solution

 [View Text Solution](#)

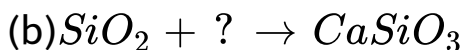
4. Why tooth pastes are basic in nature?

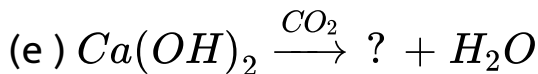
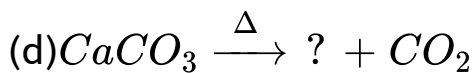
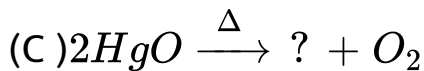
 [View Text Solution](#)

5. Why solution of slaked lime is used for white washing?

 [View Text Solution](#)

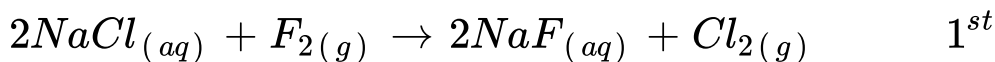
6. Complete the following reactions.



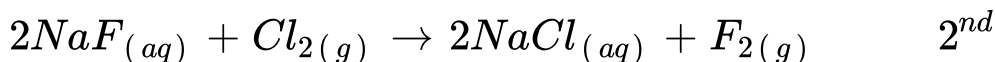


[View Text Solution](#)

7. Let us consider the following two reaction.



reaction



reaction

Which reaction will not occur .Why?



[View Text Solution](#)

8. Which of the metals displaces hydrogen gas from hydrochloric acid? Silver or zinc. Give the chemical equation of the reaction and justify your answer.



[View Text Solution](#)

9. Foods kept at room temperature spoils faster than that kept in the refrigerator Why?



[View Text Solution](#)

10. How will you enhance the rate of decomposition of potassium chlorate?



[View Text Solution](#)

11. Powdered calcium carbonate reacts more readily with hydrochloric acid than marble chips. Why?

[View Text Solution](#)

Additional Problems

1. The $[OH^-]$ ion concentration of a solution is $1.0 \times 10^{-8} M$. What is the pH of the solution?

[View Text Solution](#)

2. The hydrogen ion concentration of a solution is 1.0×10^{-9} m. What is the pH of the solution? Find out whether the given solution is acidic, basic or neutral.



[View Text Solution](#)

3. The hydroxide ion concentration of a solution is 0.001 m. What is the pH of the solution?



[View Text Solution](#)

4. The hydroxide ion concentration of a solution is 1.0×10^{-9} m. What is the pH of the solution?



[View Text Solution](#)

[View Text Solution](#)

5. The hydrogen ion concentration of a solution is $1 \times 10^{-4}m$. Calculate the pH and pOH and pOH of that solution .



[View Text Solution](#)

6. Calculate the pH of sodium hydroxide solution having the concentration of $OH^{-} 0.01mL^{-1}$.



[View Text Solution](#)