

Chemical Reactions and Equations

Question 1.

What happens when dilute hydrochloric acid is added to iron filling? Tick the correct answer

- (a) Hydrogen gas and iron chloride are produced.
- (b) Chlorine gas and iron hydroxide are produced
- (c) No reaction takes place
- (d) Iron salt and water are produced

▼ Answer

- (a) Hydrogen gas and iron chloride are produced.
-

Question 2.

Assertion: A lead nitrate on thermal decomposition gives lead oxide, brown coloured nitrogen dioxide and oxygen gas.

Reason: Lead nitrate reacts with potassium iodide to form yellow ppt of lead iodide and the reaction is double displacement as well as precipitation reaction.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

- (b) Both A and R are true but R is not the correct explanation of A.
-

Question 3.

The reaction between lead nitrate and potassium iodide present in aqueous solutions is an example of

- (a) Decomposition Reaction
- (b) Displacement Reaction
- (c) Double Displacement Reaction
- (d) Neutralisation Reaction

▼ Answer

- (c) Double Displacement Reaction
-

Question 4.

The condition produced by aerial oxidation of fats and oils in foods marked by unpleasant smell and taste is called:

- (a) Antioxidation
- (b) Reduction
- (c) Rancidity
- (d) Corrosion

▼ Answer

- (c) Rancidity
-

Question 5.

The reaction between lead nitrate and potassium iodide present in aqueous solutions is an example of

- (a) Decomposition Reaction
- (b) Displacement Reaction
- (c) Double Displacement Reaction
- (d) Neutralisation Reaction

▼ Answer

- (c) Double Displacement Reaction
-

Question 6.

Electrolysis of water is a decomposition reaction. The mole ratio of hydrogen and oxygen gases liberated during electrolysis of water is:

- (a) 1:1
- (b) 2:1
- (c) 4:1
- (d) 1:2

▼ Answer

- (b) 2:1
-

Question 7.

What type of chemical reactions take place when electricity is passed through water?

- (a) Displacement
- (b) Combination
- (c) Decomposition
- (d) Double displacement

▼ Answer

- (c) Decomposition
-

Question 8.

Which of the following is an endothermic process?

- (a) Dilution of sulphuric acid
- (b) Sublimation of dry ice
- (c) Condensation of water vapours
- (d) Respiration in human beings

▼ Answer

- (b) Sublimation of dry ice
-

Question 9.

Oxidation is a process which involves

- (a) addition of oxygen
- (b) addition of hydrogen
- (c) removal of oxygen
- (d) removal of hydrogen

▼ Answer

- (a) addition of oxygen
-

Question 10.

Give the ratio in which hydrogen and oxygen are present in water by volume.

- (a) 1:2

- (b) 1:1
- (c) 2:1
- (d) 1:8

▼ Answer

- (a) 1:2
-

Question 11.

A substance which oxidizes itself and reduces other is known as

- (a) Oxidising agent
- (b) reducing agent
- (c) Both (a) and (b)
- (d) None of these.

▼ Answer

- (b) reducing agent
-

Question 12.

In an electrolytic cell where electrolysis is carried, anode has:

- (a) Positive charge
- (b) Negative charge
- (c) Connected to negative terminal of the battery
- (d) None of these is correct

▼ Answer

- (a) Positive change
-

Question 13.

Which of the following reactions is not correct:

- (a) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$
- (b) $2\text{Ag} + \text{Cu}(\text{NO}_3)_2 \rightarrow 2\text{AgNO}_3 + \text{Cu}$
- (c) $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$
- (d) $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$

▼ Answer

- (b) $2\text{Ag} + \text{Cu}(\text{NO}_3)_2 \rightarrow 2\text{AgNO}_3 + \text{Cu}$
-

Question 14.

Copper displaces which of the following metals from its salt solution:

- (a) ZnSO_4
- (b) FeSO_4
- (c) AgNO_3
- (d) NiSO_4

▼ Answer

- (c) AgNO_3
-

Question 15.

Which of the following involves combination of two elements?

- (a) $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightarrow 2\text{NH}_3(\text{g})$

- (b) $\text{CaO(s)} + \text{CO}_2\text{(g)} \rightarrow \text{CaCO}_3\text{(g)}$
(c) $2\text{SO}_2\text{(g)} + \text{O}_2\text{(g)} \rightarrow 2\text{SO}_3\text{(g)}$
(d) $\text{NH}_3\text{(g)} + \text{HCl(g)} \rightarrow \text{NH}_4\text{Cl(s)}$

▼ Answer

- (a) $\text{N}_2\text{(g)} + 3\text{H}_2\text{(g)} \rightarrow 2\text{NH}_3\text{(g)}$
-

Question 16.

Some crystals of copper sulphate were dissolved in water. The colour of the solution obtained would be:

- (a) green
(b) red
(c) blue
(d) brown

▼ Answer

- (c) blue
-

Question 17.

When dilute HCl is added to zinc pieces taken in a test tube

- (a) No change takes place
(b) the colour of the solution becomes yellow.
(c) A pungent smelling gas gets liberated.
(d) small bubbles of H_2 gas appear on the surface of zinc pieces

▼ Answer

- (d) small bubbles of H_2 gas appear on the surface of zinc pieces.
-

Question 18.

Magnesium ribbon is rubbed before burning because it has a coating of:

- (a) basic magnesium oxide
(b) basic magnesium carbonate
(c) basic magnesium sulphide
(d) basic magnesium chloride

▼ Answer

- (b) basic magnesium carbonate
-

Question 19.

Which one of the following processes involve chemical reactions?

- (a) Storing of oxygen gas under pressure in a gas cylinder
(b) Liquefaction of air
(c) Keeping petrol in a china dish in the open
(d) Heating copper wire in presence of air at high temperature

▼ Answer

- (d) Heating copper wire in presence of air at high temperature
-

Question 20.

Assertion: Zinc reacts with sulphuric acid to form zinc sulphate and hydrogen gas and it is displacement reaction.

Reason: Zinc reacts with oxygen to form zinc oxide.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

- (b) Both A and R are true but R is not the correct explanation of A.
-

Question 21.

Assertion: $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + 2\text{H}_2\text{O}$ is redox reaction. Reason: MnO_2 oxidises HCl to Cl_2 and gets reduced to MnCl .

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

- (a) Both A and R are true and R is the correct explanation of A.
-

Question 22.

Assertion: Magnesium ribbon keeps on burning in atmosphere of nitrogen.

Reason: Magnesium reacts with nitrogen to form magnesium nitrides and this reaction is combination reaction.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

- (a) Both A and R are true and R is the correct explanation of A.
-

Question 23.

Heat is evolved during:

- (a) Endothermic Reaction
- (b) Displacement Reaction
- (c) Combustion Reaction
- (d) Combination Reaction

▼ Answer

- (c) Combustion Reaction
-

Question 24.

Dissolving sugar is an example of

- (a) Physical change
- (b) Chemical change
- (c) Redox Reaction
- (d) None of these.

▼ Answer

(a) Physical change

Question 25.

A substance added to food containing fats and oils is called:

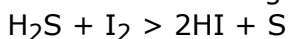
- (a) Oxidant
- (b) Rancid
- (c) Coolant
- (d) Antioxidant

▼ Answer

(d) Antioxidant

Question 26.

Select the oxidising agent for the following reaction:



- (a) I_2
- (b) H_2S
- (c) HI
- (d) S

▼ Answer

(a) I_2

Question 27.

A substance 'X' is used in white-washing and is obtained by heating limestone in the absence of air. Identify 'X'.

- (a) CaOCl_2
- (b) $\text{Ca}(\text{OH})_2$
- (c) CaO
- (d) CaCO_3

▼ Answer

(b) $\text{Ca}(\text{OH})_2$

Question 28.

The process of reduction involves

- (a) addition of oxygen
- (b) addition of hydrogen
- (c) removal of oxygen
- (d) removal of hydrogen

▼ Answer

(b) addition of hydrogen

Question 29.

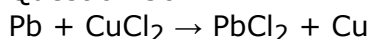
Which of the following gases can be used for storage

- (a) Carbon dioxide or Oxygen
- (b) Nitrogen or Oxygen
- (c) Carbon dioxide or Helium
- (d) Helium or Nitrogen

▼ Answer

(d) Helium or Nitrogen

Question 30.



This reaction is an example of:

- (a) combination
- (b) displacement
- (c) decomposition
- (d) double displacement

▼ Answer

(b) displacement

Question 31.

When green coloured ferrous sulphate crystals are heated, the colour of the crystal changes because:

- (a) it is decomposed to ferric oxide
- (b) it loses water of crystallisation
- (c) it forms SO_2
- (d) it forms SO_3

▼ Answer

(b) it loses water of crystallisation

Question 32.

What is observed when a solution of potassium iodide is added to silver nitrate solution?

- (a) No reaction takes place
- (b) White precipitate of silver iodide is formed
- (c) yellow precipitate of AgI is formed
- (d) AgI is soluble in water.

▼ Answer

(c) yellow precipitate of AgI is formed

Question 33.

PbS reacts with ozone (O_3) and forms PbSO_4 . As per the balanced equation, molecules of ozone required for every one molecule of PbS is/are

- (a) 4
- (b) 3
- (c) 2
- (d) 1

▼ Answer

(a) 4

Question 34.

Chemically rust is

- (a) Hydrated ferrous oxide
- (b) hydrated ferric oxide

- (c) only ferric oxide
(d) none of these

▼ Answer

- (b) hydrated ferric oxide
-

Question 35.

Which of the following reactions will not take place?

- (a) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_3 + \text{Cu}$
(b) $2\text{KBr} + \text{Cl}_2 \rightarrow 2\text{KCl} + \text{Br}_2$
(c) $\text{Zn} + \text{MgSO}_4 \rightarrow \text{ZnSO}_4 + \text{Mg}$
(d) $\text{Mg} + \text{FeSO}_4 \rightarrow \text{MgSO}_4 + \text{Fe}$

▼ Answer

- (c) $\text{Zn} + \text{MgSO}_4 \rightarrow \text{ZnSO}_4 + \text{Mg}$
-

Question 36.

Which of the following is a thermal decomposition reaction?

- (a) $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$
(b) $2\text{AgCl} \rightarrow 2\text{Ag} + \text{Cl}_2$
(c) $\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{HCl}(\text{g})$
(d) $\text{ZnCO}_3 \rightarrow \text{ZnO} + \text{CO}_2$

▼ Answer

- (d) $\text{ZnCO}_3 \rightarrow \text{ZnO} + \text{CO}_2$
-