

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.

Ouestion 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

Ouestion 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

(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

(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 change
- (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) $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$
- (b) $2Ag + Cu(NO_3)_2 \rightarrow 2AgNO_3 + Cu$
- (c) $Fe+CuSO_4 \rightarrow FeSO_4 + Cu$
- (d) Mg + 2HCl \rightarrow MgCl₂ + H₂

▼ Answer

(b) $2Ag + Cu(NO_3)_2 \rightarrow 2AgNO_3 + Cu$

Question 14.

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

- (a) ZnSO₄
- (b) FeSO₄
- (c) AgNO₃
- (d) NiSO₄

▼ Answer

(c) AgNO₃

Question 15.

Which of the following involves combination of two elements?

(a) $N_2(g) + 3H_2(g) + 2NH_3(g)$

- (b) $Cao(s) + CO_2(g) \rightarrow CaCO_3(g)$
- (c) $2SO_2(g) + O_2(g) \rightarrow 2SO_3f(g)$
- (d) $NH_3(g) + HCl(g) NH_4CI(S)$

(a) $N_2(g) + 3H_2(g) + 2NH_3(g)$

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 H₂ gas appear on the surface of zinc pieces

▼ Answer

(d) small bubbles of H₂ 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.

Kinetics, near by indian gas agency, Khurja road, Jewar(203135) PH: 8868813600, 8868823600

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: $MnO_2 + 4HCI \rightarrow MnCl_2 + Cl_2 + 2H_2O$ is redox reaction. Reason: MnO_2 oxides 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 suger is an example of

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

(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:

 $H_2S + I_2 > 2HI + S$

- (a) I_2
- (b) H₂S
- (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) CaOCl₂
- (b) $Ca (OH)_2$
- (c) CaO
- (d) CaCO₃

▼ Answer

(b) Ca $(OH)_2$

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

(d) Helium or Nitrogen

Question 30.

 $Pb \, + \, CuCl_2 \rightarrow PbCl_2 \, + \, Cu$

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 SO₂
- (d) it forms SO₃

▼ 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 Agl is formed
- (d) Agl is soluble in water.

▼ Answer

(c) yellow precipitate of Agl is formed

Question 33.

PbS reacts with ozone (O_3) and forms pbso₄. 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

(b) hydrated ferric oxide

Question 35.

Which of the following reactions will not take place?

(a)
$$Zn + CuSO_4 \rightarrow ZnSO_3 + Cu$$

(b)
$$2KBr + Cl_2 \rightarrow KCI + Br_2$$

(c)
$$Zn + MgSO_4 \rightarrow ZnSO_4 + Mg$$

(d)
$$Mg + FeSO_4 - MgSO_4 + Fe$$

▼ Answer

(c)
$$Zn + MgSO_4 \rightarrow ZnSO_4 + Mg$$

Question 36.

Which of the following is a thermal decomposition reaction?

(a)
$$2H_2O \rightarrow 2H_2 + O_2$$

(b)
$$2AgCl \rightarrow 2Ag + Cl_2$$

(c)
$$H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$$

(d)
$$ZnCO_3 \rightarrow ZnO + CO_2$$

▼ Answer

(d)
$$ZnCO_3 \rightarrow ZnO + CO_2$$