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 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) $Mg + 2HCl \rightarrow MgCl_2 + H_2$

▼ 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) $ZnSO_4$
(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) $N_2(g) + 3H_2(g) + 2NH_3(g)$

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

▼ Answer

(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 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

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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: $MnO_2 + 4HCl \rightarrow MnCl_2 + Cl_2 + 2H_2O$ 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.

▼ 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:
$H_2S + I_2 > 2HI + S$
(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) $Ca(OH)_2$
(c) CaO
(d) $CaCO_3$

▼ 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

▼ Answer

(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 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) $Zn + CuSO_4 \rightarrow ZnSO_3 + Cu$
(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) $ZnCO_3 \rightarrow ZnO + CO_2$
