CBT X SCIENCE JUNE 2024

Q1 Which among the following statement(s) is (are) true?
Exposure of silver chloride to sunlight for a long duration turns grey due to
(i) the formation of silver by decomposition of silver chloride
(ii) sublimation of silver chloride
(iii decomposition of chlorine gas from silver chloride
(iv) oxidation of silver chloride

(a) (i) only

(b) (i) and (iii)

(c) (iii) and (iv)

(d) (iv) only

Correct answer (a)

Q2 **A student adds lead and silver to two different test tubes containing an equal amount of copper sulphate solution. The student observes that the colour of the solution in the test tube with lead changes. What explains the change in the colour of the solution?**

(a) A displacement reaction takes place as lead replaces copper from the solution.

(b) A combination reaction takes place as lead combines with sulphate in the solution.

(c) A decomposition reaction takes place as copper dissociates from sulphate in the solution.

(d) A double displacement reaction takes place as copper dissociates from sulphate and lead combines with sulphate in the solution.

Correct answer (a)

Q3 What happens when dilute hydrochloric acid is added to iron fillings ? Choose the correct answer.

(a) Hydrogen gas and iron chloride is produced

(b) Chlorine gas and iron hydroxide are produced

(c) (c) No reaction takes place

(d) Iron salt and water are produced

Correct answer (a)

Q4 Fatty food become rancid because of which one of the following?

(a) Oxidation

(b) Reduction

(c) Hydrogenation

(d) Corossion

Correct answer (a)

Q5 **Assertion (A) :** Brown fumes are produced when lead nitrate is heated.
Reason (R) : Nitrogen dioxide gas is produced as a by product due to the decomposition of lead nitrate.

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

(b)Both (A) and (R) are true and (R) is not correct explanation of (A)

(c)(A) is true but (R) is false

(d)(A) is false but (R) is true

Correct answer (a)

Q6 **Assertion (A) :** In a reaction of copper with oxygen, copper serves as a reducing agent.
Reason (R) : The substance which gains oxygen in a chemical reaction acts as a oxidising agent.

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

(b)Both (A) and (R) are true and (R) is not correct explanation of (A)

(c)(A) is true but (R) is false

(d)(A) is false but (R) is true

Correct answer (c)

Q7 Copper articles acquire a green colour coating on its surface on exposure to air. Identify the green colour compound

(a)Copper hydroxide

(b)Copper carbonate

(c)Basic Copper Carbonate

(d)Copper Oxide

Correct answer (c)

Q8 Identify the reactants taking part in the reaction from the given figure

(a) Barium Chloride and Sodium sulphate

(b) Lead nitrate and Potassium Iodide

(c) Silver Chloride and Sodium Sulphate

(d) None of these

Correct answer (b)

Q9 Name the type of reactions taking place in Q8

(a) Combination and Redox

(b) Precipitation and Double Displacement

(c) Precipitation and Displacement

(d) (d) Displacement and Redox

Correct answer (b)

Q10 Following figure shows electrolysis of water. On passing electricity through acidified water , bubbles of hydrogen and oxygen gases are collected in the boiling tube fitted with 2 electrodes. Name the electrodes in which hydrogen and oxygen gas is collected.

(a) Hydrogen at anode and Oxygen at cathode

(b) Hydrogen at cathode and Oxygen at anode

(c) Both Hydrogen and Oxygen at anode

(d) Both Hydrogen and Oxygen at cathode

Correct answer (b)