

**ICSE Board
 Class X Chemistry
 Gold Series
 Sample Paper-1 Solution**

SECTION-I

Answer 1
(a)

- (i) Chromium oxide
- (ii) Calcium sulphite
- (iii) Calcium oxide or Quick lime
- (iv) Sulphur
- (v) Galvanization

(b)

- (i) $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2$
- (ii) $\text{CuO} + \text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{H}_2\text{O}$
- (iii) $\text{Na}_2\text{CO}_3 + \text{MgCl}_2 \rightarrow \text{MgCO}_3 + 2\text{NaCl}$
- (iv) $2\text{Fe} + 3\text{Cl}_2 \rightarrow 2\text{FeCl}_3$
- (v) $\text{Fe} + \text{S} \xrightarrow{\Delta} \text{FeS}$

(c)

- (i) $\text{S} + 6\text{HNO}_3(\text{conc.}) \rightarrow \text{H}_2\text{SO}_4 + 6\text{NO}_2 + 2\text{H}_2\text{O}$
- (ii) $\text{P}_4 + 20\text{HNO}_3(\text{conc.}) \rightarrow 4\text{H}_3\text{PO}_4 + 20\text{NO}_2 + 4\text{H}_2\text{O}$

(d)

- 1. (i) decreases (ii) increases
- 2. (iii) decreases (iv) increases
- 3. (v) decreases (vi) increases
- 4. (vii) increase (viii) decreases
- 5. (ix) increases (x) decreases

(e)

- (i) First the sugar turns brown then it swells to give steam and finally gets charred.
- (ii) Dense white fumes are seen.
- (iii) A colourless and odourless gas evolves with brisk effervescence which turns lime water milky.
- (iv) On adding a little Ammonium hydroxide, white precipitate of zinc hydroxide is formed which dissolves in excess of Ammonium hydroxide to give clear solution.
- (v) The solution becomes green.

(f)

Cathode	Anode
(i) Lead metal	Bromine vapours
(ii) hydrogen	Chlorine
(iii)Copper	Oxygen
(iv)Sodium	Chlorine
(v)Potassium	Chlorine

(g)

- (i) Sodium chloride – Ionic bonding
- (ii) Carbon tetrachloride – Covalent bonding
- (iii)Ammonia - Polar covalent bonding
- (iv)Methane – Covalent bonding
- (v) Calcium oxide – Ionic bonding

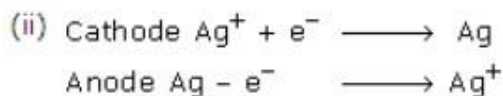
(h)

- (i) Hydrogen chloride gas is Polar covalent compound.
- (ii) Ammonia turns moist red litmus blue.
- (iii)Concentrated sulphuric acid is least volatile acid.
- (iv)Burning Magnesium reacts with Nitrogen to form Magnesium nitride.
- (v) Hydrogen chloride gas is highly or extremely soluble in water.

SECTION-II
Answer 2

(a) (1) Silver (2) Copper spoon (3) Silver (4) Pure

(b)



$$\begin{array}{l} \text{(b) (i) } \frac{10 \times 60}{100} = 6 \text{ litre of propane} \\ \frac{10 \times 40}{100} = 4 \text{ litre of butane} \end{array}$$

Now, 1 volume of propane = 3 volumes of CO_2

$$6 \text{ litre of propane} = \frac{3}{1} \times 6 = 18 \text{ litre of } \text{CO}_2$$

2 volume of butane = 8 volumes of CO_2

$$4 \text{ litre of butane} = \frac{8}{2} \times 4 = 16 \text{ litre of } \text{CO}_2$$

Total volume of $\text{CO}_2 = 18 + 16 = 34 \text{ litre}$

$$\text{(ii) \% of N} = \frac{28}{80} \times 100 = 35\%$$

$$\% \text{ of O} = \frac{48}{80} \times 100 = 60\%$$

Answer 3

(a)

(i) Lead sulphide

(ii) Sulphur dioxide

(b)

(i) Those minerals from which the metals are extracted commercially at a comparatively low cost and with minimum effort are called ores.

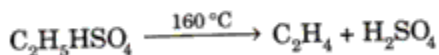
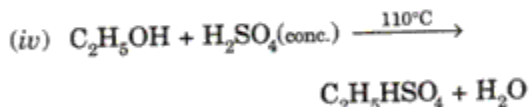
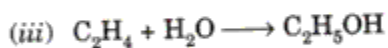
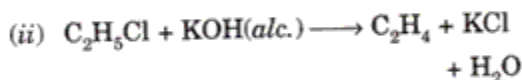
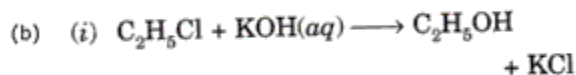
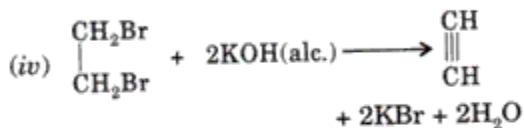
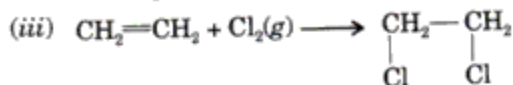
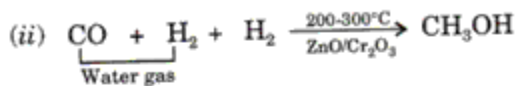
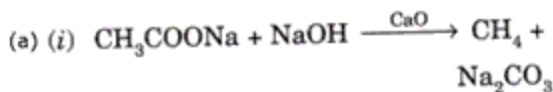
(ii) The earthly impurities including silica, mud, etc., associated with the ore are called gangue.

(c)

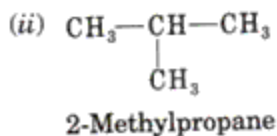
(i) Baeyer's process

(ii) Hall's process

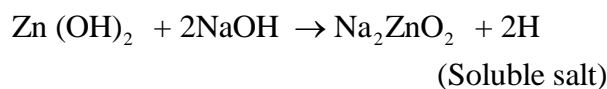
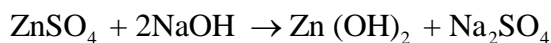
(iii) Hoope's process

Answer 4


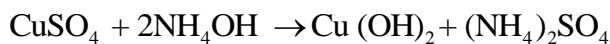
(c) (i) The compounds having the same molecular formula but different structural formula are called as isomers and the phenomenon is called as isomerism.


Answer 5

(i) On adding sodium hydroxide to zinc sulphate drop by drop a white precipitate is formed which is soluble in excess of sodium hydroxide.



(ii) On adding NH_4OH drop by drop to a solution of copper sulphate a pale blue ppt. appears which dissolves in excess of NH_4OH to give deep blue or inky blue solution.



Answer 6

(a)

- (i) False
- (ii) False

(b)

- (i) Reduced
- (ii) Negative charge
- (iii) Anode

(c)

- (i) Low
- (ii) 8, He, 2
- (iii) Alkaline earth

Answer 7

(a)

- (i) $\text{Na}_2\text{SO}_3 + 2\text{HCl (dil.)} \rightarrow 2\text{NaCl} + \text{H}_2\text{O} + \text{SO}$
 $\text{Cu} + 2\text{H}_2\text{SO}_4 \text{ (conc.)} \rightarrow \text{CuSO}_4 + 2\text{H}_2\text{O} + \text{SO}_2$
- (ii) Sulphurous acid
- (iii) Sulphites and bisulphites

(b)

- (i) Monobasic acid
- (ii) Lead nitrate and silver nitrate
- (iii) Hydrogen