

# LILAVATIBAI PODAR HIGH SCHOOL (ISC)

## PRACTISE PAPER – 1

### CHEMISTRY

*(Candidates are allowed additional 10 minutes for only reading the paper.*

*They must **NOT** start writing during this time)*

Section I is compulsory , attempt **any three** questions from section II

Intended marks for question questions or parts of questions are given in brackets [ ]

#### SECTION I (10 marks)

**Attempt all questions**

#### Question 1

Choose the correct answers to the questions from the given options. (Do not copy the question, Write the correct answer only. **[10]**

- i. The IUPAC name of acetylene is
  - a. Ethane
  - b. Ethene
  - c. Ethyne
  - d. Propene
  
- ii. Carbon to carbon triple bond is found in:
  - a. Ethanol
  - b. Ethyne
  - c. Ethanal
  - d. Ethene
  
- iii. NaOH is used for concentration of ore in Baeyer's process because
  - a. Aluminium is highly reactive
  - b. Aluminium is amphoteric in nature
  - c. Impurities are amphoteric in nature
  - d. Aluminium is acidic in nature
  
- iv. Pyrosulphuric acid is the chemical name of
  - a. Green vitriol
  - b. White vitriol
  - c. oleum
  - d. Gypsum
  
- v. Substitution reaction is a characteristic property of
  - a. Alcohols
  - b. Alkanes
  - c. Alkenes
  - d. Alkynes

- vi.** When sulphuric acid is added to sodium carbonate brisk effervescence is produced due to the evolution of ----- gas
- $\text{H}_2\text{S}$
  - $\text{Cl}_2$
  - $\text{CO}_2$
  - $\text{O}_2$
- vii.** the oxidised product formed by oxidation of sulphur with concentrated nitric acid is
- Sulphur trioxide
  - Sulphuric acid
  - Sulphur dioxide
  - Hydrogen sulphide
- viii** Mixture of ammonia and oxygen is
- acidic
  - neutral
  - explosive
  - Non -reactive
- ix** The ore which has Aluminium and magnesium
- Duralumin
  - Magnalium
  - Amalgam
  - Steel
- X** A hydrocarbon which is a greenhouse gas
- Acetylene
  - Ethylene
  - Ethane
  - Methane

## SECTION B

(attempt any three questions from this section )

### Question two

- Define **[2]**
  - Ore
  - Minerals
- Define **[2]**
  - Homologous series
  - Isomerism
- Draw the structural diagram of: **[3]**
  - Ethanal
  - Propanoic acid
  - 1,3-dibromopropane

- iv. Complete and balance the following chemical equations: [3]
- $\text{CH}_4 + \text{O}_2 \rightarrow$
  - $\text{C}_2\text{H}_4 + \text{Cl}_2 \rightarrow$
  - $\text{C}_2\text{H}_2 + \text{Cl}_2 \rightarrow$

### Question three

- Identify the salt [2]
  - Salt solution A gives inky blue solution with excess of ammonium hydroxide and white ppt with  $\text{BaCl}_2$  solution . identify A
  - Salt solution B gives dirty green precipitate with ammonium hydroxide solution and white ppt with silver nitrate solution . identify B
- State the following [2]
  - Drying agent used for hydrogen chloride gas
  - The acid anhydride of sulphuric acid
- State the observation [3]
  - Excess of ammonia solution is passed through lead nitrate solution
  - Hydrogen chloride gas is passed through silver nitrate solution
  - Concentrated sulphuric acid is added to blue vitriol
- Balanced equations [3]
  - Concentrated sulphuric acid is added to carbon
  - Aqueous ammonia is added to ferric chloride solution
  - Dilute hydrochloric acid is added to sodium sulphide

### Question four

- Give reasons [2]
  - Sodium hydroxide is used in the concentration of ore by Baeyer's process
  - Fused cryolite and fluorspar are added to the electrolyte mixture during extraction of aluminium from alumina.
- Answer the following [2]
  - Name an alloy used for making scientific tools.
  - What property of the alloy makes it suitable for the use mentioned in the above question (a)?
- Identify the term [3]
  - The gas obtained when rock salt reacts with conc sulphuric acid
  - Property of ammonia shown by the fountain experiment
  - Metallurgy
- Complete the following table

Substance reacted	acid	Gas released
Cu	Conc $\text{HNO}_3$	
Cu	Conc $\text{H}_2\text{SO}_4$	

**Question five**

- i. Mention balanced reactions or the following [2]
  - a. Conversion of impure bauxite to sodium aluminate
  - b. Conversion of aluminium hydroxide to pure alumina
- ii. A colourless gas G fumes strongly in air, gives dense white fumes when a glass rod dipped in HCl solution is held near the gas. [2]
  - a. Name the gas
  - b. Name two reactants used in the preparation of the gas
- iii. Name the following organic compound: [3]
  - a. The compound with 2 carbon atoms whose functional group is a carboxylic acid.
  - b. The second homologue whose general formula is  $C_nH_{2n}$
  - c. The compound formed by complete chlorination of ethene.
- iv. Give reasons [3]
  - a. Hydrogen chloride gas is not collected over water
  - b. Dry HCl gas does not change the colour of blue litmus
  - c. Hydrogen chloride gas is collected by the upward displacement of air

**Question six**

- i. Distinguish test [2]
  - a. HCl solution and  $H_2SO_4$  solution
  - b. Lead nitrate solution and zinc nitrate solution
- ii. Give one word [2]
  - a. The naturally occurring minerals from which metals can be extracted profitably.
  - b. Organic chemistry
- iii. Give one balanced equation to illustrate the following properties of sulphuric acid [3]
  - a. Typical acid
  - b. Dehydrating nature
  - c. Non volatile acid
- iv. Answer the following questions with respect to ethane [3]
  - a. General formula
  - b. structure
  - c. Type of reaction it undergoes