

LILAVATIBAI PODAR HIGH SCHOOL (ISC)

PRACTISE PAPER – 2

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 acetaldehyde is
 - a. Ethane
 - b. Ethene
 - c. Ethyne
 - d. Ethanal

- ii. Carbon to carbon single bond is found in:
 - a. Ethane
 - b. Ethyne
 - c. Propene
 - d. Ethene

- iii. The cathode used for electrolysis of alumina is:
 - a. Platinum
 - b. Iron
 - c. Copper
 - d. Carbon

- iv. Production of sulphuric acid from sulphur trioxide is done in ----- steps
 - a. two
 - b. one
 - c. three
 - d. four

- v. Addition reaction is a characteristic property of
 - a. Alcohols
 - b. Alkanes
 - c. Alkenes
 - d. Acids

- vi. The addition of water directly to the acid can lead to the ----- of acid
 - a. degradation
 - b. condensing
 - c. spurting
 - d. vaporisation

vii. the name of the process for commercial preparation of nitric acid is

- a. Le chatelier principle
- b. Haber's process
- c. Contact process
- d. Ostwald's process

viii The explosive compound formed by reaction between ammonia and excess chlorine is -----in colour

- a. white
- b. red
- c. yellow
- d. orange

ix The main abundant ore of aluminium is

- a. Cryolite
- b. Fluorspar
- c. Bauxite
- d. Alumina

X A hydrocarbon with a carbon-carbon triple bond is

- a. Acetylene
- b. Ethylene
- c. Ethane
- d. Methane

SECTION B

(attempt any three questions from this section)

Question two

- i. Metallurgy [2]
 - a. define – catenation
 - b. Define - Alloy

- ii. Mention the IUPAC names of the following [2]
 - a. isobutane
 - b. neopentane

- iii. Draw the structural diagram of: [3]
 - a. Propanal
 - b. Ethanoic acid
 - c. 1,3-chloropropane

- iv Name the following: [3]
 - a. Second member of alkene series
 - b. Second member of carboxylic acid.
 - c. Fourth member of alcohol series.

Question three

- i. Identify the anion [2]
a. A salt on heating gives reddish brown fume. Identify the anion in the salt
b. A salt solution gives white ppt with BaCl_2 solution. Identify the anion
- ii. State the following [2]
a. Compound of lead that can oxidize HCl to Cl_2
b. The gas produced in the combustion of ammonia in the absence of catalyst
- iii. State the observation [3]
a. Ammonia is passed through black copper oxide
b. Dilute sulphuric acid is added to barium chloride solution
c. Magnesium strip is added to dilute HCl solution
- iv. Balanced equations [3]
a. Concentrated sulphuric acid is added to copper metal
b. Ammonia solution is added to lead oxide
c. Manganese dioxide is treated with conc HCl

Question four

- i. Give reason [2]
a. Fused alumina is reduced electrolytically to aluminium
b. Anodes are continuously replaced during electrolysis of alumina to aluminium
- ii. Answer the following questions with respect to Hall Heroult's process [2]
a. The reaction at cathode
b. Constituents of the electrolyte mixture
- iii. Identify the term [3]
a. The method used for the preparation of hydrochloric acid from HCl gas
b. The type of reaction due to which the Pt catalyst continues to glow in the catalytic oxidation of ammonia
c. Metallurgy
- iv. Complete the following table

Substance reacted	acid	Gas released
Copper carbonate	Dil sulphuric acid	
S	Conc nitric acid	

Question five

- i. Mention balanced reaction for: [2]
a. Sodium aluminate to aluminium hydroxide
b. Reaction at anode in Hall Heroult's process
- ii. Distinguish between the following using ammonia solution [2]
a. Ferrous sulphate and ferric sulphate
b. Lead nitrate and zinc nitrate

- iii. Name the following organic compound: [3]
- The compound with 3 carbon atoms whose functional group is a aldehyde.
 - The second homologue whose general formula is C_nH_{2n-2}
 - The compound formed by complete chlorination of methane
- iv Manganese (IV) oxide and lead (IV) oxide react with conc HCl [3]
- What is the common property shown by these metal oxides
 - Write the chemical equation for the above reaction
 - Name the gas released in the above reaction and give a chemical test for the gas

Question six

- i. Distinguish test [2]
- Ammonia gas and HCl gas
 - HCl solution and HNO_3 solution
- ii. Give one word / identify the following [2]
- A compound added to lower the fusion temperature of the electrolytic bath in the extraction of Al.
 - Ability to form self linking chain
- iii. Answer the following [3]
- Write the balanced equation for the conversion of sulphur trioxide to oleum in contact process
 - Name the catalyst used in the oxidation of SO_2 to SO_3
 - Why is the above catalyst preferred
- iv Answer the following questions with respect to ethyne [3]
- General formula
 - structure
 - Type of reaction it undergoes