Genesis Educates

"There is no element of genius

Without some form of madness"

CLASS-10th ICSE CHEMISTRY
MOCK-TEST-1
TERM-2

T.T- 1:30 HR **M.M- 40**

General Instructions:

i Answers to this Paper must be written on the paper provided separately.
ii You will not be allowed to write during the first 10 minutes.
iii This time is to be spent in reading the question paper.
iv The time given at the head of this Paper is the time allowed for writing the answers.
v Attempt all questions from Section A and any three questions from Section B.
vi The intended marks for questions or parts of questions are given in brackets [].

SECTION-A

Attempt all questions

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 CH_3Cl is:
(a) Methyl chloride (b) Chloromethane
(c) Chloromethyl (d) Ethyl chloride

(ii) The organic compound having a triple carbon-carbon covalent bond is:
(a) C_3H_4 (b) C_3H_6
(c) C_3H_8 (d) C_4H_{10}

(iii) The reason for using Aluminium in the alloy duralumin is:
(a) Aluminium is brittle. (b) Aluminium gives strength.
(c) Aluminium brings lightness. (d) Aluminium lowers melting point.

(iv) The brown ring test is used for the detection of:
(a) CO_3^{2-} (b) NO_3^-
(c) SO_3^{2-} (d) Cl^-

(v) Aqua regia is a mixture of:
(a) Dilute hydrochloric acid and concentrated nitric acid
(b) concentrated hydrochloric acid and dilute nitric acid
(c) concentrated hydrochloric acid (1 part) and concentrated nitric acid (3 parts)
(d) concentrated hydrochloric acid (3 parts) and concentrated nitric acid (1 part)

(vi) The functional group present in acetic acid is:
(a) Ketone (C = O) (b) Hydroxyl (–OH)
(c) Carboxyl (–COOH) (d) Aldehyde (–CHO)

(vii) In the given equation, identify the role played by concentrated sulphuric acid:

$S + 2H_2SO_4 \rightarrow 3SO_2 + H_2O$

(a) Non-volatile acid (b) Oxidising agent

(c) Dehydrating agent (d) None of the above

(viii) Hydrogen chloride can be obtained by adding concentrated sulphuric acid To:

(a) NaCl (b) Na_2SO_4

(c) Na_2CO_3 (d) $NaNO_3$

(ix) Duralumin is an alloy of:

(a) Al and Cu (b) Cu and Sn

(c) Al and Ag (d) Al and Fe

(x) The property of carbon to form chains and rings is called:

(a) Catenation (b) Polymerization

(c) Cracking (d) Hydrogenation

SECTION-B

(Attempt any three questions from this Section.)

2. (i) Define: **[2]**

(a) Isomerism (b) Metallurgy

(ii) Name the product obtained when: **[2]**

(a) Ethene reacts with bromine

(b) Magnesium oxide reacts with hydrochloric acid

(iii) Give the structural formulae of each of the following: **[3]**

(a) 2-methyl propane (b) Ethanoic acid

(c) Butan-2-ol

(iv) The following questions are pertaining to the laboratory preparation of hydrogen chloride gas: **[3]**

(a) Write the equation for its preparation mentioning the condition required.

(b) Name the drying agent used and justify your choice.

(c) State a safety precaution you would take during the preparation of hydrochloric acid.

3. (i) State the relevant reason for the following: **[2]**

(a) Concentrated nitric acid appears yellow, when it is left for a while in a glass bottle.

(b) Ammonia gets easily absorbed in water.

(ii) Name one main ore of the following metals: **[2]**

(a)Iron (b) Zinc

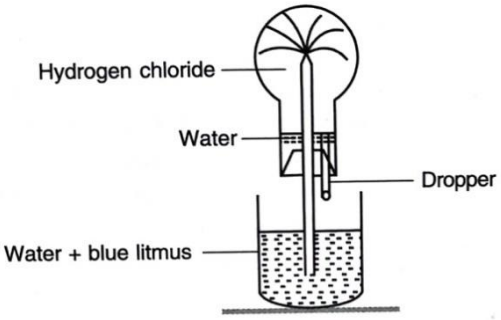
(iii) Write balanced chemical equations to show: **[3]**

(a) The oxidising action of conc. sulphuric acid on carbon.

(b) The behaviour of H_2SO_4 as an acid when it reacts with magnesium.

(c) The dehydrating property of conc. sulphuric acid with sugar.

(iv) Study the figure given below and answer the questions that follow: **[3]**



(a) Identify the gas Y.
(b) What property of gas does this experiment demonstrate?
(c) Name another gas which has the same property and can be demonstrated through this experiment.

4. (i) State the observation for the following: **[2]**
(a) Action of concentrated nitric acid on copper.
(b) Addition of excess ammonium hydroxide into copper sulphate solution.
(ii) Certain blank spaces are left in the following table and these are labelled as A and B. Identify each of them. **[2]**

	Lab Preperation of	Reactants used	Products formed	Drying agent	Method of collection
(i)	HCl gas	NaCl + H_2SO_4	A	Concentrated H_2SO_4	B

(iii) Bayer's process is used to concentrate bauxite to alumina: **[3]**
(a) Give balanced chemical equations for the reaction taking place for its conversion from bauxite to alumina.
(iv) With respect to the brown ring test for nitrates explain: **[3]**
(a) Freshly prepared ferrous sulphate solution is used.
(b) The brown ring disappears if the test tube is disturbed.
(c) Lead nitrate does not respond well to the brown ring test.

5. (i) Compare between saturated and unsaturated hydrocarbons. **[2]**
(ii) (a) During the concentration of bauxite ore, aluminium goes in _____ (soluble/ insoluble) part because of its _____ (acidic/ basic/ amphoteric) nature.
(b) In Hall Herolt's process, pure aluminium is collected at the _____ (top/ bottom) of the electrolytic cell. **[2]**

(iii) Ethane, Ethene, Ethanoic acid, Ethyne, Ethanol **[3]**

From the compounds given above, name the following:

(a) The compound with –OH as the part of its structure.

(b) The compound with –COOH as the part of its structure.

(c) Homologue of homologous series with general formula CnH2n.

(iv) Ammonia is used in the Ostwald process. **[3]**

(a) Name the catalyst used in the process.

(b) Name the oxidising agent used in this process.

(c) What is the ratio of ammonia and air taken in this process?

6. (i) Give the favourable conditions for the conversion of SO_3 in Contact process**.** **[2]**

(ii) Name the following: **[2]**

(a) Second member of alkene series.

(b) First member of alkane series.

(iii) Complete and balance the following chemical reactions: **[3]**

(a) $MnO_2 + HCl \rightarrow$ (b) $Zn + HCl \rightarrow$

(c) $FeCl_3 + NH_4OH \rightarrow$

(iv) Name the alkyl radical and functional group of the following organic compounds:

(a) CH_3OH (b) CH_3COOH **[3]**

(c) C_2H_5OH