ICSE 2023 EXAMINATION

SPECIMEN QUESTION PAPER

CHEMISTRY

(SCIENCE PAPER – 2)

Maximum Marks: 80

Time allowed: Two hours

Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during first 15 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this Paper is the time allowed for writing the answers.

***Section A** is compulsory. Attempt **any four** questions from **Section B**.*

The intended marks for questions or parts of questions are given in brackets [ ].

SECTION A

*(Attempt **all** questions from this Section.)*

Question 1

Choose one correct answer to the questions from the given options: [15]

(i) A weak electrolyte is:

(a) Alcohol

(b) Potassium hydroxide

(c) Ammonium hydroxide

(d) Glucose

(ii) Electron affinity is maximum in:

(a) Alkaline earth metals

(b) Halogens

(c) Inert gases

(d) Alkali metals

(iii) The main components of bronze are:

(a) Copper and tin

(b) Copper and iron

(c) Copper and lead

(d) Copper and zinc

(iv) A polar covalent compound is:

(a) Methane

(b) Ammonia

(c) Nitrogen

(d) Chlorine

(v) An acid which has two replaceable hydrogen ions:

(a) Acetic acid

(b) Hydrochloric acid

(c) Phosphoric acid

(d) Carbonic acid

(vi) The hydroxide which is soluble in excess of NaOH is:

(a) Ferric hydroxide

(b) Lead hydroxide

(c) Copper hydroxide

(d) Calcium hydroxide

(vii) If the RMM of carbon dioxide is 44, then its vapour density is:

(a) 22

(b) 32

(c) 44

(d) 88

(viii) Drying agent used to dry Hydrogen chloride gas:

(a) Concentrated Sulphuric acid

(b) Calcium oxide

(c) Sulphurous acid

(d) Calcium hydroxide

(ix) The catalyst used in the Haber's Process is:

(a) Molybdenum

(b) Platinum

(c) Nickel

(d) Finely divided Iron

(x) An aqueous compound which turns colourless phenolphthalein to pink:

(a) Ammonium hydroxide

(b) Nitric acid

(c) Anhydrous calcium chloride

(d) Sulphuric acid

(xi) The gas formed when carbon reacts with concentrated sulphuric acid:

(a) Hydrogen

(b) Sulphur trioxide

(c) Sulphur dioxide

(d) Oxygen

(xii) The organic compound prepared when Ethanol undergoes dehydration:

(a) Methane

(b) Ethane

(c) Acetylene

(d) Ethene

(xiii) The IUPAC name of methyl acetylene is:

(a) Propyne

(b) Ethene

(c) Propane

(d) Ethyne

(xiv) The product formed at the cathode in electroplating of an article with Nickel is:

(a) Hydrogen gas

(b) Nickel ions

(c) Nickel atoms

(d) Oxygen gas

(xv) An alkali metal found in period 3 and group 1 is:

(a) Magnesium

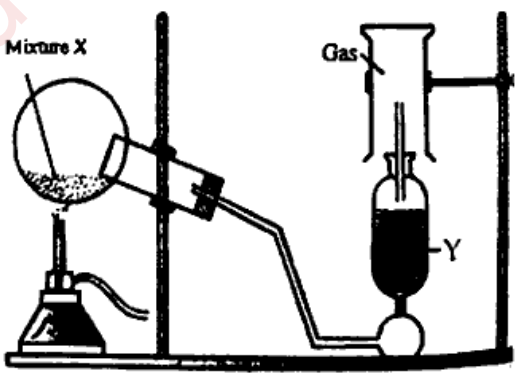
(b) Lithium

(c) Sodium

(d) Potassium

Question 2

(i) The diagram shows an experiment set up for the laboratory preparation of a pungent smelling gas. The gas is alkaline in nature. [5]



(a) Name the gas collected in the gas jar.

(b) Write a balanced chemical equation for the above preparation.

(c) How is the gas being collected?

(d) What is the purpose of using Y?

(e) How will you find that the jar is full of gas?

(ii) Match the following Column A with Column B. [5]

Column A		Column B	
(a)	Acid Salt	1.	Black in colour
(b)	Copper Oxide	2.	Reddish brown
(c)	Zinc hydroxide	3.	Hydrogen chloride
(d)	Copper Metal	4.	Sodium Hydrogen Carbonate
(e)	Polar compound	5.	Soluble in excess sodium hydroxide

(iii) Complete the following by choosing the correct answers from the bracket:

(a) Ammonia in the liquefied form is _____. [neutral / basic]

(b) Organic compounds are generally insoluble in _____. [Water / Organic solvents]

(c) An inert electrode used in electrolysis of acidified water is _____. [iron / platinum]

(d) Hydrocarbons having double bond is _____. [alkenes / alkynes]

(e) An alkaline gas gives dense white fumes of _____ [NH_4OH / NH_4Cl] with hydrogen chloride gas.

(iv) Identify the following: [5]

(a) The property by which carbon bonds with itself to form a long chain.

(b) A substance that conducts electricity in molten or aqueous state.

(c) The energy required to remove an electron from the valence shell of a neutral isolated gaseous atom.

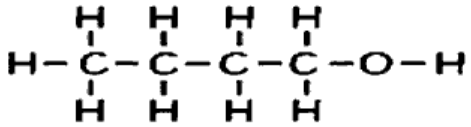
(d) The name of the process by which the Bauxite ore is concentrated.

(e) The bond formed by a shared pair of electrons with both electrons coming from the same atom.

(v) (a) Draw the structural formula for the following: 5

1. 2-pentanol
2. Ethanal
3. 1-butene

(b) Name the following organic compounds in IUPAC system:

1. 

2.