

GREENLAWNS HIGH SCHOOL
CHEMISTRY FINAL EXAMINATION 2023-24

STD. 8

TIME: 2 HR.

DATE: / /2024

MARKS: 80

NOTE:

- 1] Answer to this paper must be written on the paper provided separately.
- 2] You will not be allowed to write during the first 10 minutes. This time is to be spent in reading the paper.
- 3] The time given at the head of this paper is the time allowed for writing the answers. This paper has pages (sides)
- 4] Section A and Section B both are compulsory.
- 5] The intended marks for a question or parts of questions are given in the brackets [].

SECTION A [40 MARKS]

ALL QUESTIONS IN THIS SECTION ARE COMPULSORY.

Q.1 A] Choose the most correct answers to the questions from the given options: [10]

i) The symbol C stands for

- a) Calcium b) Copper c) Cobalt d) Carbon

ii) The last shell of Helium atom is represented by

- a) K b) L c) M d) N

iii) The _____ of substance does not change during a physical change.

- a) Shape b) size c) colour d) composition

Contd.....

iv) The shorthand form of representing the result of a chemical change is called as

- a) symbol
- b) molecular formula
- c) chemical equation
- d) chemical reaction

v) The element which shows the variable valency is

- a) Helium
- b) Sodium
- c) Copper
- d) Nitrogen

vi) The reaction in which two or more elements or compounds combine to give a single new compound is

- a) displacement reaction
- b) decomposition reaction
- c) synthesis reaction
- d) double decomposition reaction

vii) The most reactive metal in the activity series of metals is placed

- a) just above the hydrogen
- b) at the top
- c) just below the hydrogen
- d) at the bottom

viii) The metallic nitrates from Calcium to Copper on decomposition form metallic oxide along with

- a) Carbon dioxide
- b) Nitrogen dioxide and oxygen
- c) Nitrogen dioxide
- d) oxygen

ix) The nature of carbon dioxide gas is

- a) slightly acidic
- b) neutral
- c) slightly basic
- d) poisonous

x) The carbon exists in the combined state in the atmosphere as

- a) diamond
- b) graphite
- c) Hydrocarbons
- d) carbon dioxide

Contd.....

Q.2A] Write the molecular formulae of the following compounds: [7]

- 1) Sodium sulphate
- 2) Calcium oxide
- 3) Ammonium hydroxide
- 4) Zinc chloride
- 5) Magnesium nitrate
- 6) Potassium bicarbonate
- 7) Aluminium sulphide

B] Draw a neat labelled atomic structure of Calcium atom [3]

Q.3 A] Balance the following chemical equations: [6]

- 1) $\text{ZnS} + \text{O}_2 \rightarrow \text{ZnO} + \text{SO}_2$
- 2) $\text{Al} + \text{H}_2\text{O} \rightarrow \text{Al}_2\text{O}_3 + \text{H}_2$
- 3) $\text{H}_2\text{S} + \text{Cl}_2 \rightarrow \text{S} + \text{HCl}$
- 4) $\text{K} + \text{H}_2\text{O} \rightarrow \text{KOH} + \text{H}_2$
- 5) $\text{KHCO}_3 \rightarrow \text{K}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$
- 6) $\text{FeCl}_3 + \text{NaOH} \rightarrow \text{NaCl} + \text{Fe}(\text{OH})_3$

B] Write the symbols of the following elements: [2]

- 1) Silicon
- 2) Magnesium
- 3) Boron
- 4) Fluorine

C] Write the English names of the elements that represent the following symbols: [2]

- 1) Cu
- 2) P

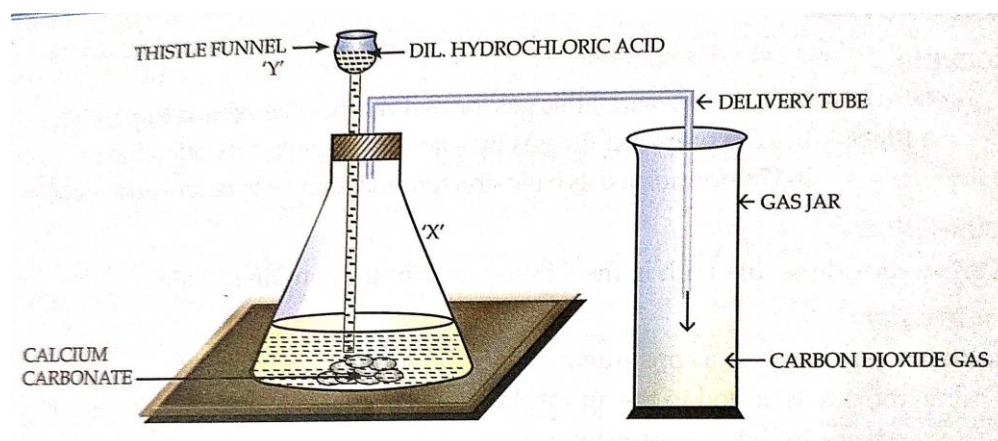
Q.4 A] Differentiate between the following pairs on the basis of what is given in the brackets: [6]

- 1) Diamond and Graphite (conduction of electricity)
- 2) Endothermic reaction and Exothermic reaction (energy involved)
- 3) Physical change and Chemical change (definition)
- 4) Carbon dioxide and Carbon monoxide (Solubility in water)
- 5) Electrolytic decomposition and photolytic decomposition (meaning)
- 6) Diamond and Graphite (density)

B] Name the gas liberated, when soda acid fire extinguisher is in use. Give three reasons why the gas mentioned by you finds application in the fire extinguishers. [4]

SECTION B [40 MARKS]
ALL QUESTIONS IN THIS SECTION ARE COMPULSORY

Q.5 A) The figure given below represents the laboratory [6]
preparation of Carbon dioxide gas. Observe the figure carefully
and answer the questions that follow:



- Name the substance X.
- Name the method of collection of gas.
- Why the gas is collected by the method mentioned by you in the above answer? Give 2 points.
- Why the gas is passed through a wash bottle containing KHCO_3 solution?
- Give a balanced chemical equation for the preparation of Carbon dioxide by the method as shown in the figure.

Contd.....

B] Define: [4]

i) Valency ii) Catalyst iii) Allotropy iv) Neutralisation

Q.6 A] State whether the following changes are the physical changes or the chemical changes. [6]

i) Cutting of wood ii) Fermentation of dosa batter
iii) Melting of chocolate iv) Heating of Mercuric oxide
v) Magnetization of an iron nail vi) Rotting of fruits

B] Name the elements/compounds formed when: [4]

i) The Carbon dioxide is passed over hot coke.
ii) The Carbon monoxide is burnt in air.
iii) The animal bones undergo destructive distillation.
iv) The Formic acid is warmed with conc. Sulphuric acid.

Q.7 A] State the type of reaction in each of the following cases: [6]

i) $2\text{NaNO}_3 \rightarrow 2\text{NaNO}_2 + \text{O}_2$
ii) $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$
iii) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$
iv) $4\text{P} + 5\text{O}_2 \rightarrow 2\text{P}_2\text{O}_5$
v) $\text{N}_2 + \text{O}_2 \rightarrow 2\text{NO}$ --

vi) $2\text{SO}_2 + \text{O}_2 \rightarrow 2\text{SO}_3$

B] Name the allotrope of carbon which finds its application in each of the following: [4]

i) In making black shoe polish ii) In manufacture of water gas and producer gas
iii) In the manufacture of synthetic petrol iv) As a decolourising agent.

Contd.....

Q.8 A] Give scientific reasons of the following: [5]

i) An explosion of a fire cracker is a Chemical change. [Give 2 points]

ii) The graphite rods are used as electrodes in electroplating. [Give 2 points]

iii) A blue litmus turns pink, when introduced in a gas jar containing Carbon dioxide.

B] Complete the following chemical reactions. Copy the equations and write the complete balanced equations. [5]