GREENLAWNS HIGH SCHOOL
CHEMISTRY TERMINAL EXAMINATION 2023-24

STD. 8 **TIME: 2 HRS.**

DATE: **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.

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.

QUESTION 1

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

i) The number of electrons in the valence shell of an atom of an element showing the stable electronic configuration is

a) 2 b)8 c) 18 d) 2 or 8

ii) The vapours of the substance when cooled directly get converted into solid state

a) Sodium bicarbonate b) Copper sulphate c) Naphthalene d) Salt

iii) The symbol Mn stands for

a) Magnesium b) Molybdenum c) Magnet d) Manganese

Contd…….

iv) The carbon exists in free state as
a) hydrocarbon b) diamond c) limestone d) carbohydrates

v) The nonmetal which is lustrous
a) Zinc b) Mercury c) Iodine d) Silicon

vi) The mass of an atom is due to
a) proton and neutron b) neutron and electron
c) proton and electron d) proton, neutron and electron

vii) The following is not a characteristic of solids
a) high density b) strong interparticle force of attraction
c) high compressibility d) high rigidity

viii) The impure substances are
a) Metalloids b) Mixtures c) Noble gases d) Non-metals

ix) The maximum number of electrons that can be accommodated in 'N' shell of an atom is
a) 32 b) 18 c) 40 d) 8

x) The crystalline allotrope of carbon is
a) Coal b) Lampblack c) Charcoal d) Graphite

Q.2A] Write the molecular formulae of the following compounds: [6]
1) Sodium bicarbonate 2) Calcium hydroxide 3) Ammonium chloride
4)Ferric oxide 5) Magnesium sulphate 6) Calcium nitrate

B] Explain the term isotopes. Draw the isotopes of hydrogen atom.[4]

Contd……..

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

1) $NH_3 + O_2$ ----------› $NO + H_2O$

2) $SiO_2 + C$ ----------› $SiC + CO$

3) $C_2H_2 + O_2$ ----------› $CO_2 + H_2O$

4) $PbS\_ + O_2$ ----------› $PbO + SO_2$

5) $Ca(NO_3)_2$ ----------› $CaO + NO_2 + O_2$

6) $NH_3 + Cl_2$ ----------› $NH_4Cl + N_2$

B] Match the columns [4]

A	B
i) Lord Rutherford	a) discovery of neutrons
ii) Goldstein	b) discovery of electrons
iii) Chadwick	c) rotation of electrons in the orbits
iv) J.J. Thomson	d) discovery of protons
	e) discovery of atomic nucleus

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

1) Magnesium atom and Magnesium ion (charge)

2) Solids and Gases (shape)

3) Homogeneous mixtures and Heterogeneous mixtures (properties)

4) Stable electronic configuration and unstable electronic configuration (meaning with respect to valence shell)

5) Diamond and Graphite (reactivity)

6) Coal and Lampblack (method of preparation)

B] i) What does the term ‘Allotropy’ mean? [2]

ii) What is the cause of allotropy? (give 2 points) [2]

Cont…….

SECTION B [40 MARKS]

ALL QUESTIONS IN THIS SECTION ARE COMPULSORY

Q.5 A] Draw a neat labelled schematic diagram of Inter-conversion of matter showing all the conversions. [3]

B] Is common salt a mixture or a compound? Justify your answer. [3] (Give four points)

C] Define: [4]

i) Atomicity ii) Radical iii) Balanced chemical equation iv) Matter

Q.6 A] Name the most appropriate technique to separate the following mixtures: [5]

i) Water soluble Lead nitrate from the lead nitrate solution.

ii) Iron scrap from the garbage.

iii) Benzene which is miscible in toluene

iv) Sulphur from the mixture of Sulphur and Copper

v) Camphor powder from salt

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

C] M_2SO_4 is the formula of sulphate of metal M. Write down the formulae of i) Oxide of M ii) Nitrate of M [2]

Q.7 A] The following are the properties of the Carbon allotropes. Write the name of the allotrope and its one use other than what is mentioned in the property. [6]

i) The greyish black, soft porous solid which adsorbs large volumes of gases.

ii) A black porous material which is obtained by destructive distillation of coal and burns with almost no smoke hence used as a fuel.

iii) A soft black powder which is almost a pure form of carbon and burns with a little smoke.

B] Give scientific reasons of the following: [4]

1) An atom is electrically neutral.
2) Graphite is used in refractory crucibles.
3) The valency of an atom boron is +3.
4) The diamond is the hardest natural substance.

Q.8 A] Study the table given below and answer the questions that follow: [6]

ATOM	Z	A
A	17	35
B	7	14
C	18	40
D	5	11
E	17	37
F	20	40
G	13	27

i) Which of these atoms has electronic configuration (2,3)?
ii) Identify a pair of isotopes.
iii) Which of the atoms given above is an inert gas?
iv) How many neutrons are present in atom G?
v) Give the electronic configuration of atom F.
vi) How many electrons does atom B contain?

B] Give any two characteristics of the following: [4]

i) Non-metals ii) Mixtures

BEST OF LUCK