

**GREENLAWNS HIGH SCHOOL**  
**CHEMISTRY TERMINAL EXAMINATION 2024-25**

**STD. 8**

**TIME: 2 HR.**

**DATE: 4/10/2024**

**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 2 pages (4 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 non-metal which is a good conductor of electricity

- a) Sulphur   b) Phosphorus   c) Copper   d) Graphite

ii) The scientist who discovered the atomic nucleus is

- a) James Chadwick   b) J. J. Thomson   c) Lord Rutherford   d) Goldstein

iii) An example of a compound is

- a) Lithium   b) Common salt   c) Neon   d) Mercury

iv) The amorphous allotrope of carbon is

- a) Coke   b) Carbon dioxide   c) Diamond   d) Fullerene

v) The symbol for Sodium is

- a) S   b) So   c) Sm   d) Na

vi) The shell which has the maximum capacity to accommodate 18 electrons is

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

Contd.....

vii) If an element is represented as  $^{31}_{15}$  then the number of neutrons in it is

- a) 15    b) 16    c) 31    d) 46

viii) The hardest form of Carbon is

- a) Diamond    b) Graphite    c) Soot    d) Bone charcoal

ix) A chemical equation is said to be balanced when

- a) the number of atoms of each element of reactant/s    the number of atoms of each element of product/s  
b) the total mass of reactants    the total mass of the products  
c) the number of atoms of each element of reactant/s    the number of atoms of each element of product/s  
d) the number of atoms of each element of reactant/s    the number of atoms of each element of product/s

x) The number of atoms of an element that join together forming a molecule of that element is known as

- a) atomic number    b) atomicity    c) atomic mass number    d) molecular weight

**Q.2] A] Write the symbols of the following elements** [5]

- i) Lithium    ii) Beryllium    iii) Nitrogen    iv) Fluorine    v) Magnesium  
vi) Iron    vii) Copper    viii) Carbon    ix) Helium    x) Hydrogen

**B] Write the English names of the elements represented by the following symbols.** [5]

- i) B    ii) K    iii) Cl    iv) Zn    v) Ne

**Q.3] A] Draw a neat labelled structure of Neon atom**  $^{20}_{10}$  [3]

**B] Name the most appropriate technique to separate the components of the following mixtures:** [7]

- i) Chalk powder from its mixture with water  
ii) Common salt from sea water

Contd.....

- iii) Hydrogen gas from a mixture of Hydrogen and Oxygen
- iv) Kerosene oil from a mixture of kerosene oil and water
- v) Methyl alcohol from a mixture of methyl alcohol and water
- vi) Sulphur from the mixture of Sulphur and Charcoal
- vii) Naphthalene powder from its mixture with a common salt

**Q.4] A] Complete the table given below by writing your answers for i to vi as i - , ii - , iii - , iv - and so on. Do not copy the table. [3]**

Element	Atomic number	Atomic mass number	Proton number	Neutron number	Electron number
X	i	35	17	ii	iii
Y	iv	v	vi	10	10

**B] Name the following: (Do not give examples unless asked) [7]**

- i) A group of atoms of elements that behave like a single unit and show valency.
- ii) A form of carbon which is used in the manufacture of water gas and producer gas.
- iii) The separation technique which is used to separate two solids which have different solubility in the same solvent.
- iv) The arrangement of electrons in various orbits of an atom of an element.
- v) The type of an element which generally donate its valence electron/s to form a cation.
- vi) The pure substance which contains two or more kinds of atoms.
- vii) The chargeless sub-atomic particle.

### SECTION B [40 MARKS]

#### ALL QUESTIONS IN THIS SECTION ARE COMPULSORY

**Q.5] A] Balance the following chemical equations: [7]**

- i)  $\text{KClO}_3 \rightarrow \text{KCl} + \text{O}_2$
- ii)  $\text{NO}_2 + \text{H}_2\text{O} \rightarrow \text{HNO}_2 + \text{HNO}_3$
- iii)  $\text{NaHCO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O} + \text{CO}_2$
- iv)  $\text{FeCl}_3 + \text{H}_2\text{S} \rightarrow \text{FeCl}_2 + \text{HCl} + \text{S}$
- v)  $\text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$
- vi)  $\text{MnO}_2 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{H}_2\text{O} + \text{Cl}_2$
- vii)  $\text{Al} + \text{NaOH} + \text{H}_2\text{O} \rightarrow \text{NaAlO}_2 + \text{H}_2$

**B] Give scientific reasons:**

- i) The valency of an oxygen atom is – 2. [1]
- ii) The whole mass of an atom is concentrated in its nucleus. [2]

**Q.6] A] Distinguish between the following pairs on the basis of what is given in the brackets. [6]**

- i) An atom and an ion (charge)
- ii) Metals and Non-metals (malleability)
- iii) Diamond and Graphite (structure)
- iv) Homogeneous mixture and Heterogeneous mixture (Composition of the constituents)
- v) Metals and Non-metals (type of ions formed to attain the stability)
- vi) Proton and Electron (location)

**B] Draw the neat labelled isotopes of Hydrogen. Write the names of the isotopes. [4]**

**Q.7]A] Write the molecular formula of each of the following compounds.[6]**

- i) Calcium carbonate    ii) Sodium hydroxide    iii) Magnesium chloride
- iv) Ferrous oxide        v) Aluminium sulphate        vi) Ammonium nitrate

**B] Define [4]**

- i) Metalloids    ii) Valency    iii) Isotopes    iv) Allotropy

**Q.8] A] State which property is used in the following cases: [7]**

- i) Graphite is used in refractory crucibles.
- ii) Diamond is used for drilling and cutting glass.
- iii) Wood charcoal finds its application in gas masks, sewers etc.
- iv) The thin rods of Graphite are used in pencil
- v) Soot is used for making printers ink, black shoe polish.
- vi) Graphite is used as electrodes in electroplating and dry cells
- vii) Diamond finds its application as the most precious and expensive item in jewellery.

**B] Draw a neat labelled structure of Silicon atom <sup>28</sup> [3]**