

GREENLAWNS SCHOOL, WORLI

TERMINAL EXAMINATION: 2025-26

CHEMISTRY

Std: VIII

Marks: 80

Date: 15/09/2025

Time: 2 hrs

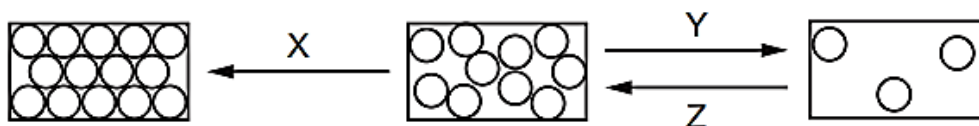
Answer to this paper must be written on the answer booklet provided to you.

The first 10 minutes are 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. All questions are compulsory.

Do not waste paper. Leave only one line after each answer.

- I A) Choose the correct answers to the questions from the given options. [10]
(Do not copy the question, write the correct answer only.)

- (i) The three rectangles show the arrangements of the particles in each of the three states of matter. X, Y and Z represent the processes needed to change from one state to another.



What are the processes X, Y and Z?

	X	Y	Z
(a)	Melting	Condensation	Evaporation
(b)	Evaporation	Melting	Freezing
(c)	Melting	Freezing	Condensation
(d)	Freezing	Evaporation	Condensation

- (ii) Which option contains **only** chemical changes?

- (a) Melting, evaporating, dissolving
- (b) Rusting, freezing, cracking
- (c) Combustion, digestion, cutting
- (d) Curdling, ripening, fermentation

- (iii) Sarvadnya owns an oil refinery that separates crude oil into various useful substances such as petrol, diesel, kerosene and other fuels. The separation method is based on the principle of difference in boiling points of the components in a mixture. Which separation technique do you think Sarvadnya is employing?

- (a) Distillation
- (b) Fractional distillation
- (c) Solvent extraction
- (d) Fractional crystallisation

(iv) In a sample of acetic acid (CH_3COOH), the two oxygen atoms have the same number of electrons but a different number of neutrons. The two oxygen atoms:

- (a) Have gained electrons
- (b) Have lost electrons
- (c) Are metals
- (d) Are isotopes

(v) Which of the following information is **not** provided by a chemical equation?

- (a) Time and speed of the reaction
- (b) Formulas and symbols
- (c) Heat, catalyst and direction of reaction
- (d) Physical state of the substances

(vi) What can we infer from the symbolic representation of Sodium, ${}_{11}\text{Na}^{23}$?

- (a) Sodium has 11 electrons and 12 protons
- (b) Sodium has 11 electrons and 11 neutrons
- (c) Sodium has 12 electrons and 11 protons
- (d) Sodium has 11 electrons and 12 neutrons

(vii) Which of the following is **not** a property of non - metals?

- (a) Non – malleable
- (b) Good conductors
- (c) Low density
- (d) No lustre

(viii) An atom on the whole is relatively empty but consists of a concentrated positive mass in the centre. Whose findings are these?

- (a) Rutherford
- (b) Goldstein
- (c) Bohr
- (d) Chadwick

(ix) Which of the following statements is / are correct?

P: An ion is any atom or a group of atoms carrying a positive or negative charge.

Q: The negatively charged ions are called cations.

- (a) Only P
- (b) Only Q
- (c) Both P and Q
- (d) Neither P nor Q

(x) The solvent for sulphur is:

- (a) Carbon tetrachloride
- (b) Hydrogen sulphide
- (c) Carbon disulphide
- (d) Sulphuric acid

B) Match the column A with column B:

[5]

A

B

- | | |
|-------------------------|------------------------|
| (i) HSO_3^{1-} | (a) Heterogeneous |
| (ii) Anode rays | (b) Atoms |
| (iii) Weight | (c) Radical |
| (iv) FeS | (d) Protons |
| (v) Paramanus | (e) Homogeneous |
| | (f) Gravitational pull |
| | (g) Ion |

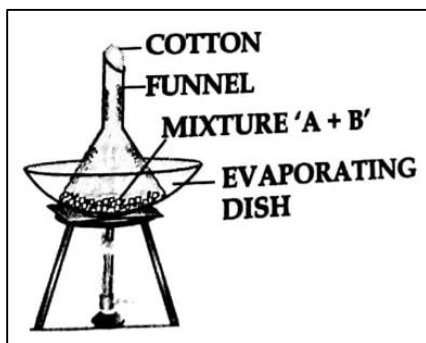
C) Complete the following by choosing the correct answers from the bracket: [5]

- (i) The outermost shell of an atom cannot have more than _____ (2 / 8) electrons.
- (ii) Carbon dioxide can be separated from water by _____ (boiling / diffusion).
- (iii) The law of conservation of mass was proposed by _____ (Lavoisier / Thomson).
- (iv) Sunset and sunrise are _____ (fast / periodic) changes.
- (v) The sub-atomic particle with a negligible mass is _____ (electron / neutron).

D) Name the following: [5]

- (i) The distribution of electrons in different shells around the nucleus of an atom.
- (ii) A physical change that gives out heat.
- (iii) The combining capacity of an atom.
- (iv) The state of matter with infinite number of free surfaces.
- (v) A non-malleable metal.

E) Observe the separation technique given below and answer the questions: [5]



- (i) Identify this technique.
- (ii) Which type of change is shown here?
- (iii) After heating, name the mixture left behind in:
 - 1. Evaporating dish
 - 2. Funnel
- (iv) State the principle of this method of separation.

F) Give an example for each of the following: [5]

- (i) A polyatomic molecule.
- (ii) A mixture separated by fractional distillation.
- (iii) A positive radical.
- (iv) A metal with variable valency 2+ and 3+.
- (v) A homogeneous mixture of two solids.

G) Answer the following questions: [5]

(i) Write the chemical formula for the following compounds:

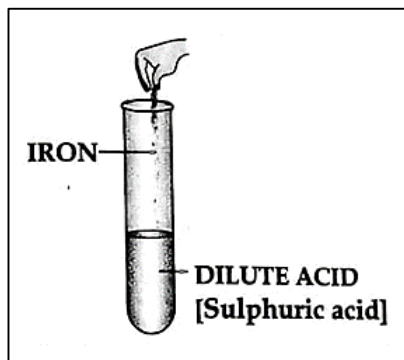
- (a) Aluminium phosphate
- (b) Copper [II] nitrate
- (c) Sodium sulphite

(ii) Write names for the following chemical formulae:

- (a) $\text{Mg}(\text{HCO}_3)_2$
- (b) KHSO_4

II A) Observe the reaction taking place below and answer the questions:

[4]



- (i) Name the two products formed by this reaction.
- (ii) What is the colour of the solution after the reaction?
- (iii) Mention the type of change that takes place and justify.

B) What is mass number? What is its relation with:

[3]

- (i) Number of neutrons
- (ii) Atomic number

C) What is an electrovalent bond?

[3]

Explain taking Sodium chloride as an example.

III A) Complete the following table:

[3]

Element	Atomic number	Electronic Configuration
Silicon		
Calcium		
Phosphorus		

B) Samaira has following queries. Help her explain why?

[3]

- (i) Helium does not react with other elements.
- (ii) Burning of a candle is both physical and chemical change.
- (iii) Solids are rigid.

C) Balance the following chemical equations:

[4]

- (i) $\text{KClO}_3 \rightarrow \text{KCl} + \text{O}_2$
- (ii) $\text{S} + \text{H}_2\text{SO}_4 \rightarrow \text{SO}_2 + \text{H}_2\text{O}$
- (iii) $\text{Pb}(\text{NO}_3)_2 + \text{HCl} \rightarrow \text{PbCl}_2 + \text{HNO}_3$
- (iv) $(\text{NH}_4)_2\text{SO}_4 + \text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O} + \text{NH}_3$

IV A) Rannvijay wishes to know the principles of Chromatography and Centrifugation. Explain it to him.

[2]

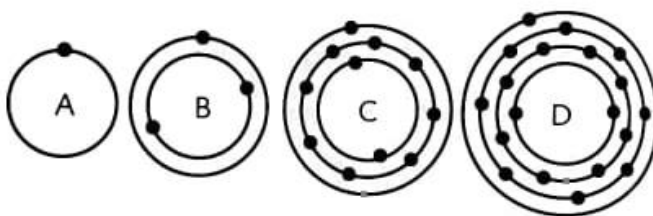
B) Balance the following word equations:

[4]

- (i) Potassium bicarbonate + Sulphuric acid $\rightarrow$ Potassium sulphate + Water + Carbon dioxide
- (ii) Iron [III] oxide + Aluminium $\rightarrow$ Aluminium oxide + Iron

C) Observe the atomic orbitals given below and answer the following questions:

[4]



(i) Identify the elements A, B, C and D.

(ii) How many protons does each element shown have?

V A) State two main postulates of the Kinetic theory of matter.

[2]

B) Chlorine has two isotopes: ${}_{17}\text{Cl}^{35}$ and ${}_{17}\text{Cl}^{37}$. Find the number of neutrons in an atom of each.

[2]

C) Define the following terms:

[3]

(i) Relative atomic mass

(ii) Atomic number

(iii) Balanced equation

D) What do the following symbols present in a chemical equation, mean?

[3]

(i) (g)

(ii) (s)

(iii) $\rightleftharpoons$
