CLASS: 8 FIRST TEST JULY 2024 MARKS: 40

CHEMISTRY

SECTION A [20marks]

Question 1

Choose the correct answers to the questions from the given options.[6]
(Do not copy the question, write the correct answer only)

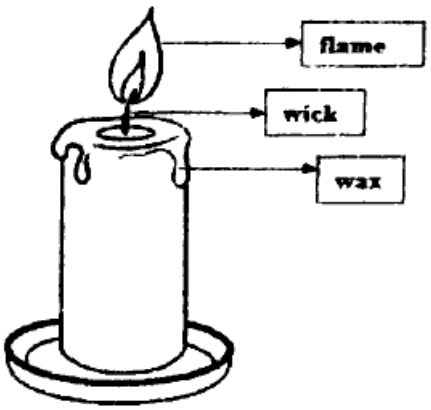
(i) Which of the following is NOT a characteristic property of solids?
(a) Definite shape and volume
(b) Rigid and incompressible
(c) Can flow easily
(d) Have fixed melting and boiling points

(ii) A piece of paper burns when exposed to an open flame. Which of the following changes occur in the reaction?
(a) Chemical and reversible change
(b) Physical and irreversible change
(c) Physical and reversible change
(d) Chemical and irreversible change

(iii) Which property of matter is described as 'The amount of space an object occupies'
(a) Density
(b) Volume
(c) Reactivity
(d) Area

(iv) **Assertion (A)**: Condensation is the reverse of vaporization.
Reason (R): Condensation involves gas particles gaining energy to move faster.
(a) Assertion (A) is true but Reason (R) is false
(b) Assertion (A) is false but Reason (R) is true
(c) Bothassertion (A) and Reason (R) are true
(d) BothAssertion (A) is ~~correct~~ and Reason (R) are false

(v) When a candle is lit, what kind of changes occur in the wax and the wick?



(a) Chemical change in burning of wick, physical change in melting of wax
(b) Chemical change in melting of wax, physical change in burning of wick
(c) Chemical change in both the wax and the wick
(d) Physical change in both the wick and the wax

(vi) Ramesh observed the properties of three substances X,Y and Z and recorded his observations as given in the table below.

Property	X	Y	Z
Occupies space	Yes	Yes	Yes
Has a definite shape	No	Yes	No
Has a definite volume	No	Yes	Yes
Can be compressed	Yes	No	No

Which of the following is the correct representation of X, Y and Z?

	X	Y	Z
(a)	Magnet	Oxygen	Shampoo
(b)	Nitrogen	Petrol	Coin
(c)	Carbon dioxide	Rock	Syrup
(d)	Toothpaste	Pin	Hydrogen

Question 2

(i) Match the following column A with column B: [5]

Column A		Column B	
(a)	Rust	(1)	Chemical change
(b)	Gases	(2)	Sublimation
(c)	Souring of milk	(3)	Flow in all directions
(d)	Dissolving common salt in water	(4)	Iron oxide
(e)	Dry ice	(5)	Physical change

(ii) Complete the following by choosing the correct answers from the brackets: [5]

(a) An element whose symbol is derived from its Latin name is _____. (carbon/ copper)

(b) The melting point of ice is equal to _____.(boiling point of water/ freezing point of water)

(c) The smallest unit of a pure substance that can take part in a chemical reaction is called a/an _____.(atom/ molecule)

(d) The symbol of sulphite radical is _____ (SO_3/SO_4)

(e) During a physical change the property that does not change is _____ (state of matter/ chemical composition)

(iii) (a)Name the state of matter formed by the following processes: [2]

(1) Solid + Heating = _____

(2) Liquid + Freezing = _____

(b) What is the valency of the underlined element or radical in the following compounds: [2]

(1) $\underline{Al}PO_4$

(2) $Ca(\underline{HCO_3})_2$

Section B [20marks]

Question 3

(i) Balance the following equations. [2]

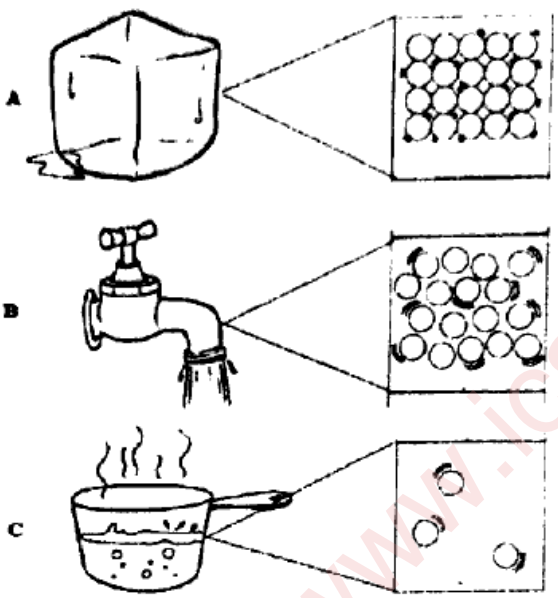
(a) $Fe + H_2O \longrightarrow Fe_3O_4 + H_2$

(b) $Na + O_2 \longrightarrow Na_2O$

(ii) On the basis of Kinetic molecular theory of matter explain why solids have a definite shape and a definite volume? [2]

(1) State any three properties of a chemical change. [3]

(2) Observe the diagram given below and answer the following questions: [3]



(a) Arrange the different substances in the increasing order of the forces of attraction between particles.

(b) What changes in the Kinetic energy and inter-particle space take place when the substance shown in fig(B) is cooled?

(c) Define the process in converting the substance from B to C at a fixed temperature.

Question 4

(i) Write the chemical formula of the following compounds. [2]

(a) Sodium phosphate

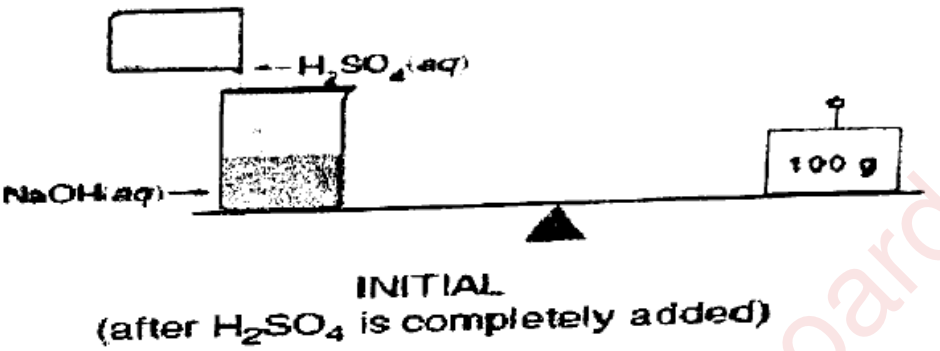
(b) Ammonium nitrate

(ii) Give reasons for the following: [2]

(a) Naphthalene sublimes on heating

(b) Burning of magnesium ribbon is a chemical change

(iii) Abhishek conducted an experiment to demonstrate 'TheLaw of Conservation of Mass'. [3]



INITIAL
(after H_2SO_4 is completely added)

(a) Does the experiment satisfy 'The Law of Conservation of Mass'? Justify your answer.
(b) Who proposed the law of conservation of mass?
(c) State the Law of conservation of mass.

(iv) Magnesium carbonate solution reacts with aqueous hydrochloric acid to yield magnesium chloride solution, water and carbon dioxide gas. [3]
(a) Write an equation to represent the given chemical reaction.
(b) Balance the chemical equation.
(c) What information can be drawn from the above equation?