

NAME:		ROLL NO:		TIME:	50: MIN
SUB:	Chemistry	Date:		CLASS:	1 st Year
SYLLABUS	Chp. 5 (States and Phases of Matter)	T. MARKS	30	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x6=6)

- London dispersion forces are the only forces present among:**
 (A) Molecules of water in liquid state
 (B) Atoms of helium in gaseous state at high temperature
 (C) Molecules of solid iodine
 (D) Molecules of hydrogen chloride gas
- Identify equation which is used to determine the molar mass of a gas.**
 (A) $PV = nRT$ (B) $NV = RT$ (C) $PV = KT$ (D) $E = mc^2$
- When water freezes at 0 °C, its density decrease due to:**
 (A) Cubic structure of ice (B) Empty spaces present in the structure of ice
 (C) Decrease in volume (D) Decrease in viscosity
- Which of following is the correct sequence of increasing ΔH_v values of substances mentioned?**
 (A) $H_2O > NH_3 > F_2$ (B) $F_2 > NH_3 > H_2O$ (C) $NH_3 > H_2O > F_2$ (D) $H_2O > F_2 > NH_3$
- Which type of intermolecular force is present in all types of molecule regardless of their polarity?**
 (A) Dipole-dipole forces (B) Hydrogen bonds
 (C) London dispersion forces (D) Ion-dipole forces
- Which of the following is a crystalline solid?**
 (A) Glass (B) Plastic (C) Quartz (D) Wax

PART-I

Q. 2 Write Short Answers of the Following Questions (2x8=16)

- Why food cooking is difficult in the areas with high altitudes?
- What is meant by habit of a crystal?
- Discuss how hydrogen bonding is responsible for the relatively high surface tension of water.
- Differentiate between crystalline and amorphous solids.
- One feels sense of cooling under the fan after bath.
- Define vapors pressure and surface tension.
- How does the heat of vaporization affect particle movement?
- What are liquid crystals? Give two of their uses.

PART-II

Write Answers of the Following Questions in Detail.

Q. 3 (a) What are London dispersion forces? Give examples, and discuss the factors affecting these forces.

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(b) A sample of an unknown gas has a mass of 0.560 g. It occupies a volume of $2.87 \times 10^{-4} \text{ m}^3$ at a temperature of 300 K and a pressure of $1.01 \times 10^5 \text{ Pa}$. Calculate the molar mass of the gas. (Gas constant, $R = 8.31 \text{ J K}^{-1} \text{ mol}^{-1}$)

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1ST YEAR REVISION & TEST SESSION



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Answer Key

1	B	2	A	3	B	4	B
5	C	6	C				