JSKf Nilesh Panchal

CHAPTER NO

10

6 MK

STATES OF MATTER

(SOLIDS ,LIQUIDS, GASES)

Nickie

LECTURE NO - 4

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PART – 3	INTERMOLECULAR FORCES AND THERMAL ENERGY

- **Thermal energy** is the measure of kinetic energy of the particles of matter that arises due to movement of particles (about which you must have learnt in Physics).
- It is directly proportional to the temperature; that means thermal energy increases with increase in temperature and vice versa.
- **Three states of matter are the consequence of a balance between the intermolecular forces of attraction and the thermal energy of the molecules.**

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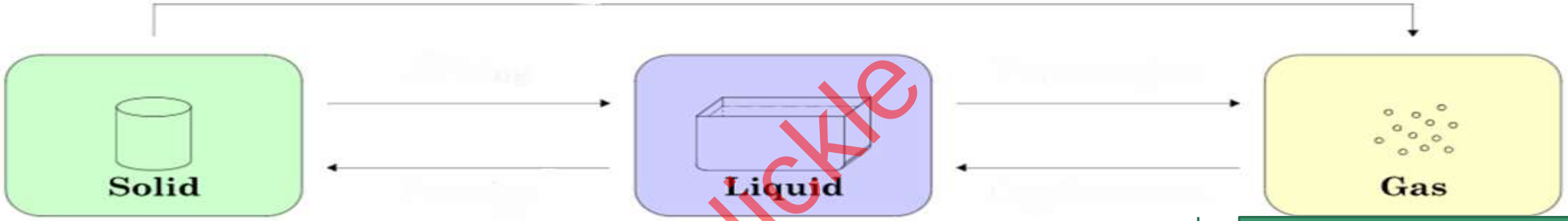
ENDOTHERMIC PROCESS

Temperature Increases
Thermal Energy Increases
Kinetic Theory Of molecules Increases (Movement of particles)
Intermolecular Force Decreases (Distance between molecule Increases)



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EXOTHERMIC PROCESS

Temperature Decreases
Thermal Energy Decreases
Kinetic Theory Of molecules decreases (Movement of particles)
Intermolecular Force Increases (Distance between molecule decreases)

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EXERCISE (PART – 1 + 2 + 3)

- Define States of Matter.
- Define the following Terms:

a) Melting

b) Boiling

c) Vaporization

d) Sublimation

e) Endothermic process

f) Exothermic process

g) Condensation

h) Freezing

i) Deposition

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- Distinguish between Solids, Liquids & Gases.
- Define Chemical bond. Write classification of types of Bonds.
- Explain Intramolecular force.
- Explain Covalent Bond.
- Explain Ionic Bond.
- Define Dipole moment. Write its formula & units.
- Explain Intermolecular force.
- Write a note on Dipole – Dipole Interaction.
- Write a note on Dipole – Induced dipole Interaction.
- Write a note on Ion – Dipole Interaction.
- Write a note on Ion – Induced dipole Interaction.
- Write a note on London forces.

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- Write short note on Hydrogen bonding.
- What is the relation between Intermolecular force & Thermal Energy.

