SKT Sir 7043638933 ÷

CHEMISTRY

GENERAL CHEMISTRY

group Name

↳ online support INC-3A

GENERAL CHEMISTRY

Copy-1 class Notes → Examples + hw
Copy-2 Race + Module Question
Copy-3 → Minor + Review + Board

Mains pattern

Advance pattern

→ Mistakes
Silly mistake (8)
Not known (5)

(P) + (I) + (O) → 12th

Introduction

1st —— 10th → Exams motive to pass everyone > 90%

IIT JEE → Mains — NIT / state engineering colleges.
IIT JEE → Advance — IIT

15L → 1.5L
30Q / (30%)

1.5L → 15K (20-25%)

Advance → Merged. (No fixed pattern)

Minor I — 15 may

INTRODUCTION OF CHEMISTRY

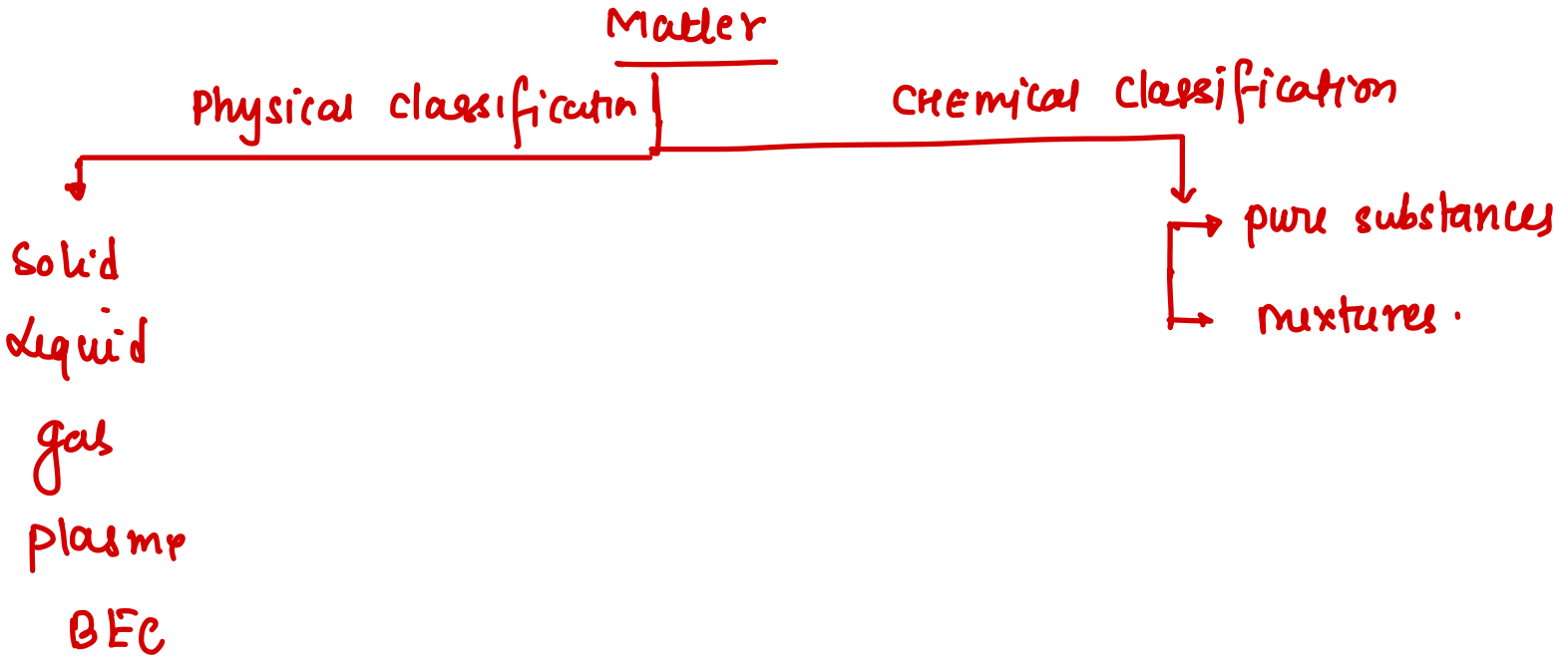
Chemistry is the study of chemicals i.e. matter.

Universe = matter + energy

Matter : Everything that has mass, volume and that can be felt by any of our five senses (taste, hear, touch, see & smell)

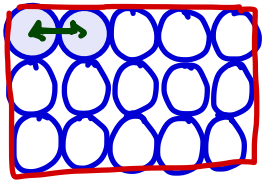
Mass : Gathering of particles

Volume : Occupied space or total space available for free movement of particles of the matter.


Matter
Physical classification
Chemical classification
Solid
Liquid
gas
plasma
BEC
pure substances
mixtures.

Physical classification

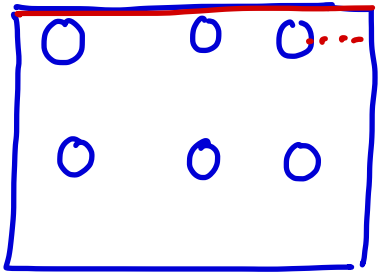
Solid



- particle can't move
- Shape fixed.
- Volume fixed

→ inter particle force max.

Liquid

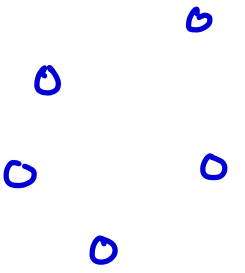


particle can move with certain boundary

- Volume fixed.

moderate

Gas



particle can move freely

inter particle force.

Solid $\xrightarrow{T\uparrow}$ Liquid $\xrightarrow{T\uparrow}$ Gas

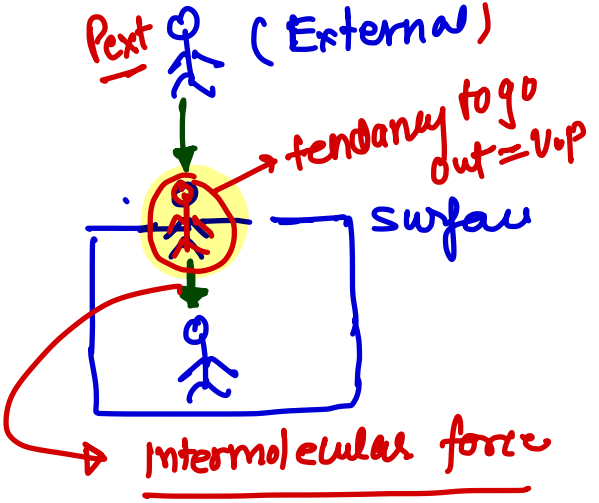
Internal energy | Internal energy | Internal energy

$E_1 < E_2 < E_3$

Melting :- Conversion of solid into liquid at constant temp.

Melting point :-

$P_{ext} >>>> V.P$	(Solid)
$P_{ext} >> V.P$	(Liquid)
$P_{ext} << V.P$	(Gas)



- The temperature at which a solid converts into liquid state at constant pressure.

- (Evaporation)
  - conversion of liquid into gas at any temperature and it is for surface particles

(vapourisation)

- Conversion of liquid into gas at or above boiling point at Constant Pressure.

  it is Bulk phenomenon

Boiling point the Temperature at liquid Converts into gaseous state at constant pressure.

$P_{ext} = 1 atm$

$P_{ext} = 0.5$

Boiling point $\rightarrow T_b = T$

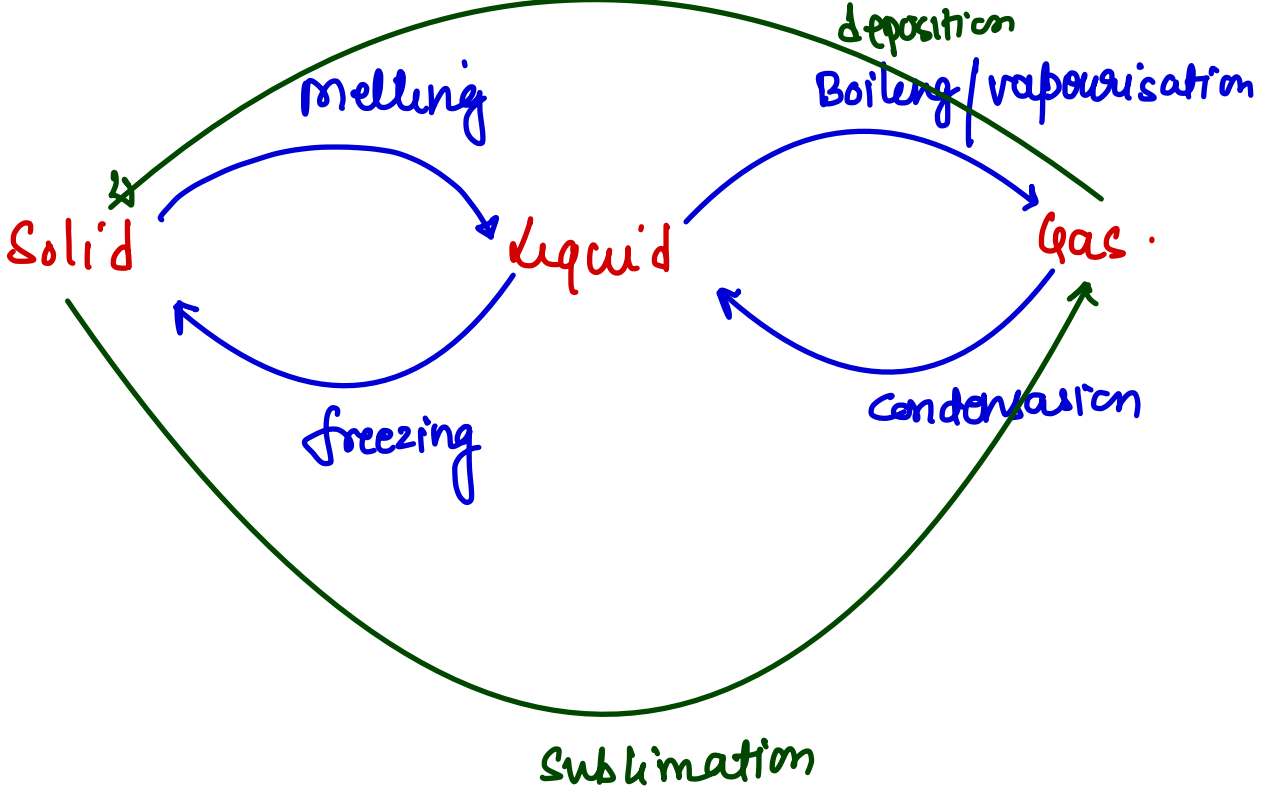
$(T_b)'$

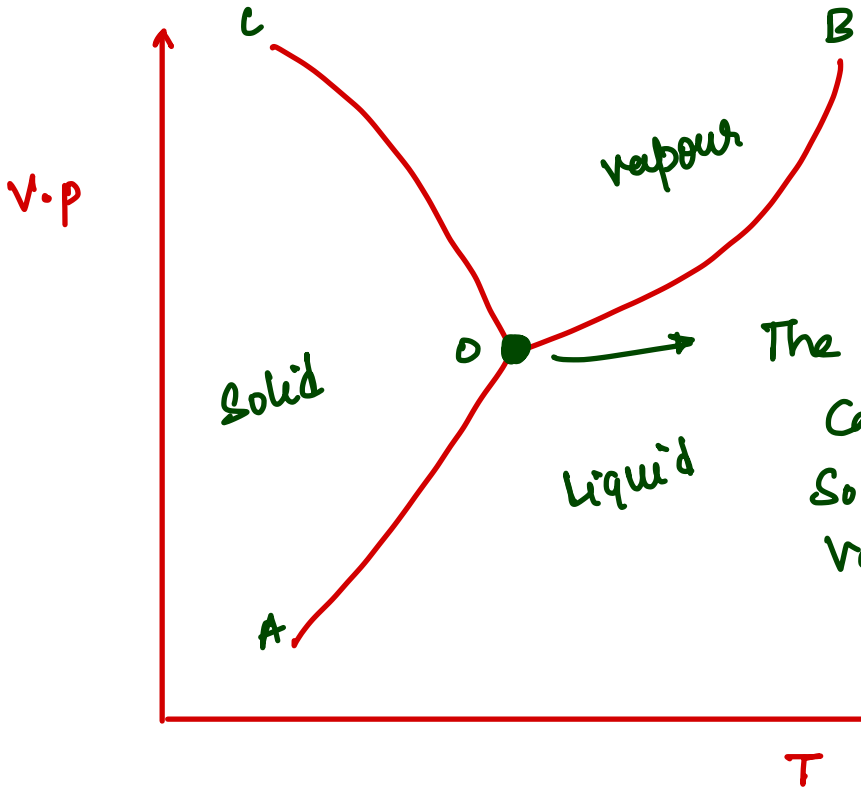
(a) $T_b' > T_b$

(b) $T_b = T_b'$

✓ (c) $T_b' < T_b$

(d) None of the above


deposition
melting
Boiling / vaporisation
Solid
Liquid
Gas
freezing
condensation
Sublimation



The temperature, pressure Condition where a Solid, Liquid and Vapour exist simultaneously is known triple point

CLASSIFICATION OF MATTER

- **PHYSICAL CLASSIFICATION:** On the basis of normal observation-

- **1.SOLID:** Definite mass, definite volume, definite shape, strongest interparticle attraction

- **2.LIQUID:** Definite mass, definite volume, indefinite shape, moderate interparticle attraction

- **3.GAS:** Definite mass, indefinite volume, indefinite shape, negligible interparticle attraction

REPRESENTATION OF ELEMENTS

HW → Learn Element Atomic Number Atomic mass upto 30 elements.

22.8 ⟹ 23 21.3 ⇒ 21

35.5 ⟶ 35.5