Q.1. In '20v' H_2O_2 soln.

given $\Rightarrow x = 20$

(i) $N = \frac{x}{5.6} = \frac{20}{5.6}$

(ii) $N = m \cdot V \cdot f. \Rightarrow \frac{20}{5.6} = m \cdot 2 \Rightarrow \boxed{m = \frac{10}{5.6}}$

(iii) $S = \frac{x}{5.6} \times 17 \Rightarrow S = \frac{20}{5.6} \times 17 \Rightarrow \boxed{S = \frac{340}{5.6}}$

(iv) $\%.g = \frac{x}{5.6} \times \frac{17}{10} \Rightarrow \%.S = \frac{20}{5.6} \times \frac{17}{10} \Rightarrow \boxed{\%.g = \frac{34}{5.6}}$

Q.2. Cal. Volume Strength of 1.5N H_2O_2 Soln.

Sol: given $\div$ $N = 1.5$, $x = ?$

$N = \frac{x}{5.6} \Rightarrow 1.5 = \frac{x}{5.6} \Rightarrow x = 1.5 \times 5.6$

$x = \frac{3}{2} \times 5.6 \Rightarrow \boxed{x = 8.4}$ Ans.

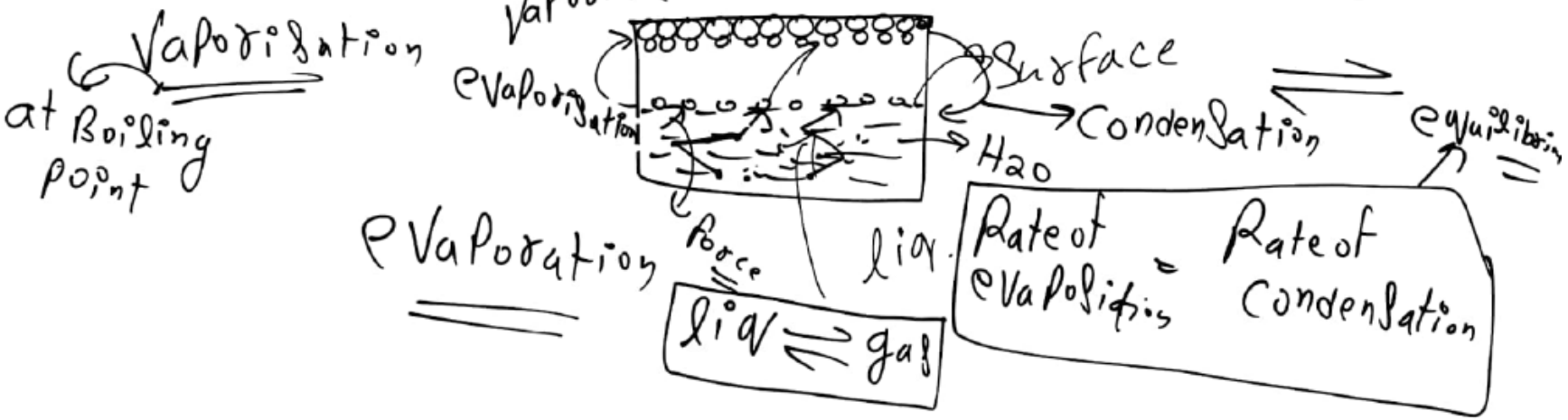
Vapour Pressure of liquid :-

At a particular temp. pressure exerted by vapour on the surface of liquid at equilibrium is k/a as Vapour pressure.

ideal gas: $PV = nRT$

$P = \frac{F}{A}$

Dynamic



Vapour Pressure of liquid :-

At a particular temp. pressure exerted by vapour on the surface of liquid at equilibrium is k/a as Vapour pressure.

$P = \frac{F}{A}$

1 atm

Vaporisation at Boiling point

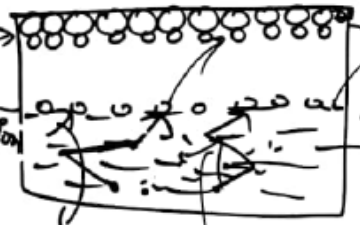
ideal gas

$PV = nRT$

at B.P. max V.P. = 1 atm

Dynamic

K.E. $\propto$ T



Evaporation

Force

liq $\rightleftharpoons$ gas

liq.

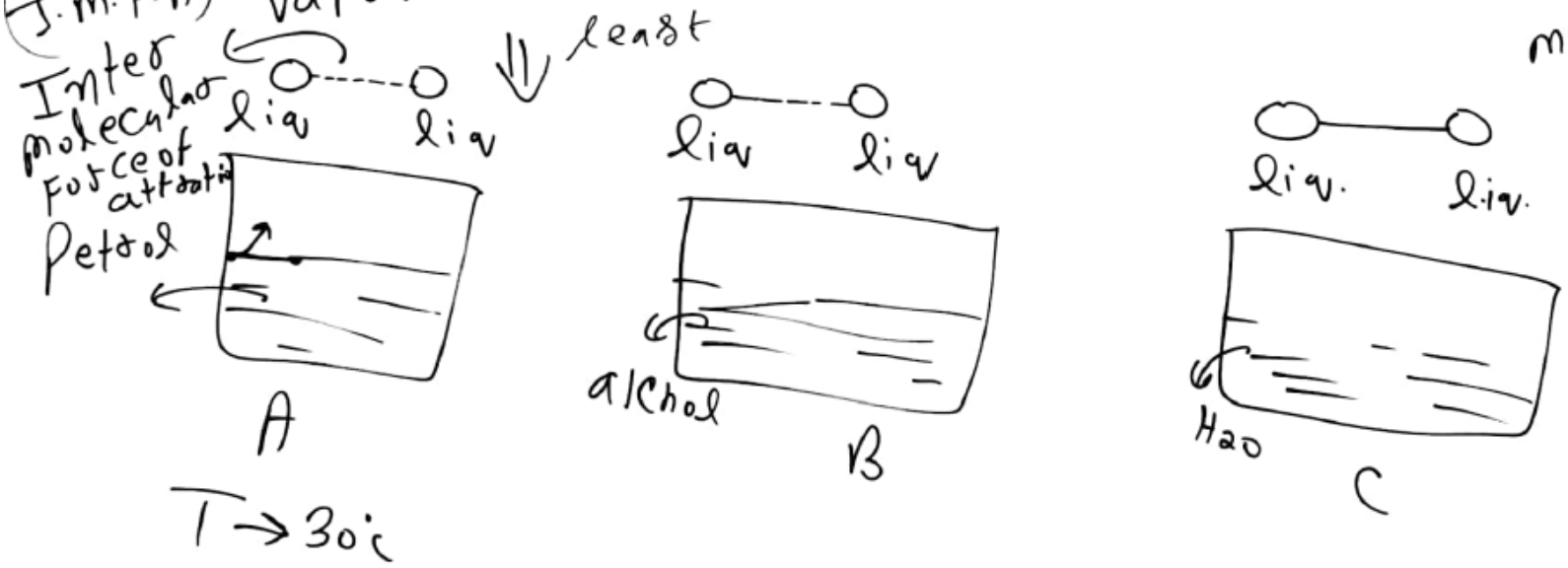
Rate of evaporation = Rate of condensation

equilibrium

Vapour Pressure of liquid :-

At a particular temp. pressure exerted by vapour on the surface of liquid at equilibrium is k/a as (V.P.)

(V.M.F.A) Vapour Pressure.

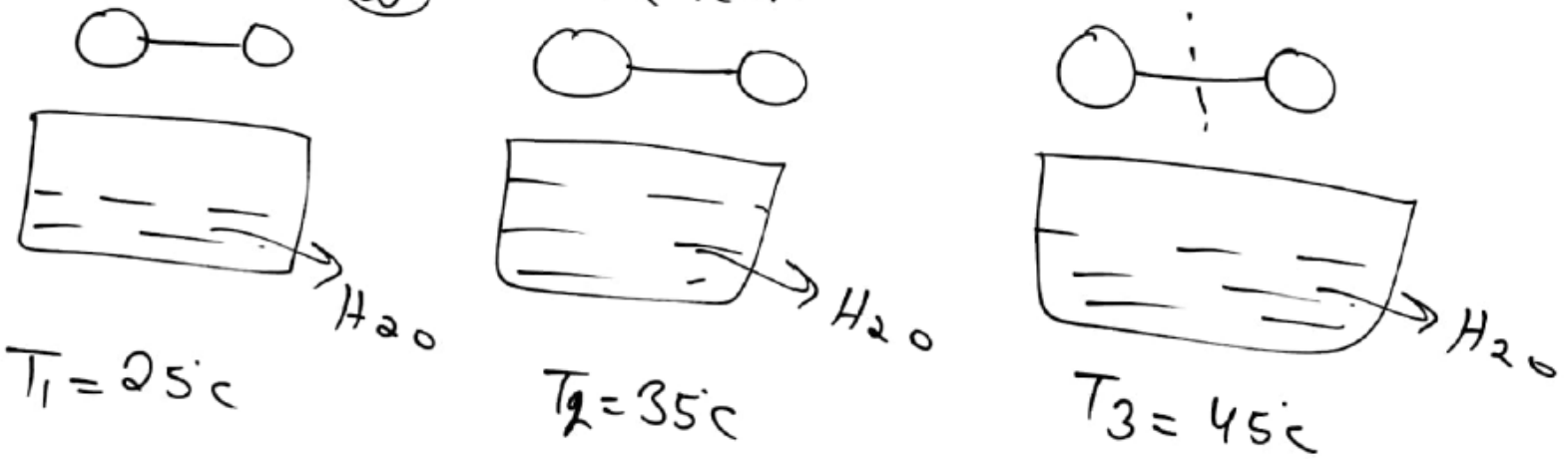


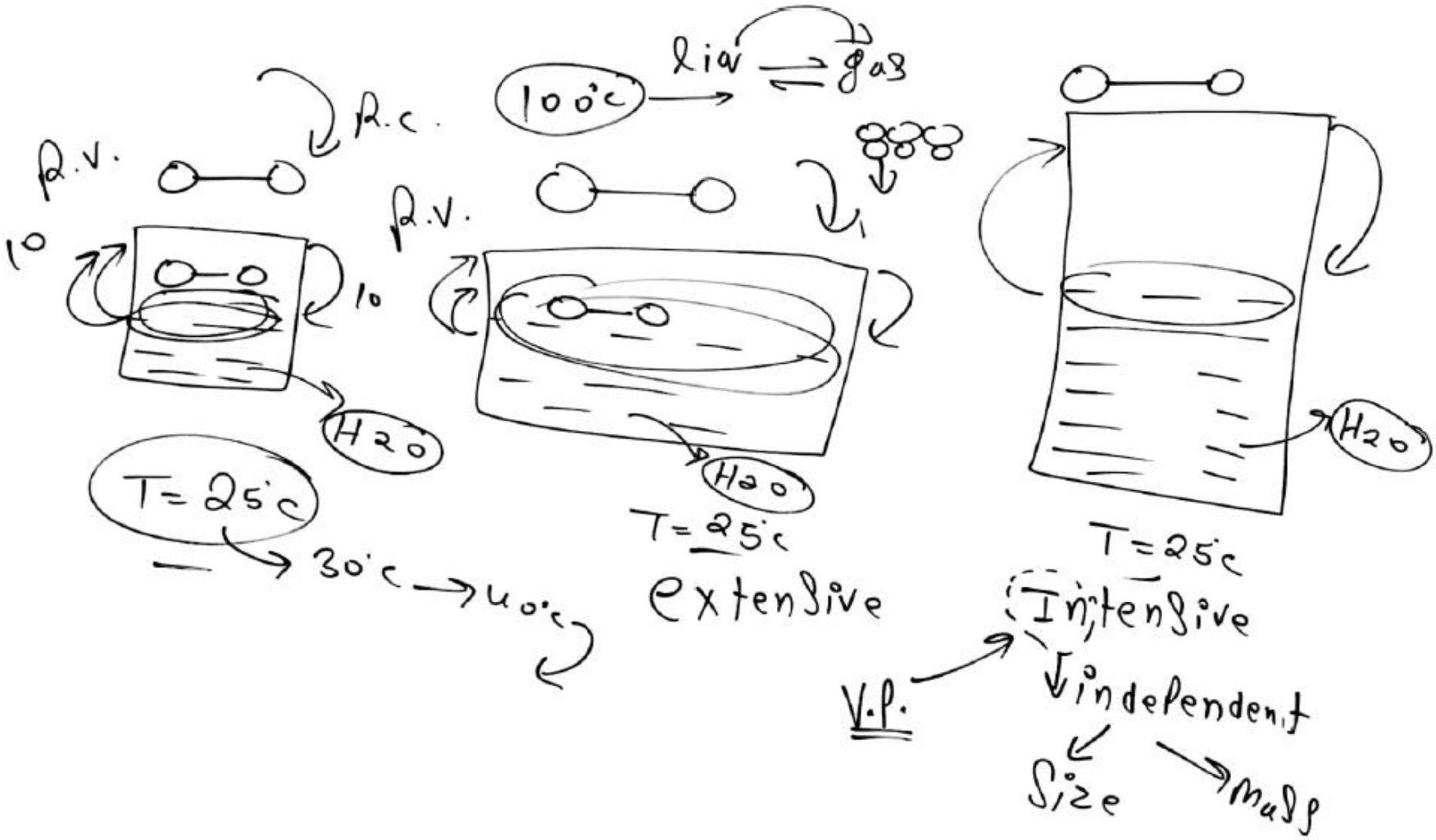
Vapour Pressure of liquid :-

At a particular temp. pressure exerted by vapour on the surface of liquid at equilibrium is k/a as V.P.

① V.P $\propto \frac{1}{I.M.F.A.}$

② V.P. $\propto$ Temp.




R.V.
R.C.
10
10
H2O
T = 25°C
30°C → 40°C
100°C
liq ⇌ gas
R.V.
H2O
T = 25°C
Extensive
H2O
T = 25°C
Intensive
V.P.
independent
Size
Mass

Condition of V.P. :- State of equilibrium

Rate of evaporation/vaporisation = Rate of Condensation.

V.P. Depend on :-

(1) Nature of liquid :-

I.M.F.A. ↑ ⇒ V.P. ↓ ⇒ $V.P. \propto \frac{1}{I.M.F.A.}$

(2) Temp.

Temp. ↑ ⇒ V.P. ↑ ⇒ V.P. ∝ Temp.

Clausius Cla eq. $P = e^{-\frac{\Delta H}{RT}}$