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WK 53 (363-002)

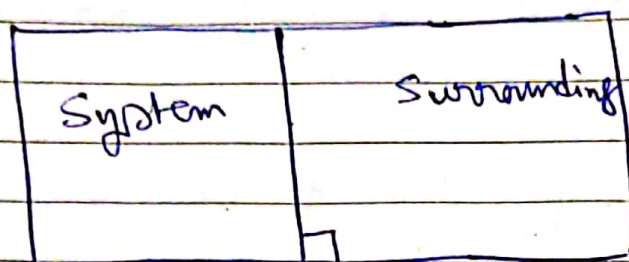
Thermodynamics!

December • Wednesday

December - 2021

M	T	W	T	F	S	S	M	T	W	T	F	S	S
	1	2	3	4	5	6	7	8	9	10	11	12	
13	14	15	16	17	18	19	20	21	22	23	24	25	26
27	28	29	30	31									

1. Microscopic &amp; Macroscopic Th.

2. Phenomenological  $\Rightarrow$  Expt.Pressure  $\Rightarrow$  avgClosed system  $\Rightarrow$  no matter exchangeOpen system  $\Rightarrow$  matter exchange.

Thermodynamic Variable.

Equilibrium state: No change in thermodynamic variable

Temperature: Zeroth Law of Thermodynamics

two System + diathermic wall

2021 If A & B is thermal equilibrium with C  $\Rightarrow$  A & B also in thermal equilibrium.



# Thermodynamic Equilibrium!

System  $\Rightarrow$  Thermodynamic variable,

when variable's change  $\Rightarrow$  change of state

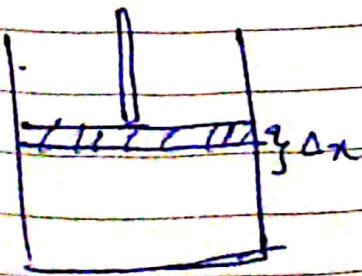
$\rightarrow$  Mechanical eq: No force on system.

$\rightarrow$  Chemical eq: No change in internal structure.

$\rightarrow$  Thermal eq: System indathermic wall  
+ mechanical eq  
+ chemical eq.

$\rightarrow$  Thermodynamic Equilibrium.

Exchange of energy but external parameter are fixed / remain same  $\Rightarrow$  heat.  
purely thermal int



$$w = \Delta x \bar{F}$$