SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech II Year II Semester Supplementary Examinations July-2021
ENGINEERING THERMODYNAMICS
(Mechanical Engineering)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Show that heat and work are path functions and not property of the system.	7M
	b	Define Internal energy and Enthalpy.	5M

OR

2	a	Define and explain zeroth law of thermodynamics.	6M
	b	Define property. Difference between intensive and extensive properties.	6M

UNIT-II

3	a	Explain the First law of thermodynamics joules experiment.	7M
	b	Derive SFEE for nozzle.	5M

OR

4	a	Explain the specific heat capacities (C_p and C_v)	7M
	b	Define Steady flow energy equation.	5M

UNIT-III

5	a	What are the draw backs of first law of thermodynamics?	6M
	b	State second law of thermodynamics.	6M

OR

6	a	Define PMM-1 and PMM-II.	5M
	b	Show the equivalence of Clausius and Kelvin statement of second law.	7M

UNIT-IV

7	a	What is Avagadro's law?	6M
	b	State Dalton's law of partial pressure.	6M

OR

8	a	What is the difference between Ideal and Real gas?	6M
	b	What is the gas equation of ideal gas?	6M

UNIT-V

9	a	Derive Clapeyron equation.	7M
	b	What is joule Thomson coefficient?	5M

OR

10	a	Write down first and second Tds equation.	6M
	b	Draw PV and TS diagram for Dual cycle and its process.	6M

*** END ***