



LESSON PLAN-(SUMMER-2024)
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- MECHANICAL	Semester-4TH	Name of teaching faculty- Er. Abhijit Chand
Subject- THERMAL II	No class allotted/ per week -4	SEM From date- 16.1.2024 TO 26.4.2024 No of weeks- 15
Week	Class day	Theory Topics
WEEK 1	16.01.2024	Carnot vapor cycle & Problems on it
	17.01.2024	Rankine vapor cycle & Problems on it
	18.01.2024	Modification to rankine vapor cycles, Problems on it
	22.01.2024	Qualities of ideal working fluid for vapor power cycle
WEEK 2	23.01.2024	Binary vapor cycles
	25.01.2024	Class test
	29.01.2024	Concept of IC Engine
	30.01.2024	Otto cycle, Problems on it
WEEK 3	31.01.2024	Diesel cycle
	01.02.2024	Problems on it
	02.02.2024	Dual cycle
	05.02.2024	Problems on it
WEEK 4	06.02.2024	Comparison of otto, Diesel and Dual cycles
	08.02.2024	2S and 4S engines and differences thereof
	09.02.2024	Assignment
	12.02.2024	Hydrocarbon fuels
WEEK 5	13.02.2024	Combustion reactions
	16.02.2024	Concept of stoichiometric combustion
	19.02.2024	Enthalpy of formation , enthalpy of reaction
	21.02.2024	Heating values for fuels
WEEK 6	22.02.2024	Quality of IC engine fuels : Octane Number and Cetane Number
	24.02.2024	Problems on it
	26.02.2024	Octane Number, Cetane Number
	27.02.2024	Modes of heat transfer
WEEK 7	28.02.2024	Fourier law of heat conduction, thermal conductivity
	29.02.2024	Steady state heat conduction in solid plane wall
	01.03.2024	Steady state heat conduction in solid hollow cylinder
	04.03.2024	Steady state heat conduction in solid plane wall
WEEK 8	05.03.2024	Steady state heat conduction in solid hollow sphere
	07.03.2024	Stefan Boltzman law
	11.03.2024	Max planck's theory
	13.03.2024	absorption, reflection and transmission
WEEK 9	14.03.2024	Kirchoff's law
	15.03.2024	Heat exchangers, types
	18.03.2024	Introduction
	20.03.2024	Reversed carnot cycle

WEEK 10	21.03.2024	Ideal vapor compression refrigeration cycle
	22.03.2024	Actual vapor compression refrigeration cycle
	27.03.2024	Air , Gas refrigeration cycle
	28.03.2024	Modes of heat transfer
WEEK 11	29.03.2024	Fourier law of heat conduction, thermal conductivity
	30.03.2024	Steady state heat conduction in solid plane wall
	01.04.2024	Steady state heat conduction in solid hollow cylinder
WEEK 12	03.04.2024	Internal Assessment
	04.04.2024	Convective heat transfer, Newton's law of cooling
	08.04.2024	Radiation heat transfer, Stefan Boltzman law
	09.04.2024	Theories of radiation : Maxwell's theory
WEEK 13	10.04.2024	Max planck's theory : black body radiation
	11.04.2024	Surface absorption, reflection and transmission
	12.04.2024	Kirchoff's law relating to spectral emissive power to absorptivity
	15.04.2024	Heat exchangers : concept , application, and classification
WEEK 14	16.04.2024	Class test
	19.04.2024	Concept of refrigerators and heat pumps
	20.04.2024	Reversed carnot cycle and its limitations
	22.04.2024	Related problems on it
WEEK 15	23.04.2024	Ideal vapor compression refrigeration cycle
	24.04.2024	Actual vapor compression refrigeration cycle
	25.04.2024	Related problems on it
	26.04.2024	Gas refrigeration cycle


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