


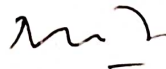
Discipline: MECHANICAL ENGG	Semester: 4th	Name of the Teaching Faculty: MUKESH KUMAR DALEI.
Subject: THERMAL ENGG-II	No. of days/per week class allotted: 04	Semester From date: 14.02.2023 To Date: 23.0523 No. of Weeks: 15
Week	Class Day	Theory/Practical Topics
1ST	1ST	Introduction to thermodynamics
	2ND	Introduction to Vapor Power cycles
	3RD	Explain Steam Power Plant with its Layout
	4TH	Explain Steam Power Plant with its Layout Contd.
2ND	1ST	Explain working of steam power plant cycle
	2ND	Explain Carnot vapor cycle with property diagram
	3RD	Explain Rankine vapor cycle with property diagram
	4TH	Explain Rankine vapor cycle with property diagram Contd.
3RD	1ST	Explain modifications to Rankine vapor cycle
	2ND	Problems solving
	3RD	Explain the qualities of ideal working fluid of power cycle
	4TH	Explain Binary vapor cycles
4TH	1ST	Previous year question discussion, Assignment
	2ND	Introduction to Gas Power cycles
	3RD	Explain the concept of IC Engine
	4TH	Explain the concept of IC Engine contd.
5TH	1ST	Explain Otto cycle with property diagram
	2ND	Explain Diesel cycle with property diagram
	3RD	Explain Dual cycle with property diagram
	4TH	Problems solving
6TH	1ST	Problems solving
	2ND	Problems solving
	3RD	Compare Otto, Diesel and Dual cycles
	4TH	Differentiate between 2 and 4 stroke engine
7TH	1ST	Previous year question discussion, Assignment
	2ND	Introduction to Fuels and Combustion
	3RD	Explain Hydrocarbon fuels
	4TH	Explain the different combustion reactions
8TH	1ST	Explain the different combustion reactions contd.
	2ND	Explain the enthalpy of formation and enthalpy of reaction
	3RD	Explain heating values for fuels
	4TH	Explain Octane number
9TH	1ST	Explain Cetane number
	2ND	Previous year question discussion, Assignment
	3RD	Introduction to Heat transfer
	4TH	Explain the different modes of heat transfer
10TH	1ST	State Fourier law of heat conduction, define thermal conductivity
	2ND	Explain steady state heat conduction in solids
	3RD	Problems solving

11 TH	4 TH	Explain convective heat transfer, State Newton's law of cooling
	1 ST	Problemsolving
	2 ND	Explain radiation heat transfer, State Stefan Boltzman law
	3 RD	Problemsolving
12 TH	4 TH	Explain the different theories of radiation
	1 ST	Explain surface absorption, reflection and transmission
	2 ND	State Kirchoff's law
	3 RD	Define heat exchanger and classify it
13 TH	4 TH	Explain the different types of heat exchangers with its application
	1 ST	Explain the different types of heat exchangers with its application
	2 ND	Previous year question discussion, Assignment
	3 RD	Introduction to refrigeration cycles
14 TH	4 TH	Explain the concept of refrigerators and heat pumps
	1 ST	Problemsolving
	2 ND	Explain reversed Carnot cycle with its limitations
	3 RD	Explain ideal vapor compression refrigeration cycle
15 TH	4 TH	Explain actual vapor compression refrigeration cycle
	1 ST	Explain actual vapor compression refrigeration cycle contd.
	2 ND	Introduction to Gas refrigeration cycle
	3 RD	Previous year question discussion, Assignment
	4 TH	Important question discussion

Learning Resources:

01. Thermal Engineering by MMRathore, McGraw Hill Education
02. A text book of Thermal Engg by RSKhurmi and JK Gupta, SChand Publisher
03. Steam Tables by KK Ramalingam, Scitech Publication


Teaching Faculty


HOD(Mech)