

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF MECHANICAL ENGINEERING

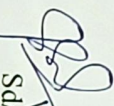


LESSON PLAN

SUBJECT: THERMAL ENGINEERING 2
FACULTY: MRS. SUSHREE PRIYADARSHINI

ACCADEMIC SESSION: 2022-23
SEMESTER: 4TH
SEC: B

H O D (MechEngg.)


Sd/-
13/02/23

LESSON PLAN

Discipline:Mechanical Engg.	Semester:4 TH SEC-B	Name of the teaching faculty:Sushree Priyadarshini	
Subject:THERMAL ENGG.2	No of days/per week class allotted:4	Semester from date:14/02/2023	to date:23/05/2023
Week	Class day	Theory/practical topics	
1 st	14/02/2023	Introduction to thermal engineering-II Performance of IC engine	
	16/02/2023	1.1derive mechanical efficiency ,indicated thermal efficiency, relative efficiency	
	17/02/2023	1.1brake thermal efficiency, overall efficiency, mean effective pressure and specific fuel consumption	
2 nd	21/02/2023	1.2define air-fuel ratio and calorific value of fuel 1.3 work out problems to determine efficiencies and specific fuel consumption	
	23/02/2023	1.3 work out problems to determine efficiencies and specific fuel consumption	
	24/02/2023	1.3 work out problems to determine efficiencies and specific fuel consumption	
	25/02/2023	2.1explain function of compressor and industrial uses of compressed air	

3 rd	28/02/2023	2.2 classify air compressor and principle of operation
	02/03/2023	2.3 describe the parts of reciprocating air compressor 2.3 describe the principle of reciprocating air compressor
	03/03/2023	2.4 explain the terminology of reciprocating compressor such as bore, stroke, pressuratio, free air delivered and volumetric efficiency
4 th	04/03/2023	2.5 derive the workdone of single stage compressor with or without clearance
	09/03/2023	2.5 derive the workdone of single stage compressor with or without clearance
	10/03/2023	2.5 derive the workdone of two stage compressor with or without clearance
5 th	11/03/2023	2.6 solve simple problems
	14/03/2023	2.6 solve simple problems
	16/03/2023	Class test-1
6 th	17/03/2023	3.1 difference between gas and vapour
	18/03/2023	3.2 formation of steam
	21/03/2023	3.3 presentation of P-V, T-S H-S and T-H diagram
	23/03/2023	3.4 definition and properties of steam
	24/03/2023	3.5 use of steam table and mollier chart for finding unknown properties 3.6 nonflow and flow process of vapour 3.7 P-V, T-S AND H-S diagram

7 th	25/03/2023	3.8 determine the changes in properties and solve simple numericals
	28/03/2023	4.1 classification and types of boiler
	31/03/2023	4.2 important terms for boiler
8 th	01/04/2023	4.3 comparison between fire tube and water tube boiler
	04/04/2023	4.4 description and working of common boilers (Cochran, Lancashire, Babcock and Wilcox boiler)
	06/04/2023	4.5 boiler draught (forced, induced and balanced) and Wilcox boiler)
9 th	08/04/2023	4.6 boiler mounting and accessories
	11/04/2023	5.1 Carnot cycle with vapour
	13/04/2023	5.2 derive work and efficiency of the cycle
	18/04/2023	5.3 Rankine cycle
	20/04/2023	5.3.1 representation in P-V, T-S and H-S diagram
10 th	21/04/2023	5.3.2 derive work and efficiency of the cycle
	25/04/2023	5.3.3 effect of various end conditions in Rankine cycle
	27/04/2023	5.3.3 effect of various end conditions in Rankine cycle
	28/04/2023	5.3.4 reheat and regeneration cycle
11 th	29/04/2023	Internal assessment
		5.4 solve simple numerical on Carnot vapour cycle and Rankine cycle
		6.1 modes of heat transfer (conduction, convection and radiation)
		6.2 Fourier law of heat conduction and thermal conductivity
		6.3 Newton's law of cooling

12 th	02/05/2023	6.3newtons law of cooling
	04/05/2023	6.4radiation heat transfer Black body radiation,emissivity,absorpvity and transmissivity Class test-2
13 th	06/05/2023	Black body radiation,emissivity,absorpvity and transmissivity Class test-2
	09/05/2023	Class test-2
	11/05/2023	revision
	12/05/2023	revision
	13/05/2023	revision
14 th	16/05/2023	Previous year question discussion
	18/05/2023	Previous year question discussion
	20/05/2023	Previous year question discussion