

PNS SCHOOL OF ENGINEERING & TECHNOLOGY, MARSHAGHAI, KENDRAPARA

LESSON PLAN

Discipline : MECHANICAL	Semester: 4th	Name of the Teaching Faculty :Er. Jyotirmay Jena
Subject : THERMAL ENGINEERING-II	No. of Days / per week class allotted : 6	Semester From date : 04.02.2025 to Date :17.05.2025 No. of Weeks : 10
Week	Class Day	Topics
1st	1st	CHAPTER-1 Performance of I.C engine Introduction
	2nd	Define mechanical efficiency, Indicated
	3rd	thermal efficiency, Relative Efficiency,
	4th	brake thermal efficiency, Overall efficiency , Mean effective pressure
	5th	specific fuel consumption, Define air-fuel ratio & calorific value of fuel.
	6th	simple problem solved
2nd	1st	simple problem solved
	2nd	CHAPTER-2 Air Compressor INTRODUCTION
	3rd	Explain functions of compressor & industrial use of compressor air
	4th	Classify air compressor & principle of operation.
	5th	Describe the parts and working principle
	6th	of reciprocating Air compressor
3rd	1st	Explain the terminology of reciprocating compressor such as bore, stroke, pressure ratio free air delivered
	2nd	& Volumetric efficiency.
	3rd	Derive the work done of single stage & two stage compressor with and without
	4th	simple problem solved
	5th	simple problem solved
	6th	simple problem solved
4th	1st	Ch-3. Properties of Steam
	2nd	Difference between gas & vapours.
	3rd	Formation of steam.
	4th	Representation on P-V, T-S, H-S, & T-H Diagram
	5th	Use of steam table & mollier chart for
	6th	Non flow & flow process of vapour
5th	1st	V, T-S & H-S, diagram
	2nd	Determine the changes in properties & solve simple numerical
	3rd	simple problem solved
	4th	simple problem solved
	5th	simple problem solved
	6th	simple problem solved
6th	1st	CH.-4 Steam Generator INTRODUCTION
	2nd	Classification & types of Boiler.
	3rd	Important terms for Boiler.
	4th	Description & working of common boilers (Cochran)
	5th	Description & working of common boilers Lancashire
	6th	Description & working of common boilers , Babcock & Wilcox
7th	1st	Wilcox Boiler)
	2nd	Comparison between fire tube & Water BOILER
	3rd	Comparison between fire tube & Water BOILER
	4th	Boiler Draught (Forced, induced & Boiler Draught (Forced, induced &
	5th	balanced)
	6th	Explain specific heat of gas (Cp and Cv)
	1st	Boiler mountings & accessories
	2nd	Boiler mountings & accessories

8th	3rd	Boiler mountings & accessories
	4th	Ch-5: Steam Power Cycles INTRODUCTION
	5th	Carnot cycle with vapour. Derive work & efficiency of the cycle
9th	6th	Rankine cycle. Representation in P-V, T-S
	1st	Rankine cycle. Representation in P-V, T-S & HS
	2nd	simple problem solved
	3rd	regenerative Cycle
	4th	REHEAT CYCLE
	5th	simple problem solved
10th	6th	CH.-6 Heat Transfer INTRODUCTION
	1st	Modes of Heat Transfer (Conduction,
	2nd	Convection, Radiation
	3rd	NEWTON S Law of cooling
	4th	Radiation heat transfer (Stefan, Boltzmann & Kirchhoff's law) only statement,
	5th	BLACK BODY ,Emissivity, absorptivity & Transmissibility
	6th	Previous year questions discussion

Sytemay Jev
Signature of Lecturer

PO
03.02.25
Signature of HOD

AD Khan
03/02/25
Signature of Principal