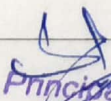


Discipline: MECHANICALENGG	Semester: 4TH	Name of the Teaching Faculty: BALLA PAWANI
Subject: THERMAL ENGINEERING-II	No. of days/per week class allotted: 4	Semester From date: 14.02.2023 To Date: No. of Weeks: 15
Week	Class Day	Theory/Practical Topics
1 ST	1 ST	Define mechanical efficiency, Indicated thermal efficiency, Relative Efficiency, brake thermal efficiency, overall efficiency Mean effective pressure & specific fuel consumption.
	2 ND	Define mechanical efficiency, Indicated thermal efficiency, Relative Efficiency, brake thermal efficiency, overall efficiency Mean effective pressure & specific fuel consumption.
	3 RD	Define mechanical efficiency, Indicated thermal efficiency, Relative Efficiency, brake thermal efficiency, overall efficiency Mean effective pressure & specific fuel consumption.
	4 TH	Define mechanical efficiency, Indicated thermal efficiency, Relative Efficiency, brake thermal efficiency, overall efficiency Mean effective pressure & specific fuel consumption.
2 ND	1 ST	Define air-fuel ratio & calorific value of fuel
	2 ND	Define air-fuel ratio & calorific value of fuel
	3 RD	Work out problems to determine efficiencies & specific fuel consumption.
	4 TH	Work out problems to determine efficiencies & specific fuel consumption.
3 RD	1 ST	Explain functions of compressor & industrial use of compressor air
	2 ND	Explain functions of compressor & industrial use of compressor air
	3 RD	Classify air compressor & principle of operation
	4 TH	Classify air compressor & principle of operation
4 TH	1 ST	Describe the parts and working principle of reciprocating Air compressor.
	2 ND	Describe the parts and working principle of reciprocating Air compressor.
	3 RD	Explain the terminology of reciprocating compressor such as bore, stroke, pressure ratio free air delivered & Volumetric efficiency.. Properties of Steam
	4 TH	Explain the terminology of reciprocating compressor such as bore, stroke, pressure ratio free air delivered & Volumetric efficiency.. Difference between gas & vapours
5 TH	1 ST	Derive the work done of single stage & two stage compressor with and without clearance Formation of steam
	2 ND	Derive the work done of single stage & two stage compressor with and without clearance Representation on P-V, T-S, H-S, & T-H diagram.
	3 RD	Solve simple problems (without clearance only)
	4 TH	Solve simple problems (without clearance only)
6 TH	1 ST	Difference between gas & vapours.
	2 ND	Formation of steam.
	3 RD	Representation on P-V, T-S, H-S, & T-H diagram.
	4 TH	Representation on P-V, T-S, H-S, & T-H diagram.


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7 TH	1 ST	Definition & Properties of Steam.
	2 ND	Use of steam table & mollier chart for finding unknown properties.
	3 RD	Non flow & flow process of vapour.
	4 TH	P-V, T-S & H-S, diagram.
8 TH	1 ST	P-V, T-S & H-S, diagram.
	2 ND	Determine the changes in properties & solve simple numerical.

	3 RD	Classification & types of Boiler
	4 TH	Classification & types of Boiler
9 TH	1 ST	Important terms for Boiler
	2 ND	Important terms for Boiler
	3 RD	Comparison between fire tube & Water tube Boiler.
	4 TH	Comparison between fire tube & Water tube Boiler.
10 TH	1 ST	Description & working of common boilers (Cochran, Lancashire, Babcock & Wilcox Boiler)
	2 ND	Description & working of common boilers (Cochran, Lancashire, Babcock & Wilcox Boiler)
	3 RD	Boiler Draught (Forced, induced & balanced)
	4 TH	Boiler Draught (Forced, induced & balanced)
11 TH	1 ST	Boiler mountings & accessories.
	2 ND	Boiler mountings & accessories.
	3 RD	Carnot cycle with vapour.
	4 TH	Derive work & efficiency of the cycle.
12 TH	1 ST	Rankine cycle. Representation in P-V, T-S & h-s diagram.
	2 ND	Derive Work & Efficiency.
	3 RD	Effect of Various end conditions in Rankine cycle
	4 TH	Reheat cycle & regenerative Cycle
13 TH	1 ST	Solve simple numerical on Carnot vapour Cycle & Rankine Cycle.
	2 ND	Solve simple numerical on Carnot vapour Cycle & Rankine Cycle.
	3 RD	Solve simple numerical on Carnot vapour Cycle & Rankine Cycle.
	4 TH	Solve simple numerical on Carnot vapour Cycle & Rankine Cycle.
14 TH	1 ST	Modes of Heat Transfer (Conduction, Convection, Radiation).
	2 ND	Fourier law of heat conduction and thermal conductivity (k).
	3 RD	Newton's laws of cooling.
	4 TH	Radiation heat transfer (Stefan, Boltzmann & Kirchoff's law) only statement, no derivation & no numerical problem.
15 TH	1 ST	Radiation heat transfer (Stefan, Boltzmann & Kirchoff's law) only statement, no derivation & no numerical problem.
	2 ND	Black body Radiation, Definition of Emissivity, absorptivity, & transmissibility.
	3 RD	Black body Radiation, Definition of Emissivity, absorptivity, & transmissibility.
	4 TH	Black body Radiation, Definition of Emissivity, absorptivity, & transmissibility.

Balla Pawani

Signature of The Faculty

B.S. Sharma
09/02/2023

Signature of The HOD

B.S. Sharma
13/2/23

Signature of The Academic Coordinator

Signature of The Principal
Govt Polytechnic
Mankangiri, (Odisha)