Government Polytechnic Mayurbhanj, Tikarpada || Lesson Plan			
Discipline : MECHANICAL ENGG.		Semester: 4th Sem	Name of the Teaching Faculty : SASMITA SAHA
Subject : TE-II		No. of Days / per week class allotted : 04	Semester From date : 14.02.2023 To Date : 23.05.2023
MONTH	Week	Day	Topics
FEBRUARY	3rd	2nd	Performance of I.C engine: Define mechanical efficiency, Indicated thermal efficiency
		3rd	Relative Efficiency, brake thermal efficiency overall efficiency
		4th	Mean effective pressure &specific fuel consumption.
	4th	1st	Solve related problems
		2nd	Define air-fuel ratio & calorific value of fuel.
		3rd	Work out problems to determine efficiencies & specific fuel consumption
		4th	Work out problems to determine efficiencies & specific fuel consumption
	5th	1st	Explain functions of compressor & industrial use of compressor air
		2nd	Explain functions of compressor & industrial use of compressor air
MARCH	1st	3rd	Classify air compressor & principle of operation
		4th	Classify air compressor & principle of operation
	2nd	1st	Describe the parts and working principle of reciprocating Air compressor.
		4th	Describe the parts and working principle of reciprocating Air compressor.
	3rd	1st	Explain the terminology of reciprocating compressor such as bore, stroke, pressure ratio free air delivered &Volumetric efficiency
		2nd	Explain the terminology of reciprocating compressor such as bore, stroke, pressure ratio free air delivered &Volumetric efficiency
		3rd	Derive the work done of single stage & two stage compressor with and without clearance.
		4th	Derive the work done of single stage & two stage compressor with and without clearance.
	4th	1st	Solve simple problems (without clearance only)
		2nd	Solve simple problems (without clearance only)
		3rd	Difference between gas & vapours.
		4th	Formation of steam.
	5th	1st	Representation on P-V, T-S, H-S, & T-H diagram.
		2nd	Definition & Properties of Steam
		3rd	Use of steam table & mollier chart for finding unknown properties
		4th	Non flow & flow process of vapour.
APRIL	2nd	1st	Solve related problems
		2nd	Determine the changes in properties & solve simple numerical.
		3rd	Classification & types of Boiler.
		4th	Important terms for Boiler.
	3rd	1st	Comparison between fire tube & Water tube boiler.
		2nd	Description & working of common boilers (Cochran, Lancashire, Babcock & Wilcox Boiler)
		3rd	Description & working of common boilers (Cochran, Lancashire, Babcock & Wilcox Boiler)
		4th	Boiler Draught (Forced, induced & balanced)
	4th	1st	Boiler mountings & accessories
		2nd	Carnot cycle with vapour
		3rd	Derive work & efficiency of the cycle.
		4th	Rankine cycle.
	5th	1st	Representation in P-V, T-S & h-s diagram. Derive Work & Efficiency.
		2nd	Effect of Various end conditions in Rankine cycle
		3rd	Reheat cycle & regenerative Cycle.
		4th	Solve simple numerical on Carnot vapour Cycle & Rankine Cycle.
MAY	1ST	1st	Modes of Heat Transfer (Conduction, Convection, Radiation).
		2nd	Modes of Heat Transfer (Conduction, Convection, Radiation).
		3rd	Fourier law of heat conduction and thermal conductivity (k).
		4th	Newton's laws of cooling.
	2ND	1st	Radiation heat transfer (Stefan, Boltzmann & Kirchhoff's law)
		2nd	Radiation heat transfer (Stefan, Boltzmann & Kirchhoff's law)
		3rd	Black body Radiation, Definition of Emissivity, absorptivity, & transmissibility.
		4th	Black body Radiation, Definition of Emissivity, absorptivity, & transmissibility.
	3rd	1st	Solve related problems
		2nd	Solve related problems
		3rd	Revision
		4th	Revision
	4TH	1st	Question Discussion.
		2nd	Question Discussion.