

ACADEMIC SESSION : WINTER 2022

Discipline : Mechanical	Semester : 3 rd	Name Of The teaching faculty : Ashish Meher
Subject : Element of Mechanical Engineering	No. of days / week class allotted	Semester From date : 15.09.2022 to 22.12.2022 Nos. of Weeks :15
Week	Class Day	Theory / Practical topics
1st	1 st	Introduction of Thermodynamics
	2 nd	State Unit of Heat and work
	3 rd	1st law of thermodynamics ,
	4 th	State Laws of perfect gases
2nd	1 st	Determine relationship of specific heat of gases at constant volume and constant volume
	2 nd	Determine relationship of specific heat of gases at constant volume and constant pressure
	3 rd	Properties of steam
	4 th	Basic concept of steam table
3rd	1 st	Use steam table for solution of simple problem
	2 nd	Use steam table for solution of problem
	3 rd	Explain total heat of wet dry and superheated steam
	4 th	Boilers – (different parts), Working principle of Boiler, State type of Boiler
4th	1 st	Durga Puja Holiday
	2 nd	
	3 rd	
	4 th	
5th	1 st	Explain different type of boiler ,Vertical and horizontal boiler, Low and high pressure boiler
	2 nd	Describe Cochran boiler
	3 rd	Describe Babcock Wilcox boiler Working principal of Babcock Wilcox boiler
	4 th	Boiler Mountings

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6th	1 st	Explain Boiler accessories
	2 nd	Steam Engine – Basic Concept
	3 rd	Explain the principle of steam engine
	4 th	Explain the construction of steam engine
7th	1 st	Explain working principle of steam engine
	2 nd	Draw indicator diagram
	3 rd	Theoretical Indicator diagram without clearance
	4 th	Theoretical Indicator diagram with clearance
8th	1 st	Calculate Mean effective pressure,
	2 nd	Calculate IHP and BHP and mechanical efficiency.
	3 rd	Solve Simple problem of steam engine
	4 th	Steam turbine
9th	1 st	State type of Steam turbine
	2 nd	Describe impulse Turbine
	3 rd	Describe reaction Turbine
	4 th	Draw velocity triangle
10th	1 st	Differentiate between impulse and reaction Turbine
	2 nd	condenser –Basic working principle
	3 rd	Explain the function of condenser
	4 th	Type of Condenser

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11th	1 st	Jet condenser, Surface condenser
	2 nd	Internal Combustion Engine
	3 rd	Explain working of 2 stroke petrol and Diesel engines.
	4 th	Explain working of 4 stroke petrol and Diesel engines.
12th	1 st	Differentiate 2 stroke and 4 stroke petrol and Diesel engines.
	2 nd	Hydrostatics
	3 rd	Describe properties of fluid
	4 th	Determine pressure at a point
13th	1 st	Piezometer, U-tube manometer
	2 nd	Mechanical Gauge
	3 rd	Hydrokinetics
	4 th	Different type of flow
14th	1 st	Deduce equation of continuity of flow
	2 nd	Explain energy of flowing liquid
	3 rd	State and explain Bernoulli's theorem
	4 th	HYDRAULIC DEVICES AND PNEUMATICS
15th	1 st	Intensifier
	2 nd	Hydraulic lift
	3 rd	Accumulator
	4 th	Hydraulic ram