UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING

(2021-2022)

LESSON PLAN (2021-2022)		
Discipline: Mechanical	**Semester: 3RD**	**Name of the Teaching faculty: Amit Kumar Marandi**
Subject: Elements of Mechanical Engineering (Th-3)	**No of Days/ Week class alloted: 4**	**Semester: 3RD from Date:01. 10. 2021** **To Date: 08.01.2022** **No of weeks: 14**
Week	**Class Day**	**Topics**
1st	1st	**CHAPTER-1: THERMODYNAMICS** 1.1 State Unit of Heat and work, 1st law of thermodynamics.
	2nd	1.2 State Laws of perfect gases
	3rd	1.3 Determine relationship of specific heat of gases at constant volume and constant pressure.
	4th	Solve simple numericals.
2nd	1st	Doubt clearing classes of Chapter-1.
	2nd	**CHAPTER-2: PROPERTIES OF STEAM** 2 . 1 Use steam table for solution of simple problem
	3rd	2 . 1 Use steam table for solution of simple problem
	4th	2 . 2 Explain total heat of wet, dry and super heated steam
3rd	1st	2 . 2 Explain total heat of wet, dry and super heated steam
	2nd	Doubt clearing classes of Chapter-2.
	3rd	**CHAPTER-3: BOILERS** 3 . 1 State types of Boilers
	4th	3 . 2 Describe Cochran,
4th	1st	3 . 2 Describe Babcock Wilcox boiler
	2nd	3 . 3 Describe Mountings and accessories
	3rd	Doubt clearing classes of Chapter-3.
	4th	Previous year chapter-1,2,3 questions discussions.
5th	1st	Previous year chapter-1,2,3 questions discussions.
	2nd	**CHAPTER-4: STEAM ENGINES**
	3rd	4.1 Explain the principle of Simple steam engine
	4th	4.2 Draw Indicator diagram
6th	1st	4.3 Calculate Mean effective pressure, IHP and BHP and mechanical efficiency.

	2nd	4.4 Solve Simple problem.
	3rd	4.4 Solve Simple problem.
	4th	**CHAPTER-5: STEAM TURBINES** 5.1 State Types
7th	1st	5.2 Differentiate between impulse and reaction Turbine
	2nd	Doubt clearing classes of Chapter-4,5.
	3rd	**CHAPTER-6: CONDENSER** 6.1 Explain the function of condenser
	4th	6.1 Explain the function of condenser
8th	1st	6.2 State their types
	2nd	**CHAPTER-7: IC ENGINES** 7.1 Explain working of two stroke and 4 stroke petrol and Diesel engines.
	3rd	7.2 Differentiate between them
	4th	Doubt clearing classes of Chapter-6,7.
9th	1st	**CHAPTER-8: HYDROSTATICS** 8.1 Describe properties of fluid
	2nd	8.2 Determine pressure at a point, pressure measuring Instruments
	3rd	Doubt clearing classes of Chapter-8.
	4th	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-4,5,6,7,8
10th	1st	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-4,5,6,7,8
	2nd	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-4,5,6,7,8
	3rd	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-4,5,6,7,8
	4th	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-4,5,6,7,8
11th	1st	**CHAPTER-9: HYDROKINETICS** 9.1 Deduce equation of continuity of flow
	2nd	9.2 Explain energy of flowing liquid
	3rd	9.3 State and explain Bernoulli's theorem
	4th	Doubt clearing classes of Chapter-9.
12th	1st	**CHAPTER-10: HYDRAULIC DEVICES AND PNEUMATICS:** 10.1 Intensifier
	2nd	10.2 Hydraulic lift
	3rd	10.3 Accumulator
	4th	10.4 Hydraulic ram
13th	1st	Doubt clearing classes of Chapter-10.
	2nd	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-9,10.
	3rd	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-9,10.

	4th	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-1,2,3,4,5
14th	1st	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-1,2,3,4,5
	2nd	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-1,2,3,4,5
	3rd	PREVIOUS YEAR PAPER DISCUSION OF CHAPTER-6,7,8,9,10
	4th	REVISION