

GOVERNMENT POLYTECHNIC JAJPUR

A/ P: Ragadi, Block: Korei, Dist.: Jajpur, Odisha- 755019

Website: <https://www.gpjajpur.org> E-mail: principalgpjajpur@yahoo.co.in Contact: 9437155107

**DEPARTMENT OF ELECTRICAL ENGINEERING
LESSON PLAN**

Discipline: Mechanical	Semester: 3rd	Name of the Teaching faculty: SOUBHAGYA GHADAI
Subject: EME (Th3)	No of Days/Week class allotted: 4	Semester from Date:15.09.2022 To Date:22.12.2022 No of weeks: 15
Week	Class Day	Topics
1st	1st	Introduction to Thermodynamics
	2nd	Thermodynamic System & its types
	3rd	Form of energy transfer-Heat & work
	4th	Unit of Heat and Work
2nd	1st	Law of Thermodynamics-Zeroth, 1st & 2nd law
	2nd	1st law during a change of state & cyclic process
	3rd	1st law applied to non flow process
	4th	Laws of perfect gases-Boyle's Law, Charles law & Gay Lussac Law
3rd	1st	& relationship.
	2nd	Steam generation process -P-V & T-s Diagram
	3rd	Properties of steam
	4th	Types of steam, Dryness fraction. Use of Steam table
4th	1st	Use of Steam table for solution to simple problem
	2nd	Introduction to Boiler & Its function & types
	3rd	Types of Boiler
	4th	Water tube & fire tube boiler
5th	1st	Cochran boiler & its working
	2nd	Babcock Wilcox boiler & its working
	3rd	Boiler Mounting
	4th	Boiler Accessories
6th	1st	Boiler efficiency & simple Numerical
	2nd	Introduction to Steam engine
	3rd	Main parts of steam engine
	4th	Working principle of steam engine
7th	1st	Indicator diagram & its uses.
	2nd	Calculation of mean effective pressure
	3rd	Calculation of IHP, BHP & FHP
	4th	Mechanical efficiency
8th	1st	Numerical on above.
	2nd	CLASS TEST-1
	3rd	Introduction to Steam turbine
	4th	Main parts of steam turbine
9th	1st	Working of steam turbine
	2nd	Steam turbine types
	3rd	Differentiate Impulse & reaction turbine
	4th	Introduction to condenser

10th	1st	Function & uses of condenser
	2nd	Working of condenser
	3rd	Types of condenser
	4th	Haet engine & Its classification
11th	1st	IC engine & its types
	2nd	2-S & 4-S engine & its working
	3rd	SI & CI engine
	4th	Differentiate 2-S ,4-S petrol & disel engine
12th	1st	Fluid & its Properties -I
	2nd	Fluid & its Properties -II,Types of fluid
	3rd	Define pressure at a point & Pascal's Law
	4th	absolute pressure.
13th	1st	Measurement of pressure-I-Piezometer & U-Tube manometer
	2nd	Measurement of pressure-I-Differential U-Tube Manometer
	3rd	Bourdon tube pressure gauge
	4th	Deduce equation of continuity
14th	1st	Energy of flowing fluid
	2nd	Bernoulii's theorem -statement & derivation
	3rd	Application to venturimeter ,orificemeter & pitot tube
	4th	Hydraulic lift
15th	1st	sketch.
	2nd	Hydraulic accumulator & it's working
	3rd	Hydraulic ram with it's working.
	4th	CLASS TEST-2

Southegeya Bhabai
Signature of Faculty