## **GOVERNMENT POLYTECHNIC JAJPUR**

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## DEPARTMENT OF ELECTRICAL ENGINEERING LESSON PLAN

Discipline: Electrical		Semester: 3r	Name of the Teaching faculty: SOUBHAGYA GHADAI
Subject: (Th3)	EME	No of Days/Week class alloted:	Semester from Date:01.08.2023 To Date:30.11.2023 No of weeks: 15
Week		Class Day	
1st		1st	Topics Introduction toThermodynamics
	ĺ	2nd	Thermodynamic System & its types
		3rd	Form of energy trnsfer-Heat & work
		4th	Unit of Heat and Work
		1st	Law of Thermodynamics-Zeroth, 1st & 2nd law
		2nd	1st law during a change of state & cyclic process
2nd		3rd	1st law applied to non flow process
			Laws of perfect gases-Boyle's Law, Charles law & Gay Lussac
		4th	Law Law
3rd	L	1st	& relationship.
	L	2nd	Steam generation process -P-V & T-s Diagram
		3rd	Properties of steam
		4th	Types of steam, Dryness fraction. Use of Steam table
	L	1st	Use of Steam table for solution to simple problem
4th		2nd	Introduction to Boiler & It's function & types
401		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 Acessories
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
			Numerical on above.
8th			CLASS TEST-1
			ntroduction to Steam turbine
		4th N	Aain parts of steam turbine
9th			Vorking of steam turbine
			team turbine types
			ifferentiate Impulse & reaction turbine

	4th	Introduction to condenser
10th	1st	Function & uses of condenser
	2nd	Working of condenser
	3rd	Types of condenser
	4th	
	1st	Haet engine & Its classification
		IC engine & its types
11th	2nd	2-S & 4-S engine & its working
	3rd	SI & CI engine
	4th	Differentiate 2-S, 4-S petrol & disel engine
	1st	Fluid & its Properties -I
12th	2nd	Fluid & its Properties -II, Types of fluid
	3rd	Define pressure at a point & Pascal's Law
	4th	absolute pressure.
	1st	Measurement of pressure-I-Piezometer & U-Tube manometer
13th	2nd	Measurement of pressure-I-Differential U-Tube Manometer
	3rd	Bourdon tube pressure gauge
	4th	Deduce equation of continuity
	1st	Energy of flowing fluid
14th	2nd	Bernoulii's theorem -statement & derivation
2401	3rd	Application to venturimeter ,orificemeter & pitot tube
	4th	Hydraulic lift
	1st	sketch.
15th	2nd	Hydraulic accumulator & it's working
1501	3rd	Hydraulic ram with it's working.
	4th	CLASS TEST-2

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