



NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY  
SERGARH-756060, BALASORE (ODISHA)  
(Approved by AICTE& affiliated to SCTE&VT, Odisha,



## LESSON PLAN

**SUBJECT: Th-4 (ELEMENT OF MECHANICAL ENGINEERING )**

### CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus
1	THERMODYNAMICS	6
2	PROPERTIES OF STEAM	5
3	BOILERS	10
4	STEAM ENGINES	10
5	STEAM TURBINES	6
6	CONDENSER	4
7	I.C. ENGINE	4
8	HYDROSTATICS	5
9	HYDROKINETICS	5
10	HYDRAULIC DEVICES AND PNEUMATICS	5
11	TOTAL PERIOD	60

Discipline: ELECTRICAL & ELECTRONIC S ENGG	Semester: 3rd	Name of the Teaching Faculty: Er.BISHNU CHARAN JENA
Week	Class Day	Theory / Practical Topics
1 <sup>st</sup>	1 <sup>st</sup>	<i>THERMODYNAICS:</i>
	2 <sup>nd</sup>	State Unit of Heat and work, 1st law of thermodynamics.
	3 <sup>rd</sup>	State Unit of Heat and work, 1st law of thermodynamics.
	4 <sup>th</sup>	State Laws of perfect gases
	5 <sup>th</sup>	Determine relationship of specific heat of gases at constant volume and constant pressure
2 <sup>nd</sup>	1 <sup>st</sup>	PROPERTIES OF STEAM
	2 <sup>nd</sup>	PROPERTIES OF STEAM:
	3 <sup>rd</sup>	Use steam table for solution of simple problem
	4 <sup>th</sup>	Explain total heat of wet, dry and super heated steam
	5 <sup>th</sup>	Explain total heat of wet, dry and super heated steam
3 <sup>rd</sup>	1 <sup>st</sup>	BOILERS
	2 <sup>nd</sup>	<i>BOILERS</i>
	3 <sup>rd</sup>	State types of Boilers
	4 <sup>th</sup>	Describe Cochran
	5 <sup>th</sup>	Babcock Wilcox boiler
4 <sup>th</sup>	1 <sup>st</sup>	Describe Mountings and accessories
	2 <sup>nd</sup>	Describe Mountings and accessories
	3 <sup>rd</sup>	CLASS TEST
	4 <sup>th</sup>	STEAM ENGINES:
	5 <sup>th</sup>	STEAM ENGINES:
5 <sup>th</sup>	1 <sup>st</sup>	Explain the principle of Simple steam engine
	2 <sup>nd</sup>	Explain the principle of Simple steam engine
	3 <sup>rd</sup>	<i>Draw Indicator diagram</i>
	4 <sup>th</sup>	<i>Calculate Mean effective pressure</i>
	5 <sup>th</sup>	IHP and BHP and mechanical efficiency.
6 <sup>th</sup>	1 <sup>st</sup>	Solve Simple problem.
	2 <sup>nd</sup>	Solve Simple problem.
	3 <sup>rd</sup>	STEAM TURBINES
	4 <sup>th</sup>	STEAM TURBINES
7 <sup>th</sup>	1 <sup>st</sup>	State Types
	2 <sup>nd</sup>	State Types
	3 <sup>rd</sup>	Differentiate between impulse and reaction Turbin
	4 <sup>th</sup>	Differentiate between impulse and reaction Turbin
	5 <sup>th</sup>	<i>CLASS TEST</i>
8 <sup>th</sup>	1 <sup>st</sup>	CONDENSER
	2 <sup>nd</sup>	1 Explain the function of condenser
	3 <sup>rd</sup>	1 Explain the function of condenser
	4 <sup>th</sup>	State their types
9 <sup>th</sup>	1 <sup>st</sup>	State their types

	2 <sup>nd</sup>	I.C. ENGINE
	3 <sup>rd</sup>	I.C. ENGINE
	4 <sup>th</sup>	Explain working of two stroke and 4 stroke petrol and Diesel engines.
10 <sup>th</sup>	1 <sup>st</sup>	Explain working of two stroke and 4 stroke petrol and Diesel engines.
	2 <sup>nd</sup>	<i>Differentiate between them</i>
	3 <sup>rd</sup>	Differentiate between them
	4 <sup>th</sup>	HYDROSTATICS
	5 <sup>th</sup>	HYDROSTATICS
11 <sup>th</sup>	1 <sup>st</sup>	Describe properties of fluid
	2 <sup>nd</sup>	Describe properties of fluid
	3 <sup>rd</sup>	FLUID
	4 <sup>th</sup>	REVISION
	5 <sup>th</sup>	Determine pressure at a point, pressure measuring Instruments
12 <sup>th</sup>	1 <sup>st</sup>	Determine pressure at a point, pressure measuring Instruments
	2 <sup>nd</sup>	HYDROKINETICS:
	3 <sup>rd</sup>	HYDROKINETICS:
	4 <sup>th</sup>	<i>Deduce equation of continuity of flow</i>
13 <sup>th</sup>	1 <sup>st</sup>	Deduce equation of continuity of flow
	2 <sup>nd</sup>	Explain energy of flowing liquid
	3 <sup>rd</sup>	Explain energy of flowing liquid
	4 <sup>th</sup>	State and explain Bernoulli's theorem
14 <sup>th</sup>	1 <sup>st</sup>	State and explain Bernoulli's theorem
	2 <sup>nd</sup>	CLASS TEST
	3 <sup>rd</sup>	HYDRAULIC DEVICES AND PNEUMATICS:
	4 <sup>th</sup>	HYDRAULIC DEVICES AND PNEUMATICS:
	5 <sup>th</sup>	Intensifier
15 <sup>th</sup>	1 <sup>st</sup>	Intensifier
	2 <sup>nd</sup>	Hydraulic lift
	3 <sup>rd</sup>	Accumulator
	4 <sup>th</sup>	Accumulator
	5 <sup>th</sup>	Hydraulic ram


No. of periods actually needed
6
6
11
10
6
4
4
5
5
5
62