

SYNERGY SCHOOL OF ENGINEERING DHENKANAL



LESSON PLAN

Discipline-Mech. Engg.	Semester:-6th Summer 2026	Name of the faculty:- Mr. Somanath Sethy Lecturer
Subject:-PSE	Total No Of Period-60	Start Date:-22/12/25
Theory:-TH3	No of days per Week-04	End Date:18/04/26
Week	Class Day	COURSE TO BE COVERED
1 st	1 st	Describe sources of energy.
	2 nd	Explain concept of Central.
	3 rd	Captive power station
	4 th	Classify power plants and Explain
2 nd	1 st	Importance of electrical power in day today life
	2 nd	Overview of method of electrical power generation.
	3 rd	Layout of steam power stations
	4 th	Steam power cycle.
3 rd	1 st	Explain Carnot vapour power cycle with P-V, T-s diagram and determine thermal efficiency.
	2 nd	Solve Simple Problems.
	3 rd	Explain Rankine cycle with P-V, T-S & H-s diagram and determine thermal efficiency, Work done, work ratio, and specific steam Consumption
	4 th	Solve Simple Problems.
4 th	1 st	List of thermal power stations in the state with their capacities
	2 nd	Boiler Accessories: Operation of Air pre heater,. Need of boiler mountings
	3 rd	Operation of Economiser, Electrostatic precipitator and super heater
	4 th	Operation of boiler.

5 th	1 st	Draught systems (Natural draught, Forced draught & balanced draught) with their advantages & disadvantages.
	2 nd	Steam prime movers.
	3 rd	Advantages & disadvantages of steam turbine.
	4 th	Elements of steam turbine, governing of steam turbine
6 th	1 st	Performance of steam turbine: Explain Thermal efficiency.
	2 nd	Explain Stage efficiency and Gross efficiency.
	3 rd	Steam condenser: Function of condenser
	4 th	Classification of condenser. function of condenser auxiliaries such as hot well
7 th	1 st	Function of condenser extraction pump, air extraction pump, and circulating pump.
	2 nd	Cooling Tower: Function and types of cooling tower, and spray ponds
	3 rd	Selection of site for thermal power stations.
	4 th	Classify nuclear fuel (Fissile & fertile material)
8 th	1 st	Explain fusion and fission reaction
	2 nd	Explain working of nuclear power plants with block diagram.
	3 rd	Explain the working
	4 th	construction of nuclear reactor
9 th	1 st	Compare the nuclear and thermal plants.
	2 nd	Explain the disposal of nuclear waste.
	3 rd	Selection of site for nuclear power stations
	4 th	List of nuclear power stations
10 th	1 st	State the advantages and disadvantages of diesel electric power stations.
	2 nd	Explain briefly different systems of diesel electric power stations: Fuel storage
	3 rd	fuel supply system
	4 th	Fuel injection system, Fuel injection system
11 th	1 st	Air supply system
	2 nd	Exhaust system
	3 rd	cooling system
	4 th	Lubrication system
12 th	1 st	starting system
	2 nd	governing system
	3 rd	Selection of site for diesel electric power stations.
	4 th	Performance and thermal efficiency of diesel electric power stations

1 st	State advantages and disadvantages of hydroelectric power plant.
2 nd	Classify and explain the general arrangement of storage type hydroelectric project
3 rd	explain its operation
4 th	Selection of site of hydel power plant
1 st	List of hydro power stations with their capacities and number of units in the state.
2 nd	Types of turbines and generation used
3 rd	Simple problems
4 th	Selection of site for gas turbine stations
1 st	Fuels for gas turbine
2 nd	Elements of simple gas turbine power plants
3 rd	Merits, demerits.
4 th	application of gas turbine power plants

S. S. Somani
20/12/23

Verified By HOD

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MECHANICAL ENGG. DEPT.
SSE, Dhenkanal

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20/12/23

SOMANATH SETHY
Lect. In Mech. Engg.