

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF
ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN
Session-2024-2025

Semester: 6th Discipline: Mechanical Engg.

Subject: Power Station Engineering

Name of the Teaching Faculty: Shashanka Sankar Bhoi

Subject: PSE No. of Days/per week class allotted: 04

Semester From Date: 04.02.2025 To Date: 17.05.2025 No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
01	01	Sources of Energy
	02	Classification of power station
	03	Concept of central & Captive P.S
	04	Electrical Power
02	01	Method of Electrical power generation
	02	Steam power plant
	03	Layout of steam power plant.
	04	Steam power cycle.
03	01	Carnot vapour power cycle.
	02	Rankine cycle.
	03	Efficiency, workdone, work ratio, S.R
	04	P-V, T-S, H-S diagram.

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Signature of the Faculty

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Week	Class Day	Theory /Practical Topics
04	01	Simple problem on Rankine cycle
	02	List of thermal P.S with capacities
	03	Boiler Accessories APH
	04	Economiser
05	01	Electrostatic precipitator
	02	Super Heater, Need of boiler mountings
	03	Draught system, types
	04	Steam prime mover, Advantages & disadvantages of turbine.
06	01	Elements of steam turbine.
	02	Stage efficiency & Gross efficiency.
	03	Steam Condenser.
	04	Cooling tower.

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Week	Class Day	Theory / Practical Topics
07	01	Selection of site for thermal P.S
	02	Nuclear Power station.
	03	Classification of Nuclear fuels.
	04	Fusion & Fission of Reaction.
08	01	Working of Nuclear P.S with diagram.
	02	Nuclear Reactor
	03	Working and Construction of Nuclear Reactor.
	04	Compared Nuclear & Thermal P.S
09	01	Explanation of disposal of nuclear waste.
	02	Selection of site for nuclear P.S
	03	List of nuclear P.S
	04	Diesel electric P.S.

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Semester From Date: 04.02.2025 To Date: 17.05.2025 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
10	01	Advantages and disadvantages of diesel electric P.S
	02	Fuel storage and fuel supply system.
	03	Fuel injection system
	04	Air supply system
11	01	Cooling system
	02	Lubrication system
	03	Starting system
	04	Governing system
12	01	Exhaust system
	02	Selection of site for diesel electric power stations
	03	Performance and thermal efficiency of diesel electric power station.
	04	Doubt clearing

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Semester From Date : 04.02.2025 To Date: 17.05.2025 No. of Weeks : 15

Week	Class Day	Theory / Practical Topics
13	01	State advantages and disadvantages of hydroelectric power plant -
	02	Classify hydroelectric power plant -
	03	Explain the general arrangement of hydroelectric power plant -
	04	Explain its operation -
14	01	Selection of site of hydel power plant -
	02	List of hydro power stations.
	03	Number of units in the state -
	04	Types of turbines.
15	01	Generation used -
	02	Steam Prime movers
	03	Condenser extraction pump -
	04	Simple problem.

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