

Government Polytechnic Mayurbhanj, Tikarpada Lesson Plan			
Discipline : MECHANICAL ENGG.		Semester: 6th Sem	Name of the Teaching Faculty : SASMITA SAHA
Subject : PSE		No. of Days / per week class allotted : 04	Semester From date : 16.01.24 To Date : 23.04.24
MONTH	Week	Day	Topics
JANUARY	3rd	2nd	Describe sources of energy
		4th	Explain concept of Central and Captive powerstation
		5th	Explain concept of Central and Captive powerstation
	4th	1st	Classify power plants.
		4th	Importance of electrical power in day to day life.
	5th	1st	Importance of electrical power in day to day life.
FEBRUARY	1st	2nd	Overview of method of electrical power generation
		4th	Layout of steam powerstations.
		5th	Steam powercycle
	2nd	1st	Explain Carnot vapour power cycle with P-V,T-s diagram and determine thermal efficiency.
		2nd	Explain Rankine cycle with P-V,T-S&H-s diagram
		4th	Determine thermal efficiency,Workdone,workratio, and specific steam Consumption.
		5th	solve simple problems.
	3rd	1st	list of the thermal power station in the state with their capacities
		2nd	Operation of air pre heater
		4th	Operation of economiser,electrostatic precipitator
		5th	Operation of super heater,need of boiler mountings
	4th	1st	operation of boiler
		2nd	Draught systems(Naturaldraught,Forceddraught & balanceddraught)
		4th	Advantages & disadvantages of Draught systems
		5th	Advantages & disadvantages of steam turbine
	5th	1st	Discuss about the elements of steam turbine
		2nd	Governing and Performance of steam turbine.
		4th	Explain Thermal efficiency,Stage efficiency and Gross efficiency.
MARCH	1st	5th	Function of condenser and classification of condenser
	2nd	1st	circulating pump.
		4th	Function and type of cooling tower and sprayponds
		5th	Selection of site for thermal powerstations
	3rd	1st	Classify nuclear fuel(Fissile&fertilematerial)
		2nd	Explain fusion and fission reaction.Explain working of nuclear powerplants with blockdiagram
		4th	Explain the working and construction of nuclear reactor.Compare the nuclear and thermalplants
		5th	Explain the disposal of nuclear waste.Selection of site for nuclear powerstations.List of nuclear powerstations.
	4th	4th	State the advantages and disadvantages of diesel electric power stations.
	APRIL	1st	2nd
4th			Explain Fuel storage and fuel supply system, Fuel injection system,Air supply system in diesel electric power station
5th			Exhaust system,cooling system,Lubrication system,starting system,governing system of diesel electric power station
2nd		1st	Selection of site for diesel electric powerstations.Performance and thermal efficiency of diesel electric powerstations.
		2nd	State advantages and disadvantages of hydro electric powerplant.
		5th	Classify and explain the general arrangement of storage type hydro electric project and explain its operation.
3rd		1st	Selection of site of hydel powerplant.
		2nd	List of hydro power stations with their capacities and number of units in the state.Types of turbines and generation used.
		4th	Selection of site for gas turbine stations.
		5th	Fuels for gas turbine.
4th	1st	Elements of simple gas turbine power plants	
	2nd	Merits,demerits and application of gas turbine power plants.	