

Discipline: Mechanical  
Subject: PSE

Semester: 6th

Name of the faculty: Suresh Kumar

No. of days /  
Classes allotted: 5

Semester from - 10/3/22  
to 10/6/22

WEEK	No. of period	Theory Topics
	1st	Describe sources of energy
10th March to	2nd	Explain concept of central & captive power station.
12th March	3rd	classify power plants.
14th March to	1st	Importance of electrical power in day to day life.
19th March	2nd	overview of method of electrical power generation
	3rd	Layout of Steam power Stations
	4th	———— "Dolo puonima" ————
	5th	———— "Holi" ————
	1st	Describe Steam power cycle
21st March to	2nd	Explain Carnot vapour power cycle with PV & TS Diagram
26th March	3rd	Explain Rankine cycle with P-V, T-S & H-S diagram & Determine thermal efficiency
	4th	Discuss about work done, work ratio, & specific steam consumption
	5th	Solved simple problems.
28th March to	1st	Discuss about list of thermal power stations in the state with their capacities.
2nd April	2nd	Boiler Accessories, & operation of Air preheater.
	3rd	operation of Economiser, operation Electrostatic Precipitator & operation of Super heaters.
	4th	———— "Utkal Dibas" ————

Week	No of period	Theory topics
	5th	Need of boiler mountings & operation of Boiler.
4th April to 9th April	1st	Natural draught & forced draught with advantage & disadvantage.
	2nd	Balanced draught with advantage & disadvantage.
	3rd	Advantage & Disadvantage of Steam turbine.
	4th	Elements of Steam turbine & governing of Steam turbine.
	5th	Performance of Steam turbine.
11th April to 16th April	1st	Explain thermal efficiency, stage efficiency & Gross efficiency.
	2nd	Function & elaboration of Condenser.
	3rd	"Mahavi'suba Sankranti"
	4th	"Good Friday"
	5th	Function of condenser auxiliaries such as hot well, condenser extraction pump.
16th April to 23rd April	1st	Function of air extraction pump & circulating pump.
	2nd	Cooling tower: Function & types.
	3rd	Selection of site for thermal Power Station.
	4th	Clarity nuclear fuel i.e. Fissile & Fertile material.

Week	No of period	Theory topics
	5th	Explain Fusion & Fission Reaction.
25th April to 30th April	1st	Explain working of nuclear power plants with block diagram.
	2nd	Explain the working & construction of nuclear reactor.
	3rd	Compare the nuclear & thermal plants.
	4th	Explain the disposal of nuclear waste.
	5th	Selection of site for nuclear Power Stations & list of it.
2nd May to 7th May	1st	State the advantage & Disadvantages of diesel electric Power Station.
	2nd	"D-d-ni-Fetre"
	3rd	Explain briefly systems of diesel electric power Stations.
	4th	Fuel Storage & Fuel supply system.
	5th	Fuel injection system & Air supply system.
	1st	Exhaust system & Cooling System.
9th May to 14th May	2nd	Lubrication system & starting system.
	3rd	Discuss on governing system.
	4th	Selection of site for diesel Power Station.
	5th	Performance of diesel electric Power Stations.

Week	No of Period	theory topics
	1st	— "Buddha Purnima" —
16th may to	2nd	- Thermal efficiency of Diesel electric power stations.
21st may	3rd	State advantages & Dis advantages of hydro electric power plant
	4th	classify & explain the general arrangement of hydroelectric project
	5th	Selection of site of hydro power plant
23rd may to	1st	List of hydro power stations with their capacities
28th may	2nd	Types of turbines & generation
	3rd	Solved problems
	4th	Selection of site for gas turbine
	5th	Fuels for gas turbine
	1st	— "Sabarni Amabasya" —
30th may to	2nd	Elements of simple gas turbine power plant
4th June	3rd	merit of gas turbine
	4th	Demerit of gas turbine
	5th	Application of gas turbine
	1st	Discussed short type question
6th June to	2nd	Discussed long type question
	3rd	Discuss important question
10th June	4th	Revision
	5th	Revision.