

Discipline:
Mechanical

Semester: 6th

Name of the faculty:
Er. Rakesh Roshan Appata.
Semester from: 27

Subject:
Power Station Eng.

No. of days/
week class:

Week	Class day	Theory Topics
5th Apr to	1st	Layout of Describe sources of energy.
10th Apr.	2nd	Explain concept of central & captive power station.
	3rd	Classify power plants.
	4th	Importance of electrical power in day to day life.
	5th	Overview of method of electrical power generation.
		1st Layout of steam power stations.
12th Apr to	2nd	Describe steam power cycle
17th Apr.	3rd	Explain Carnot vapour power cycle with PV & TS Diagram.
	4th	— Maha Visuva Sankranti —
	5th	Explain Rankine cycle with P-V, TS & H-S Diagram & Determine thermal efficiency.
19th Apr to	1st	Discuss about work done, work ratio, & specific steam consumption.
24th Apr.	2nd	Solved simple problems
	3rd	— Ram Navami —
	2nd	Discuss about list of thermal power stations in the state with their capacities.
	4th	Boiler accessories & operation of Air pre heater.
	5th	Operation of Economiser, operation Electrostatic precipitator & operation of super heater.

Week	Class day	Theory Topics
26th Apr to 01st May	1st to 2nd	Need of boiler mountings & operation of boiler. Natural draught & forced draught with advantage & Dis advantage
	3rd	Balanced draught with advantage & Dis advantage
	4th	- Advantage & Dis advantage of Steam turbine.
	5th	Elements of steam turbine & governing of steam turbine
	1st	Performance of steam turbine
	2nd	Explain Thermal efficiency, stage efficiency & gross efficiency
3rd May to 08th May	3rd	Function & classification of Condenser.
	4th	Function of Condenser auxiliaries such hot well, condenser extraction pump.
	5th	Function of air extraction pump & circulating pump.
	1st	Cooling tower function & types.
10th May to 15th May	2nd	Selection of site For thermal power station
	3rd	Classify nuclear fuel i.e. Fissile & Fertile material.
	4th	Explain Fusion & Fission reaction.
	5th	— I.D. — F.I. —

Week	Class day	Theory Topics
17th May to 22nd May	2nd to 3rd	Explain working of nuclear power plants with block diagram. Explain the working & construction of nuclear reactor. Compare the nuclear & thermal plants.
	4th	Explain the disposal of nuclear waste.
	5th	Selection of site for nuclear power stations. & list of it.
	1st	State the advantage & Disadvantages of diesel electric power stations.
24th May to 29th May	2nd	Explain briefly systems of diesel electric power stations.
	3rd	Fuel storage & Fuel supply system.
	4th	Fuel injection system & Air supply system.
	5th	Exhaust system & cooling system lubrication system & starting system
31st May to 05th June	2nd to 3rd	- Discuss on governing system Selection of site for Diesel power station.
	4th	- Performance of Diesel electric power stations.
	5th	- Thermal efficiency of Diesel electric power stations.

Week	Class Day	Theory Topics.
	1st-	State advantages & Disadvantages of hydro electric power plant
7th June to	2nd	Classify & explain the general arrangement of hydroelectric Project
12th June	3rd	explain the operation at hydro-electric Project
	4th	— Sabarzi Amabasya —
	5th	Selection at Site of hydrel Power plant
	1st	List at hydro power Stations with their Capacities.
14th June to	2nd	— Raja Sankaranti —
19th June	3rd	Types of turbines & generation
	4th	Solved Problems
	5th	Selection of Site for gas turbine
	1st	Fuels for gas turbine
21st June to	2nd	Elements of simple gas turbine Power plant
26th June	3rd	Merits of gas turbine
	4th	Demerits of gas turbine
	5th	Application of gas turbine
	1st	Discussed short type question
28th June to	2nd	Discussed long type question
30th June	3rd	— Revision —

~~R. Datta~~

~~J. J. J.~~
05/04/2024