



TRADE MARK

LIONTM

Teacher's Lesson Note

2023-24

Power Station Engineering
Mechanical Engg & Mech Engg. II II
8th Sem

TEACHERS

LESSON NOTE

1	2	3	4	5	6	7	8
Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
23.02.24	1st PER	1st	Introduction to R.E.			Describe sources of energy.	
24.02.24		2nd				Concept of Central and Captive power station.	
25.02.24		3rd				Classify Power Plants.	
26.02.24		4th				Importance of electric power in day today life.	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	- Introduction to Power station Engineering. - Discuss of sources of energy.		<i>[Signature]</i>		
	- Overview of Central and captive power station.		<i>[Signature]</i>		
	Classification of power plants. → Conventional plant → Non conventional plant		<i>[Signature]</i>		
	Importance of Electricity.		<i>[Signature]</i>		

TECHNICALS

LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
08.02.24	2nd Week	4th				Overview of method of electrical power generation.	
12.02.24		2nd		Thermal power stations.		Layout of steam power stations.	
12.02.24		3rd				Steam power cycle, Carnot vapour power cycle.	
13.02.24		4th				P-V, T-S diagram and determine thermal efficiency.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headteacher	Remarks
9	10	11	12	13	14
	Methods of Electric power generation.		<i>[Signature]</i>		
	Study of steam power station with layout and different circuits.		<i>[Signature]</i>		
	Working of steam power cycle/Carnot vapour power cycle.		<i>[Signature]</i>		
	Study thermal efficiency and different efficiency with P-V, T-S diagram.		<i>[Signature]</i>		

TECHNICALS

LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
13.02.23	Grid Week	8 th				Explain Rankine Cycle with P-v, T-s & H-s Diagram.	
15.02.23		8 th				Determine Thermal Efficiency, work done, work ratio, and specific steam consumption.	
		8 th				Give simple problems.	
		8 th				List of Thermal Power Stations in the state with their capacities.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Working of Rankine cycle with P-v, T-s & H-s Diagram.		<i>[Signature]</i> 13/02/23		
	Discuss Thermal efficiency of Rankine cycle, work done, Ratio, and specific steam consumption.		<i>[Signature]</i> 15/02/23		

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Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks	
9	Boiler Accessories & operation & its pollution → Economiser → Electric static precipitator	10	11	12	13	14
	Operation and Working of Electric-static precipitator and Super heater		11	12	13	14
	Boiler Mounting and three used and Working. → Pressure gauge → Water level indicator → Steam stop valve → Safety valve → Feed check valve		11	12	13	14
	Draught System • Natural Draught - Induced Draught - forced Draught		11	12	13	14

TEACHERS

LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
27.02.24	5th Week	1st				Balance draft with their advantages & Disadvantages.	
27.02.24		2nd				Steam prime mover, Advantages & Disadvantages of Steam turbine.	
12.03.24		3rd				Elements of Steam turbine, governing of Steam turbine, Performance of Steam turbine.	
14.03.24		4th				Thermal efficiency stage efficiency and, Gross efficiency.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	Study of Balance Draft with their Advantages & Disadvantages		62/20/11/24		
10	Steam prime mover Advantages & Disadvantages		62/20/11/24		
11	Elements of Steam Turbine - Steam chest casing - Nozzle - Rotor - Governor		62/20/11/24		
12	Governing of Steam Turbine - Throttle Governing - By-Pass Governing - Nozzle Governing		62/20/11/24		

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
18.03.24	6th Week	1st			Steam Condenser	Function of Condenser, Classification of Condenser.	
18.03.24		2nd				Function of the Condenser Auxiliaries such as Hot Well, Condenser extraction pump.	
19.03.24		3rd				Air extraction pump and Circulating pump.	
21.03.24		4th				Function and types of cooling tower and Spray pond.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Function of Condenser, Classification of Condenser.		18.03.24		
	Function of Condenser - Hot well - extraction pump.		18.03.24		
	Air Extraction pump and Circulating pump.		19.03.24		
	Study of types of cooling tower and Spray pond.		21.03.24		

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LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
21.03.24	7th Week	7th				Selection of site for thermal power station.	
22.03.24		7th		Nuclear Power stations.		Classify nuclear fuel. (Fissile & Fertile material)	
22.03.24		7th				Fusion & Fission Reaction.	
01.04.24		7th				Working of Nuclear Power plant.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Site selection for thermal power plant.		<i>[Signature]</i> 22.03.24		
	Introducing to nuclear fuel. - Fissile - Fertile - Inferior.		<i>[Signature]</i> 22.03.24		
	Difference bet ⁿ Fusion Reaction and fission Reaction.		<i>[Signature]</i> 22.03.24		
	Working and construction of nuclear power plant.		<i>[Signature]</i> 22.03.24		

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Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
01.04.24	8th Week	8th	Sci			Working of Nuclear power plant with Block diagram.	
02.04.24		8th	Sci			Working of Nuclear Reactor.	
03.04.24		8th	Sci			Construction of Nuclear Reactor.	
04.04.24		8th	Sci			Compare the nuclear and thermal plants.	

LESSON NOTE

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Working of nuclear power plant with Block Diagram.		12.10.20		
	Working of Nuclear Reactor.		12.10.20		
	Construction and components of Nuclear Reactor.		12.10.20		
	Comparison between Nuclear and thermal plants.		12.10.20		

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
09.09.24	9th Week	9th	Sci			Disposal of Nuclear Waste.	
09.09.24		9th	Sci			Selection of site for nuclear power stations.	
09.09.24		9th	Sci			List of Nuclear power stations.	
09.09.24		9th	Sci			Advantages of Diesel Electric Power Stations.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Discussion about Nuclear waste Disposal.		Revised		
	Site Selection of Nuclear power station.		Revised		
	List of Nuclear power stations with their Capacities.		Revised		
	Study of Diesel Electric power stations		Revised		

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LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
07.04.24	10th Week	12	Eng			Disadvantages of Electric power stations.	
12.04.24		Eng			Different system of Diesel electric power station.	Fuel storage & fuel supply system, Fuel injection system, Air supply system.	
12.04.24		Eng				Exhaust system, Cooling system, Lubrication system, Starting system.	
		Eng				Governing system.	

Explanatory Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Disadvantages of Diesel Electric power stations.	Components and working features. - Fuel storage - Fuel injection system - Air supply system.	Handwritten signature 12.04.24		
	- Exhaust system - cooling system - lubrication system - starting system.		Handwritten signature 12.04.24		
	Governing system of Diesel Electric		Handwritten signature		

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
	11th Week	8th				Selection of site for diesel electric power stations.	
		8th				Performance of diesel electric power station.	
		8th				Thermal efficiency of diesel electric power station.	
		8th				- Revision -	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Site Selection for Diesel Electric Power Stations.		Signature		
	Revision - class -		Signature		
	Thermal Efficiency of Diesel electric Power Station.		Signature		
	- Class-Test -		Signature		

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LESSON NOTE

Sl. No.	Period	Class	Subject	Topic / Concept	Sub-Topic / Sub-Concept	Learning Activities to be taken up	TLM to be used
1	12th Week	12th	Physics	Hydroelectric Power		Class Test -	
2						Advantages and Disadvantages of hydroelectric power plant.	
3						Classify the general arrangement of storage type hydroelectric project & its operation.	
4						Selection of site of hydro power plant.	

Sl. No.	Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
5		Introduction to Hydro Electric Power station.				
6		Advantages and Disadvantages of hydroelectric power plant.				
7		Classification of general arrangement of storage type hydro electric project and working				
8		Site Selection of hydro power station.				

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Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
	1st Week	1st				List of hydropower station with their capacities.	
		2nd				Number of units in the state of hydropower stations.	
		3rd				Types of Turbine.	
		4th				Generation of used of Turbines.	

LESSON NOTE

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	List of hydropower station with their capacities.		Signature		
	Number of units in the state of hydropower stations.		Signature		
	Types of Turbine.		Signature		
	Generation used and working of Turbine.		Signature		

1	2	3	4	5	6	7	8
Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	Time to be used
	14th Week	7 th	Maths			Simple problems	
		7 th	Maths			- Revision -	
		7 th	Maths			- Class test -	
		7 th	Maths			Selection of site for gas turbine stations.	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcomes	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Simple Numerical Problems -		Teacher		
	- Revision - class -		Teacher		
	- Class Test -		Teacher		
	Site selection for Gas Turbine power stations.		Teacher		

TEACHER

LESSON NOTE

Date	Period	Class	Subject	Topic	Sub-Topic	Learning Activities to be taken up	Time to be used
	1504	12				Fuels for gas turbines.	
						Elements of simple gas turbine power plants.	
						Merits, demerits and application of gas turbine power plants.	

Exercises Questions	Expected learning outcomes	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14