

LESSON PLAN FOR ACADEMIC SESSION: 2023-24(Summer-24)

Discipline: Electrical Engineering		Semester : 4th	Name of the Teaching Faculty : DHANANJAYA MAHAKUR
Subject : GENERATION TRANSMISSION & DISTRIBUTION	No. of days / week class allotted		Semester From : 16.01.24 to 23.04.2024 Nos. of Weeks per semester : 15
Week	Class Day	Chapter	Theory Topics
1 ST	1 st	Chapter-1 GENERATION OF ELECTRICITY	1.1 Elementary idea on generation of electricity from Thermal power Station.
	2 nd		Continue.....
	3 rd		1.1 Elementary idea on generation of electricity from Hydel power Station
	4 th		Continue.....
2 ND	1 st		1.1 Elementary idea on generation of electricity from Nuclear power Station
	2 nd		1.2 Introduction to Solar Power Plant (Photovoltaic cells).
	3 rd		1.3 Layout diagram of generating stations.
	4 th		2.1 Layout of transmission and distribution scheme.
3 RD	1 st	Chapter-2 TRANSMISSION OF ELECTRIC POWER	2.2 Voltage Regulation & efficiency of transmission.
	2 nd		2.3 State and explain Kelvin's law for economical size of conductor
	3 rd		Continue.....
	4 th		2.4 Corona and corona loss on transmission lines.
4 TH	1 st	Chapter-3 OVER HEAD LINES	3.1 Types of supports, size and spacing of conductor.
	2 nd		3.2 Types of conductor materials.
	3 rd		3.3 State types of insulator and cross arms.
	4 th		3.4 Sag in overhead line with support at same level
5 TH	1 st		3.4 Sag in overhead line with support at different level.
	2 nd		3.5 Simple problem on sag.
	3 rd		Continue.....
	4 th		Continue.....
6 TH	1 st	Chapter-4 PERFORMANCE OF SHORT & MEDIUM LINES	4.1. Calculation of regulation and efficiency for short Transmission Line.
	2 nd		Continue.....
	3 rd		Continue.....
	4 th		Continue.....
7 TH	1 st		4.1. Calculation of regulation and efficiency for Medium Transmission Line.
	2 nd		Continue.....
	3 rd		Continue.....
		Chapter-5 EHV	5.1 EHV AC transmission. 5.1.1. Reasons for adoption of EHV AC transmission

	4 th	TRANSMISSION	5.1.2. Problems involved in EHV transmission.
8 TH	1 st		Continue.....
	2 nd		Continue.....
	3 rd		Continue.....
	4 th		5.2 HV DC transmission
9 TH	1 st	Chapter-6 DISTRIBUTION SYSTEMS	5.2..1. Advantages and Limitations of HVDC transmission system
	2 nd		6.1 Introduction to Distribution System. 6.2 Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)
	3 rd		6.3 DC distributions. 6.3.1 Distributor fed at one End.
	4 th		6.3 DC distributions. 6.3.2 Distributor fed at both the ends.
10 TH	1 st		6.3 DC distributions. 6.3.3 Ring distributors.
	2 nd		6.4 AC distribution system. 6.4.1. Method of solving AC distribution problem
	3 rd		Continue.....
	4 th		6.4.2. Three phase four wire star connected system arrangement
11 TH	1 st	Chapter-7 UNDERGROUND CABLES	7.1 Cable insulation and classification of cables.
	2 nd		7.2 Types of L. T. & H.T. cables with constructional features
	3 rd		Continue.....
	4 th		7.3 Methods of cable lying
12 th	1 st		7.4 Localization of cable faults: Murray loop test for short circuit fault / Earth fault.
	2 nd		7.4 Localization of cable faults: Varley loop test for short circuit fault / Earth fault.
	3 rd	Chapter-8 ECONOMIC ASPECTS	8.1 Causes of low power factor and methods of improvement of power factor in power system
	4 th		Continue.....
13 th	1 st		Continue.....
	2 nd		8.2 Factors affecting the economics of generation: (Define and explain) 8.2.1 Load curves. 8.2.2 Demand factor. 8.2.3 Maximum demand.
	3 rd		8.2.4 Load factor. 8.2.5 Diversity factor. 8.2.6 Plant capacity factor.
	4 th		8.3 Peak load and Base load on power station.
14 th	1 st	Chapter-9 TYPES OF TARIFF	9.1. Desirable characteristic of a tariff.
	2 nd		9.2. Explain flat rate, block rate, two part and maximum demand tariff.
	3 rd		9.2 Simple problem on tariff.

	4 th	Chapter-10 . SUBSTATION	10.1 Layout of LT substation.
15 th	1 st		10.1 Layout of HT substation..
	2 nd		10.1 Layout of EHT substation.
	3 rd		10.2 Earthing of Substation, transmission and distribution lines.
	4 th		Continue.....

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14.01.24

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