

DISCIPLINE	SEMESTER	NAME OF THE TEACHING FACULTY	
ELECTRICAL	4TH	SRI SUSHANTA KUMAR MALIK, SR. LECTURER	
SUBJECT: GTD		NO. OF DAYS PER WEEK CLASS ALLOTTED : 04	SEMESTER FROM 04/02/2025 TO 17/05/2025
		NO. OF WEEKS : 15 NOS.	
WEEKS	CLASS DAYS	THEORY TOPICS	
1ST	1ST	Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station.	
	2ND	Elementary idea on generation of electricity from Hydel Power station	
	3RD	Elementary idea on generation of electricity from Nuclear Power station	
	4TH	Introduction to Solar Power Plant (Photovoltaic cells)	
2ND	1ST	Layout diagram of generating stations.	
	2ND	Layout of transmission and distribution scheme	
	3RD	Voltage Regulation & efficiency of transmission.	
	4TH	State and explain Kelvin's law for economical size of conductor.	
3RD	1ST	Corona and corona loss on transmission lines.	
	2ND	Types of supports, size and spacing of conductor.	
	3RD	Types of conductor materials	
	4TH	State types of insulator and cross arms.	
4TH	1ST	Sag in overhead line with support at same level and different level.	
	2ND	Sag in overhead line with support at same level and different level (approximate formula effect of wind, ice and temperature on sag)	
	3RD	Simple problem on sag.	
	4TH	Different Types of Transmission line and calculation of Regulation and Transmission Efficiency.	
5TH	1ST	Derivation of Short Transmission line with numerical	
	2ND	Different Types of Medium Transmission line	
	3RD	Derivation of End condenser medium Transmission line with numerical	
	4TH	Derivation of T Type Medium Transmission line with numerical	
6TH	1ST	Derivation of PI TYPE Medium Transmission line with numerical	
	2ND	Introduction to EHV AC transmission.	
	3RD	Reasons for adoption of EHV AC transmission	
	4TH	Problems involved in EHV transmission.	
7TH	1ST	Introduction to HV DC transmission	
	2ND	Advantages and Limitations of HVDC transmission system	
	3RD	Introduction to Distribution System and Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)	
	4TH	Introduction to DC distributions and its type	
8TH	1ST	Distributor fed at one End with problem	
	2ND	Distributor fed at both the ends with problem	
	3RD	Ring distributors with problem	
	4TH	Introduction to AC distribution system.	
9TH	1ST	Method of solving AC distribution problem	
	2ND	Three phase four wire star connected system arrangement.	
	3RD	Cable insulation and classification of cables.	
	4TH	Types of L. T. & H.T. cables with constructional features	
10TH	1ST	Methods of cable laying.	
	2ND	Localization of cable faults: Murray loop test for short circuit fault /Earth fault.	
	3RD	Localization of cable faults: Varley loop test for short circuit fault /Earth fault	
	4TH	Causes of low power factor and methods of improvement of power factor in power system	
	1ST	Factors affecting the economics of generation: (Define and explain) 1. Load curves 2. Demand factor.	



11TH	2ND	3.Maximum demand. 4.Load factor.
	3RD	5.Diversity factor. 6. Plant capacity factor
	4TH	Peak load and Base load on power station
12TH	1ST	Desirable characteristic of a tariff
	2ND	Explain flat rate tariff. (SolveProblems)
	3RD	Explain block rate tariff. (SolveProblems)
	4TH	Explain two part. tariff. (SolveProblems)
13TH	1ST	Explainmaximum demand tariff. (SolveProblems)
	2ND	Introduction to substation
	3RD	Layout of LT substation
	4TH	Layout of HT substation
14TH	1ST	Layout of EHT substation
	2ND	Earthing of Substation
	3RD	Earthing of Transmission Line
	4TH	Earthing of Distribution Line
15TH	1ST	Revision of Chapter 1 and 2
	2ND	Revision of Chapter 3 and 4
	3RD	Revision of Chapter 5 and 6
	4TH	Revision of Chapter 7 and 8

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 04/02/2025  
 HOD (ELECTRICAL)  
 GOVT. POLY.  
 GAJAPATI