

ELECTRICAL ENGINEERING DEPARTMENT

SUBJECT-GENERATION TRANSMISSION & DISTRIBUTION

SEMESTER-4TH -SUMMER 2024

NAME OF THE TEACHING FACULTY- PRITISH KUMAR MOHANTY

DATE-16.01.2024 TO 26.04.2024

WEEK No	NO OF PERIODS AVAILABLE	CHAPTER	TOPIC NAME	PERIODS ASSIGNED per topic
1	4	GENERATION OF ELECTRICITY	1.1 Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station	1
			1.2 Introduction to Solar Power Plant (Photovoltaic cells).	1
			1.3 Layout diagram of generating stations.	1
			cont..	1
2	3	TRANSMISSION OF ELECTRIC POWER	2.1 Layout of transmission and distribution scheme	1
			2.2 Voltage Regulation & efficiency of transmission	1
			2.3 State and explain Kelvin's law for economical size of conductor	1
3	4	OVER HEAD LINES	2.4 Corona and corona loss on transmission lines	1
			3.1 Types of supports, size and spacing of conductor	1
			3.2 Types of conductor materials	1
			3.3 State types of insulator and cross arms	1
4	4	OVER HEAD LINES	3.4 Sag in overhead line with support at same level and different level	1
			cont..	1
			3.5 Simple problem on sag.	1
			cont..	1
5	4	PERFORMANCE OF SHORT & MEDIUM LINES	4.1.1 Calculation of regulation and efficiency for short transmission line	1
			continue problem	1
			4.1.2 Calculation of regulation and efficiency for medium transmission line	1
			continue problem...	1
6	4	EHV TRANSMISSION	continue problem...	1
			5.1 EHV AC transmission.	1
			5.1.1. Reasons for adoption of EHV AC transmission.	1
7	4	DISTRIBUTION SYSTEMS	5.1.2. Problems involved in EHV transmission	1
			HV DC transmission 5.2.1. Advantages and Limitations of HVDC transmission system.	1
			6.1 Introduction to Distribution System.	1
			6.2 Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)	1
8	4	DISTRIBUTION SYSTEMS	cont...	1
			6.3 DC distributions 6.3.1 Distributor fed at one End.	1
			6.3.2 Distributor fed at both the ends.	1
			6.3.3 Ring distributors	1
9	3	DISTRIBUTION SYSTEMS	Solve Numerical	1
			6.4 AC distribution system	1
			6.4.1 Method of solving AC distribution problem	1
			Solve Numerical	1

10	4	UNDERGROUND CABLES	6.4.2 Three phase four wire star connected system arrangement (Solve Numerical)	1
			7.1 Cable insulation and classification of cables	1
			7.2 Types of L. T. & H.T. cables with constructional features	1
			7.3 Methods of cable lying	1
11	4	ECONOMIC ASPECTS	7.4 Localization of cable faults: Murray and Varley loop test for short circuit fault / Earth fault.	1
			8.1 Causes of low power factor and methods of improvement of power factor in power system	1
			8.2 Factors affecting the economics of generation: (Define and explain)	1
			8.2.1 Load curves.8 .2.2 Demand factor.	1
12	4	TYPES OF TARIFF	8.2.3 Maximum demand 8.2.4. Load factor. 8.2.5 Diversity factor.	1
			8.2.6 Plant capacity factor.8.3 Peak load and Base load on power station	1
			9.1 Desirable characteristic of a tariff.	1
			9.2 Explain flat rate, block rate, two part	1
13	4	SUBSTATION	9.2 maximum demand tariff. (Solve Problems)	1
			10.1 Layout of LT, HT and EHT substation	1
			cont....	1
			10.2 Earthing of Substation, transmission and distribution lines	1

Pratish Kumar Mahapatra
SIGN OF FACULTY

[Signature]
16/01/21
SIGN OF ACADEMIC COORDINATOR