Lesson Plan

	Discipline:Electrical Engineering	Semester-4th SUMMER 2023.SEC-B	Name of the Teachng Faculty: Sri NIGAM PRASAD MOHAPATRA
Sl. No.	Subject-Generation, Transmission and Distribution	No. Of Days/Week class alloted:04	Semester From date: 14.02.2023 to date: 23.05.2023. No of weeks: 15
	Weeks/Months	Class Day	Topic
1	1st Week	1st(14/2/23)	Elementary idea on generation of electricity from Thermal power plant.
		2nd(16/2/23)	Elementary idea on generation of electricity from HydroPower station.
		3rd(17/2/23)	Elementary idea on generation of electricity from Nuclear Power station.
2	2nd Week	1st(20/2/23)	Introduction to Solar Power Plant (Photovoltaic cells).
		2nd(21/2/23)	Layout diagram of generating stations Thermal.
		3rd(23/2/23)	Layout diagram of generating stations Hydro.
		4th(24/2/23)	Layout diagram of generating stations Nuclear.
3	3rd Week	1st(27/2/23)	Layout of transmission and distribution scheme.
		2nd(28/2/23)	Voltage Regulation & efficiency of transmission.
		3rd(2/3/23)	State and explain Kelvin's law for economical size of conductor.
		4th(3/3/23)	Corona and corona loss on transmission lines.
4	4th Week	1st(6/3/23)	Corona and corona loss on transmission lines.
		2nd(9/3/23)	Types of supports, size and spacing of conductor.
		3rd(10/3/23)	Types of conductor materials.
5	5th Week	1st(13/3/23)	State types of insulator and cross arms.
		2nd(14/3/23)	Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)
		3rd(16/3/23)	Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)
		4th(17/3/23)	Simple problem on sag.
6	6th Week	1st(20/3/23)	Calculation of regulation and efficiency.
		2nd(21/3/23)	Calculation of regulation and efficiency.
		3rd(23/3/23)	Calculation of regulation and efficiency.
		4th(24/3/23)	Calculation of regulation and efficiency.
7	7th Week	1st(27/3/23)	Calculation of regulation and efficiency.
		2nd(28/3/23)	Calculation of regulation and efficiency.
		3rd(31/3/23)	EHV AC transmission
8	8th Week	1st(3/4/23)	Reasons for adoption of EHV AC transmission.
		2nd(4/4/23)	Problems involved in EHV transmission.
		3rd(6/4/23)	HV DC transmission
9	9th Week	1st(10/4/23)	Advantages and Limitations of HVDC transmission system.
		2nd(11/4/23)	Introduction to Distribution System.
		3rd(13/4/23)	Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)
10	10th Week	1st(17/4/23)	DC distributions. Distributor fed at one End.
		2nd(18/4/23)	Distributor fed at both the ends.
		3rd(20/4/23)	Ring distributors
		4th(21/4/23)	AC distribution system. Method of solving AC distribution problem.

11	11th Week	1st(24/4/23)	Three phase four wire star connected system arrangement
		2nd(25/4/23)	Cable insulation and classification of cables.
		3rd(27/4/23)	Types of L. T. & H.T. cables with constructional features.
		4th(28/4/23)	Methods of cable lying.
12	12th Week	1st(1/5/23)	Localization of cable faults: Murray and Varley loop test for short circuit fault / Earth fault.
		2nd(2/5/23)	Causes of low power factor and methods of improvement of power factor in power system.
		3rd(4/5/23)	Causes of low power factor and methods of improvement of power factor in power system.
13	13th Week	1st(8/5/23)	Factors affecting the economics of generation: (Define and explain)
		2nd(9/5/23)	Load curves. Demand factor.Maximum demand. Load factor.Diversity factor.
		3rd(11/5/23)	Plant capacity factor.Peak load and Base load on power station
		4th(12/5/23)	Desirable characteristic of a tariff
14	14th Week	1st(15/5/23)	Explain flat rate, block rate, two part and maximum demand tariff.
		2nd(16/5/23)	Explain flat rate, block rate, two part and maximum demand tariff.
		3rd(18/5/23)	Layout of LT, HT and EHT substation
15	15th Week	1st(22/5/23)	Earthing of Substation.
		2nd(23/5/23)	Earthing of transmission and distribution lines.