

## Lesson Plan of Generation Transmission & Distribution

No. of week	No. of class	Topic to be taught
		NAME OF TEACHING FACULTY- PRADEEP KUMAR MOHANTY DATE- 04/02/2025 to 17/05/2025
1 <sup>st</sup>	1	Elementary idea on generation of electricity from Thermal, Hydro, Nuclear, Power station.
	2	Continue
	3	Introduction to Solar Power Plant (Photovoltaic cells).
	4	Continue
	5	Layout diagram of generating stations.
2 <sup>nd</sup>	6	Continue
	7	Continue
	8	Layout of transmission and distribution scheme.
	9	Voltage Regulation & efficiency of transmission.
3 <sup>rd</sup>	10	Continue
	11	State and explain Kelvin's law for economical size of conductor.
	12	Corona and corona loss on transmission lines.
	13	Types of supports, size and spacing of conductor.
	14	Continue
4 <sup>th</sup>	15	State types of insulator and cross arms.
	16	Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)
	17	Continue
	18	Simple problem on sag.
	19	Continue
5 <sup>th</sup>	20	Calculation of regulation and efficiency.
	21	Continue
	22	Continue
	23	Calculation of regulation and efficiency.
	24	Continue
6 <sup>th</sup>	25	Continue
	26	Continue
	27	EHV AC transmission.
	28	Continue
	29	Reasons for adoption of EHV AC transmission.
7 <sup>th</sup>	30	Continue
	31	Problems involved in EHV transmission.
	32	HV DC transmission.
	33	Advantages and Limitations of HVDC transmission system.
	34	Introduction to Distribution System.
	35	Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)

# Lesson Plan of Generation Transmission & Distribution

8 <sup>th</sup>	36	Distributor fed at one End.
	37	Distributor fed at both the ends.
	38	Ring distributors.
	39	Method of solving AC distribution problem.
	40	Three phase four wire star connected system arrangement.
9 <sup>th</sup>	41	Cable insulation and classification of cables.
	42	Types of L. T. & H.T. cables with constructional features.
	43	Methods of cable lying.
	44	Continue
	45	Localization of cable faults: Murray and Valley loop test for short circuit fault / Earth fault.
10 <sup>th</sup>	46	Continue
	47	Causes of low power factor and methods of improvement of power factor in power system
	48	Factors affecting the economics of generation:
	49	Load curves.
	50	Demand factor, Maximum demand
11 <sup>th</sup>	51	Load factor. Diversity factor.
	52	Plant capacity factor. Peak load and Base load on power station.
	53	Desirable characteristic of a tariff.
	54	Explain flat rate, block rate, two part and maximum demand tariff. (Solve Problems)
	55	Continue
	56	Layout of LT, HT and EHT substation.
	57	Continue
	58	Earthing of Substation, transmission and distribution lines.
	59	Continue
	60	Continue

P. Mohanty  
4/2/25

Teacher's signature

R.K.  
HOD,EE 4/2/2025