

# LESSON PLAN

<b>Name of the Institute:</b>		C. V. RAMAN POLYTECHNIC
<b>Department:</b>		ELECTRICAL ENGINEERING
<b>Semester/Division/Branch:</b>		4 <sup>th</sup> SEM/EE
<b>Subject Name with code:</b>		GENERATION, TRANSMISSION & DISTRIBUTION (TH-4)
<b>Total No. of Class (Required):</b>		60
<b>Faculty Name:</b>		Mrs. PALLAVI MISHRA
Class No.	<i>Brief description of the Topic/Chapter to be taught</i>	Remarks
1	Unit 1: GENERATION OF ELECTRICITY	
2	Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station.	
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5	Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station.	
6	Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station.	
7	Introduction to Solar Power Plant (Photovoltaic cells)	
8	Unit 2: TRANSMISSION OF ELECTRIC POWER	
9	Layout of transmission and distribution scheme.	
10	Voltage Regulation & efficiency of transmission.	
11	State and explain Kelvin's law for economical size of conductor.	
12	Corona and corona loss on transmission lines.	
13	Unit 3: OVER HEAD LINES	
14	Types of supports, size and spacing of conductor.	

15	Types of conductor materials	
16	Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)	
17	Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)	
18	Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)	
19	Simple problem on sag.	
20	Calculation of regulation and efficiency.	
21	Calculation of regulation and efficiency.	
22	Calculation of regulation and efficiency.	
23	Calculation of regulation and efficiency.	
24	Calculation of regulation and efficiency.	
25	Calculation of regulation and efficiency.	
26	Calculation of regulation and efficiency.	
27	EHV AC transmission.	
28	Reasons for adoption of EHV AC transmission	
29	Problems involved in EHV transmission.	
30	Problems involved in EHV transmission.	
31	HV DC 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)	
36	Distributor fed at one End.	
37	Distributor fed at both the ends & Ring distributors.	
38	AC distribution system	
39	Method of solving AC distribution problem.	

40	Three phase four wire star connected system arrangement.	
41	Cable insulation and classification of cables.	
42	Types of L. T. & H.T. cables with constructional features.	
43	Types of L. T. & H.T. cables with constructional features.	
44	Methods of cable lying.	
45	Methods of cable lying.	
46	Localization of cable faults: Murray and Varley loop test for short circuit fault / Earth fault.	
47	Causes of low power factor and methods of improvement of power factor in power system	
48	Load curves.	
49	Demand factor, Maximum demand.	
50	Load factor, Diversity factor.	
51	Plant capacity factor.	
52	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	Explain flat rate, block rate, two part and maximum demand tariff. (Solve Problems)	
56	Layout of LT, HT and EHT substation.	
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58	Layout of LT, HT and EHT substation.	
59	Earthing of Substation, transmission and distribution lines.	
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Signature of the Faculty



Signature of the H.O.D