



SUDDHANANDA RESIDENTIAL POLYTECHNIC

(A UNIT OF SAMVIT SAGAR TRUST)

(Approved by AICTE, New Delhi & Affiliated to SCTE & VT, Odisha)

LESSON PLAN

Name of Faculty : Er. Jeten Ku. Mishra Subject Name : Generation Transmission & Distribution
Semester/Branch : 4th Sem/Electrical Total Periods : 60
Commencement of class : Closing of class :

Week No.	Class No.	Article/Module No.	Subject to be taught
1	1	1.1	Elementary idea on generation of electricity from Thermal power station with layout diagram.
	2	1.1	Thermal power station
	3	1.1	Hydro power plant with layout diagram
	4	1.1	Hydro power plant
2	5	1.1	Nuclear power station with layout diagram
	6	1.1	Nuclear power station
	7	1.2	Introduction to Solar Power Plant (Photovoltaic cells).
	8	2.1	Layout of transmission and distribution scheme
3	9	2.2	Voltage Regulation & efficiency of transmission
	10	2.3	State and explain Kelvin's law for economical size of conductor.
	11	2.4	Corona and corona loss on transmission lines.
	12	2.4	Solve the problem
4	13	3.1	Types of supports, size and spacing of conductor.
	14	3.2	Types of conductor materials.
	15	3.3	State types of insulator and cross arms.
	16	3.4	Sag in overhead line with support at same level and different level.
5	17	3.4	Sag in overhead line with support at same level and different level.
	18	3.5	Numerical problem on sag
	19	3.5	Numerical problem on sag
	20	4.1	Calculation of regulation and efficiency
6	21	4.1	Numerical problem continued
	22	4.1	Numerical problem continued
	23	4.1	Numerical problem continued
	24	4.1	Numerical problem continued

Week No.	Class No.	Article/ Module No.	Subject to be taught
7	25	4.1	Numerical problem continued
	26	4.1	Numerical problem.
	27	5.1	EHV AC transmission.
	28	5.1	EHV AC transmission with problem
8	29	5.1	EHV AC transmission with problem
	30	5.2	HV DC transmission.
	31	5.2	HV DC transmission.
	32	5.2	Advantages and Limitations of HVDC transmission system.
9	33	5.2	Advantages and Limitations of HVDC transmission system.
	34	6.1	Introduction to Distribution System.
	35	6.2	Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)
	36	6.3	DC distributions, fed at one End
10	37	6.3	Distributor fed at both the ends
	38	6.3	Ring distributors.
	39	6.4	AC distribution system with problem
	40	6.4	Three phase four wire star connected system arrangement
11	41	7.1	Cable insulation and classification of cables.
	42	7.2	Types of L. T. & H.T. cables with constructional features.
	43	7.2	Types of L. T. & H.T. cables with constructional features.
	44	7.3	Methods of cable lying.
12	45	7.4	Localization of cable faults: Murray and Varley loop test for short circuit fault
	46	7.4	Localization of cable faults: Murray and Varley loop test for short Earth fault
	47	8.1	Causes of low power factor and methods of improvement of power factor in power system.
	48	8.2	Define and explain of Load curves & Demand factor
13	49	8.2	Define and explain of Maximum demand & Load factor
	50	8.2	Define and explain of Diversity factor & Plant capacity factor
	51	8.2	Define and explain of Plant capacity factor
	52	8.3	Peak load and Base load on power station
14	53	9.1	Desirable characteristic of a tariff
	54	9.2	Explain flat rate, block rate with problem solving
	55	9.3	Explain two part and maximum demand tariff with problem solving
	56	10.1	Layout of LT substation
15	57	10.2	Layout of HT substation
	58	10.3	Layout of EHT substation
	59	10.4	Earthing of substation
	60	10.5	Earthing of transmission and distribution lines

