



GOVERNMENT POLYTECHNIC ,NAYAGARH

DEPARTMENT OF ELECTRICAL ENGINEERING

Semester: 4TH DIPLOMA

AY-2022-23

Subject: Generation Transmission and Distribution

No Of Period :60 (4p/week)

Branch: Electrical Engineering

Name of Faculty: Satyabrata Sahoo

Week	Period	Topics to be covered
3 rd Week of February	1	Elementary idea on generation of electricity from Thermal
	2	Elementary idea on generation of electricity from Hydel
	3	Elementary idea on generation of electricity from Nuclear
	4	Elementary idea on generation of electricity from Power station
4 th Week February	5	Introduction to Solar Power Plant
	6	-do-
	7	Layout diagram of generating stations
	8	Layout of transmission and distribution scheme.
1 st Week of March	9	Voltage Regulation & efficiency of transmission
	10	State and explain Kelvin's law for economical size of conductor
	11	Corona and corona loss on transmission lines
	12	-do-
2 nd Week of March	13	Types of supports, size and spacing of conductor.
	14	Types of conductor materials
	15	State types of insulator and cross arms
	16	Sag in overhead line with support at same level and different level
3 rd Week of March	17	-do-
	18	Simple problem on sag
	19	-do-
	20	Calculation of regulation and efficiency
4 th Week of March	21	-do-
	22	Numerical
	23	Numerical
	24	Numerical
5 th Week of March	25	Numerical
	26	Numerical

	27	EHV AC transmission.
	28	Reasons for adoption of EHV AC transmission
1 st Week of April	39	Problems involved in EHV transmission
	30	-do-
	31	HV DC transmission
	32	-do-
2 nd Week of April	33	Advantages and Limitations of HVDC transmission system.
	34	Introduction to Distribution System, Connection Schemes of Distribution System
	35	Distributor fed at one End
	36	Distributor fed at both the ends
3 rd Week of April	37	Numerical
	38	Ring distributors
	39	Method of solving AC distribution problem.
	40	Cable insulation and classification of cables
4 th Week of April	41	Types of L. T. & H.T. cables with constructional features..
	42	-do-
	43	Methods of cable lying.
	44	Localization of cable faults: Murray and Varley loop test for short circuit fault / Earth fault.
1 st Week May	45	-do-
	46	Causes of low power factor and methods of improvement of power factor in power system
	47	Factors affecting the economics of generation Load curves, Demand factor
	48	Maximum demand, Load factor
2 nd Week May	49	Diversity factor, Plant capacity factor.
	50	Numerical
	51	Numerical
	52	Peak load and Base load on power station
3 rd Week May	53	Desirable characteristic of a tariff
	54	Explain flat rate, block rate
	55	Explain two part and maximum demand tariff
	56	Layout of LT substation,
4 th Week	57	Layout of HT substation
	58	Layout of EHT substation
	59	Earthing of Substation
	60	transmission and distribution lines

Satyabrata Sahoo

Signature of Faculty

Signature of HOD