

LESSON PLAN

DEPARTMENT OF ELECTRICAL ENGINEERING, ITT, CHOUDWAR

SUBJECT: GTD

Periods: 4 per week

SEMESTER: 4th

NAME OF FACULTY: SATYAJIT PANI

No. of weeks: 15

Week	Period	Theory / Practical Topics
1st	1 st	GENERATION OF ELECTRICITY-Elementary idea on generation of electricity from Thermal power station.
	2 nd	Elementary idea on generation of electricity from Hydel, Power station.
	3 rd	Elementary idea on generation of electricity from Nuclear, Power station.
	4 th	Introduction to Solar Power Plant (Photovoltaic cells)
2 nd	1 st	Layout diagram of generating stations
	2 nd	TRANSMISSION OF ELECTRIC POWER-Layout of transmission and distribution scheme.
	3 rd	Voltage Regulation & efficiency of transmission. State and explain Kelvin's law for economical size of conductor.
	4 th	Corona and corona loss on transmission lines.
3 rd	1 st	Problems on corona loss.
	2 nd	OVER HEAD LINES-Types of supports, size and spacing of conductor , Types of conductor materials.
	3 rd	State types of insulator and cross arms.
	4 th	Sag in overhead line with support at same level and different level.
4 th	1 st	Approximate formula effect of wind, ice and temperature on sag
	2 nd	Problem on sag with support at same level.
	3 rd	Problem on sag with support at different level.
	4 th	PERFORMANCE OF SHORT & MEDIUM LINES-Calculation of regulation and efficiency of short transmission line.
5 th	1 st	Calculation of regulation and efficiency of medium transmission line.
	2 nd	EHV TRANSMISSION- EHV AC transmission
	3 rd	Reasons for adoption of EHV AC transmission.
	4 th	Problems involved in EHV transmission.
6 th	1 st	HV DC transmission.
	2 nd	Different DC Links.
	3 rd	Advantages and Limitations of HVDC transmission system.
	4 th	DISTRIBUTION SYSTEMS- Introduction to Distribution System.
7 th	1 st	Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)
	2 nd	DC distributions- Distributor fed at one End.(Concentrated loading & Uniform loading)
	3 rd	Problems on DC Distributor fed at one end.(Concentrated loading)
	4 th	Problems on DC Distributor fed at one end.(Uniform loading)
8 th	1 st	DC Distributor fed at both the ends
	2 nd	Problems on DC Distributor fed at both the ends. (Concentrated loading)
	3 rd	Problems on DC Distributor fed at both the ends. (Uniform loading)
	4 th	DC Ring distributors & Problems on ring distributor.
9 th	1 st	AC DISTRIBUTION SYSTEM- Method of solving AC distribution problem

	2 nd	Problems on AC Distributor.(p.f refers to far end).
	3 rd	Problems on AC Distributor.(p.f refers to respective load point).
	4 th	Types of L. T. & H.T. cables with constructional features
10 th	1 st	Methods of cable lying.
	2 nd	Localization of cable faults: Murray loop test for short circuit fault / Earth fault.
	3 rd	Localization of cable faults: Varley loop test for short circuit fault / Earth fault.
	4 th	Problems on Murray loop test& Varley loop test
11 th	1 st	ECONOMIC ASPECTS- Causes of low power factor and methods of improvement of power factor in Power system.
	2 nd	Factors affecting the economics of generation- Load curves, Demand factor
	3 rd	Maximum demand, Load factor
	4 th	Diversity factor.
12 th	1 st	Plant capacity factor
	2 nd	Peak load and Base load on power station.
	3 rd	TYPES OF TARIFF- Desirable characteristic of a tariff.
	4 th	Explain flat rate, block rate.
13 th	1 st	Problem on flat rate & block rate tariff.
	2 nd	Two part and maximum demand tariff.
	3 rd	Problem on Two part and maximum demand tariff.
	4 th	SUBSTATION- Layout of LT
14 th	1 st	Layout of HT
	2 nd	Layout of EHT
	3 rd	Earthing of Substation
	4 th	Earthing of transmission and distribution lines.
15 th	1 st	Previous year Question discussion. & Doubt Clearing Class
	2 nd	Previous year Question discussion. & Doubt Clearing Class
	3 rd	Previous year Question discussion. & Doubt Clearing Class
	4 th	Previous year Question discussion. & Doubt Clearing Class

Teaching Faculty