

LESSON PLAN

Discipline: Elect. Engg.	Semester: Fourth(4 th)	Name of the Faculty: Er B K Swain
Subject: Generation Transmission & Distribution	No. of days per Week class allotted: Six (6)	Semester from Date: 14.02.23 to Date: 23.05.23 No. of Weeks: 15
WEEK	CLASS DAY	THEORY TOPICS
1 st	1 st	<u>CHAPTER NO- 1 (GENERATION OF ELECTRICITY):</u> Introduction,
	2 nd	Elementary idea on generation of electricity from Thermal power plant
	3 rd	Continue
	4 th	Hydroelectric power station
	5 th	Continue....
	6 th	Nuclear power station
2 nd	1 st	Continue...
	2 nd	Introduction to solar power plant. (Photo voltaic cell).
	3 rd	Draw Layout diagram of generating stations.
	4 th	Possible question answer discussion
	5 th	<u>CHAPTER NO-03 (OVER HEAD LINES)</u> State types of supports, size and spacing of conductor.
	6 th	Types of conductor materials.
3 rd	1 st	State types of insulator and cross arms.
	2 nd	Derive for sag in overhead line with support at same level
	3 rd	Derive for sag in overhead line with support at different level
	4 th	Simple problem on sag
	5 th	Possible question answer discussion

	6 th	<u>CHAPTER NO -02TRANSMISSION OF ELECTRIC POWER)</u> Draw layout of transmission and distribution scheme
4 th	1 st	Explain voltage Regulation & efficiency of transmission.
	2 nd	Kelvin's law for economical size of the conductor
	3 rd	Corona and corona loss on transmission lines.
	4 th	Monthly Test-01
	5 th	Possible question answer discussion
	6 th	<u>CHAPTER NO -04 (PERFORMANCE OF SHORT & MEDIUM LINES):</u> Calculation of regulation and efficiency
5 th	1 st	Numerical problem.....
	2 nd	Numerical problem.....
	3 rd	Numerical problem.....
	4 th	Numerical problem.....
	5 th	Numerical problem.....
	6 th	Numerical problem.....
6 th	1 st	Possible question answer discussion
	2 nd	<u>CHAPTER NO -05 (EHV TRANSMISSION):</u> Explain EHV AC transmission. Explain Reasons for adoption of EHV AC transmission
	3 rd	Problems involved in EHV AC transmission.
	4 th	HV DC transmission. Advantages and Limitations of HV DC transmission
	5 th	Possible question answer discussion
	6 th	<u>CHAPTER-06 (DISTRIBUTION SYSTEMS):</u> Introduction of Distribution System.
	1 st	Connection Schemes of Distribution System (Radial)
	2 nd	Introduction of Distribution System. Connection Schemes of Distribution System (Ring main & Inter connected)

7 th	3 rd	Explain DC distributions Distributor fed at one End Distributor fed at both the ends
	4 th	Monthly test-02
	5 th	Numerical problem
	6 th	Numerical problem
8 th	1 st	Ring distributors
	2 nd	Numerical problem
	3 rd	AC distribution system. Method of solving AC distribution problem
	4 th	Three phase four wire star connected system arrangement
	5 th	Possible question answer discussion
	6 th	<u>CHAPTER NO-07 (UNDER GROUND CABLES):</u> Explain cable insulation and classification of cables.
9 th	1 st	Types of L. T. cables with construction features
	2 nd	Types of H.T. cables with construction features
	3 rd	Methods of cable laying.
	4 th	Localization of cable faults – Murray loop test for short circuit fault/Earth fault.
	5 th	Localization of cable faults Varley loop test for short circuit fault/Earth fault.
	6 th	Simple problems
10 th	1 st	Possible question answer discussion
	2 nd	Monthly test-03
	3 rd	<u>CHAPTER-08 (ECONOMIC ASPECTS):</u> Causes of low power factor.

	4 th	Methods of Improvement of power factor in power system.
	5 th	Cont....
	6 th	Factors affecting the economics of generation Define & explain Load curves. Define & explain Demand factor Define & explain Maximum demand. Define & explain Load factor.
11 th	1 st	Define & explain Diversity factor. Define & explain Plant capacity factor. Define & explain peak load and Base load on power station.
	2 nd	Possible question answer discussion
	3 rd	<u>CHAPTER NO-09 (TYPES OF TARIFF) :</u> Desirable characteristics of a tariff
	4 th	Explain flat rate, block rate, two part and
	5 th	maximum demand tariffs
	6 th	Simple problems
12 th	1 st	Possible question answer discussion
	2 nd	<u>CHAPTER NO -10 (SUBSTATION) :</u> Layout of LT. HT Substation.
	3 rd	Layout of EHT substation.
	4 th	Earthing of Substation, transmission, distribution lines
	5 th	Earthing of distribution lines
	6 th	Possible question answer discussion
	1 st	Revision
	2 nd	Revision
	3 rd	Monthly test-04

13 th	4 th	Revision
	5 th	Revision
	6 th	Revision
14 th	1 st	Revision
	2 nd	Revision
	3 rd	Revision
	4 th	Revision
	5 th	Revision
	6 th	Revision
15 th	1 st	Revision
	2 nd	Revision
	3 rd	Revision
	4 th	Revision
	5 th	Revision
	6 th	Revision

Syllabus Coverage up to Internal assessment- Ch-1,2,3,4 &5.