

DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: EEE

Academic Session: 2020-2021 (MAY- AUG, 2021)

Lecture Plan with Assignment questions

Subject with code: Transmission and Distribution (PCC-EE-210-G)

Name of Faculty with designation : Ms. Pooja Sharma , Assistant Professor

S.No.	Month	Date & Day	Sem-Class	Unit	Topic/Chapter covered	Reference Books	Write Lecture Wise Questions
1			IV-EEE	A	Evolution of Power Systems and Present Day Scenario, Structure of a Power System	Power System Engg: I.J.Nagrath and D.P.Kothari (TMH)	Q.1. Draw structure of power system. Q.2. Draw single line diagram of power system
2			IV-EEE	A	Bulk Power Grids and Micro - Grids, Indoor and Outdoor Substations		Q.1. Write difference between Centralized power grid and micro grid Q.2. Write difference between Indoor and outdoor substations
3			IV-EEE	A	Equipment for Substations, Layout, Auxiliary Supply		Q.1. Why DC supply is needed in substation. Q.2. Draw layout of substations and explain its equipment.
4			IV-EEE	A	Radial Network Distribution Systems		Q.1. Write disadvantages of radial distribution system. Q.2. Explain types of distribution systems.
5			IV-EEE	A	Ring Mains Distribution System		Q.1. Explain ring main distribution system. Q.2. Write advantages of ring mains distribution system.
6			IV-EEE	A	Network Distribution System		Q.1. Explain different types of distribution system with help of neat sketches. Q.2. Discuss network distribution system.
7			IV-EEE	A	Comparison of Various Types of AC and DC Systems		Q.1. Compare various types of ac and dc systems. Q.2. Discuss disadvantages of DC system.
8			IV-EEE	B	Calculation of Line Parameters	Electrical Power Systems: C. L. Wadhwa (New Age International Pvt Ltd)	Q.1. What are the line parameters? Q.2. What is method of images?
9			IV-EEE	B	Ferranti Effect, Proximity Effect		Q.1. Explain Ferranti effect Q.2. Explain Proximity effect
10			IV-EEE	B	Models of Short, Medium Transmission Lines		Q.1. Draw equivalent circuit of short transmission line. Q.2. Explain significance of medium TL.
11			IV-EEE	B	Models of Long Transmission Lines		Q.1. Write long transmission line equation with its ABCD parameters. Q.2. Explain characteristics of long TL.
12			IV-EEE	B	Performance of Transmission Lines		Q.1. What is meant by GMD & GMR? Q.2. What is skin effect?
13			IV-EEE	B	Circle Diagram, Capacity of Synchronous Condenser		Q.1. Explain circle diagram. Q.2. Derive an expression for capacitance.
14			IV-EEE	B	Tuned Line, Voltage Control		Q.1. What do you mean by tuned lines? Q.2. Describe effect of load power factor on voltage regulation of line.

15			IV-EEE	C	Sag Calculations	Electrical Power Systems: C. L. Wadhwa (New Age International Pvt Ltd)	Q.1.Derive sag formula in transmission line. Q.2.What is a sag template?
16			IV-EEE	C	Stress Calculations		Q.1.How is sag useful for location of towers? Q.2.Discuss stress calculations.
17			IV-EEE	C	Effect of Ice and Wind, Dampers		Q.1.What do you mean by dampers and why it is used? Q.2.What are the different types of dampers?
18			IV-EEE	C	Insulators Type		Q.1.List the basic tests that are carried out on insulators. Q.2.What are the advantages of string insulators?
19			IV-EEE	C	Insulating Materials		Q.1.Explain constructional features of pin type insulator. Q.2.What electrical and mechanical characteristics are required for a good insulator?
20			IV-EEE	C	Voltage Distribution over Insulator String		Q.1.Explain the potential distribution over a string of suspension insulator. Q.2.Name the various causes for the failure of overload line insulators.
21			IV-EEE	C	Equalizer Ring		Q.1.Explain the methods of equalising the potential. Q.2.Explain equalizer ring.
22			IV-EEE	D	Types of LV and HV Cables, Grading of Cables	Power System Engg: I.J.Nagrath and D.P.Kothari (TMH)	Q.1.Describe in brief one method of laying UG cable. Q.2.Draw neat sketch of an underground cable.
23			IV-EEE	D	Capacitance, Ratings		Q.1.Does insulation resistance of a cable is inversely proportional to its length. Q.2.Discuss ratings of cables in brief.
24			IV-EEE	D	Corona Phenomenon		Q.1.Explain corona effect. Q.2.Discuss factors affecting corona.
25			IV-EEE	D	Critical Voltage, Power Loss, Reduction in Losses		Q.1.Write expression of critical visual dispersive voltage. Q.2.Write expression of power loss due to corona.
26			IV-EEE	D	Radio-Interference, HVDC Transmission		Q.1.Explain the EHV. Q.2.List out the advantages of HVAC transmission.
27			IV-EEE	D	HVDC Types of Links, Advantages and Limitations	Q.1.Explain the advantages and limitations of DC links. Q.2.Explain application of HVDC transmission.	
28			IV-EEE		Revision		
29			IV-EEE		Revision		
30			IV-EEE		Last year question paper discussion		