

	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT	
	Department : Electrical Engineering Branch / Sem : EE 4 th	Session :Jan-June 2018 Subject Name & Code :Transmission and Distribution (EE-212-F)
LESSON PLAN		TEACHER : Ritu Sharma

Books Referred:

1. Electrical Power System – C.L.Wadhwa
2. Switchgear Protection and Power System-Sunil S.Rao

Lecture No.	Topics to be Covered
1.	Section A: Introduction to power system
2.	Structure of a power system
3.	indoor and outdoor substations
4.	equipment for Substations
5.	Layout, auxiliary supply.
6.	DISTRIBUTION SYSTEMS: Radial, ring mains and network distribution system,
7.	Comparison of various types of ac and dc systems.
8.	numerical
9.	numerical
10.	Section B: Calculation of line parameters
11.	Ferranti effect, proximity effect.
12.	models of short transmission lines
13.	Models of Medium transmission lines
14.	Models of long transmission lines
15.	capacity of synchronous condenser
16.	numerical

17.	SECTION C MECHANICAL DESIGN: Sag and stress calculations
18.	effect of ice and wind, dampers
19.	INSULATORS: Types, insulating materials
20.	Voltage distribution over insulator string, equalizer ring.
21.	numerical
22.	numerical
23.	SECTION D CABLES: Types of cables and their construction,
24.	Dielectric stress grading of cables, capacitance and ratings.
25.	CORONA: Phenomenon, critical voltage, power loss
26.	reduction in losses, radio-interference
27.	HVDC: types of links, advantages and limitations