

Lesson Planning

Name of the Institute : CRSSIET SILANI-KESHO, JHAJJAR
Name of the teacher : Mr. SANDEEP YADAV
Department : Electrical
Subject & Code : Power System-1 PCC- EE-301G
Branch/Semester : EE 5th Semester

Chapter Covered	Topic
Section-A INTRODUCTION:	Basic concepts : Introduction, Review of Three-phase systems.
	Analysis of simple three phase circuits.
	Single-phase representation of balance three-phase network
	The one-line diagram
	the impedance or reactance diagram
	Per unit (PU) system,
	The steady state model of synchronous machine,
	Transmission of electric power, Representation of loads.
Section-B:	Method of Symmetrical Components
	(positive, negative and zero sequences)
	Balanced and Unbalanced Faults.
	.Representation of generators,
	Representation of generators, lines and transformers in sequence networks.
	Computation of Fault Currents.
	Neutral Grounding
	Types of Circuit Breakers.
Section-C	Attributes of Protection schemes,
	Back-up Protection
	Protection schemes (Over-current)

	Directional, distance protection, differential protection) and their application
Section-D:	Introduction to DC Transmission & Solar PV systems
	DC Transmission Systems:
	Line Commutated Converters (LCC)
	Voltage Source Converters (VSC)
	LCC and VSC based dc link
	Real Power Flow control in a dc link.
	Comparison of ac and dc transmission.
	Solar PV systems: I-V and P-V characteristics of PV panels
	power electronic interface of PV to the grid
	Wind Energy Systems
	Power curve of wind turbine
	Fixed and variable speed turbines
	Permanent Magnetic Synchronous Generators
	Induction Generators.