

LESSON PLAN

Name of Faculty	:	NITIN GARG
Discipline	:	ELECTRICAL ENGG.
Semester	:	6 th
Subject	:	ELECTRICAL POWER-II
Lesson Plan Duration	:	15 week(Jan 2019 April 2019) Theory : 04

Week	Lecture Day	Topic (including Assignment/ Test)
1st	Day 1	Unit1: faults, introduction
	Day2	Common type of faults in both overhead and underground systems
	Day 3	symmetrical/ Unsymmetrical faults
	Day 4	Single line to ground fault
2nd	Day 1	double line to ground fault, 3-phase to Ground fault open circuit
	Day2	Simple problems relating to fault finding.
	Day 3	Revision of important topics
	Day 4	Assignment / Class test
3rd	Day 1	2 Switch Gears: Purpose of protective gear. Difference between switch, isolator and circuit breakers
	Day2	Function of isolator and circuit breaker. Making capacity and breaking
	Day 3	capacity of circuit breaker (only definition)
	Day 4	Circuit breakers. Types of circuit breakers, bulk and minimum oil circuit breakers,
4th	Day 1	air SF6 circuit breakers
	Day2	Principles of Arc extinction blast circuit breakers in OCB and ACB, Constructional
	Day 3	features of OCB, ACB, and their working
	Day 4	Method of arc extinction
5th	Day 1	Miniature circuit breakers MCB, MCCB
	Day2	ELCB, for distribution and transmission system (Descriptive)
	Day 3	Revision of important topics
	Day 4	Assignment / Class test
6th	Day 1	3 Protection devices: Fuses; function of fuse.
	Day2	Types of fuses HV and LV fuses,
	Day 3	rewire-able, cartridge, HRC
	Day 4	Earthing: purpose of earthing, method of earthing
7th	Day 1	Equipment earthing, Substation earthing,
	Day2	System earthing as per Indian Electricity rules. Methods of reducing earth resistance.

	Day 3	Relays: a) Introduction - types of relays
	Day 4	Electromagnetic and thermal relays, their
8th	Day 1	construction and working
	Day2	b) Induction type over-current, earth fault relays
	Day 3	instantaneous over current
	Day 4	Directional over-current, differential relays, their functions
9th	Day 1	d) Distance relays, their functions
	Day2	e) Idea of static relays and their applications
	Day 3	Revision of important topics
	Day 4	Assignment / Class test
10th	Day 1	4 Protection Scheme : introduction
	Day2	Relays for generator protection
	Day 3	Relays for transformer protection including Buchholtz relay protection
	Day 4	Protection of feeders and bus bars
11th	Day 1	Over current and earth fault protection.
	Day2	Distance protection for transmission system
	Day 3	Relays for motor protection
	Day 4	Relays for generator protection
12th	Day 1	Revision of important topics
	Day2	Assignment / Class test
	Day 3	5 Over-voltage Protection : Protection of system against over voltages
	Day 4	causes of over voltages, utility of ground wire
13th	Day 1	Lightning arrestors, rod gap
	Day2	Horn gap, metal oxide type.
	Day 3	Transmission Line protection against over-voltages and lightning
	Day 4	substation protection against over-voltages and lightning
14th	Day 1	Revision of important topics
	Day2	Assignment / Class test
	Day 3	6:Concept of Tariffs
	Day 4	Block rate, flat rate
15th	Day 1	maximum demand and two part tariffs
	Day2	Simple problems
	Day 3	Assignment / Class test
	Day 4	Problem solution/ test check