

Lesson Plan

Name of the Faculty : Nitin Garg (Theory & Practical)

Discipline : Electrical Engg.

Semester : 6th

Subject : Electrical power-II

Lesson Plan Duration : 15 weeks(From Januauy 2018 to April 2018)

WEEK	Theory		Practical	
	Lecture day	Topic	Practical Day	Topic
1st	1st	Unit 1 : faults-Introduction	1st	1.Testing of the dielectric strength of transformer oil and air
	2nd	common types of faults in both overhead and underground system		
	3rd	symetrical and unsymetrical faults L to G faults, LL to G fault,LLL to G fault		
2nd	1st	open circuit fault and problem related to fault finding	2nd	2.Study of different types of circuit breaker and isolator
	2nd	problem solving class		
	3rd	Unit 2: Switch gears-introduction		
3rd	1st	purpose of protective gear and difference between switch ,isolator and circuit breaker	3rd	3.Plot the time current characteristics of over current relay
	2nd	function of isolator and circuit breaker		
	3rd	making and breaking capacity of circuit breaker		
4th	1st	types of circuit breakers, explanation of bulk oil CB and MOCB.	4th	4.Power measurement using CTs and PTs
	2nd	SF6 CB,ACB		
	3rd	Principle of ARC extinction in OCB and ACB		
5th	1st	construction of different CB,MCB, MCCB and ELCB	5th	5. Earthing of different equipment
	2nd	problem solving class		
	3rd	test and assignment		
6th	1st	UNIT :3 Protection Devices-inroduction, fuse , types of fuse	6th	6.Perform the over load and short circuit test of MCB
	2nd	Earthing, its purpose , methods , substation earthing, system earthing as per indian electricity rules.		
	3rd	method of reduce earth resistance		

7th	1st	relays and its introduction, types of relay	7th	7. Plot the time current characteristics of kitkat fuse wire.
	2nd	construction and working of electromagnetic and thermal relay		
	3rd	induction type over current relay, earth fault relay, instantaneous over current relay		
8th	1st	directional; over current relay differential relay and their function	8th	8. Taking reading of current on any LT line with clip on meter
	2nd	idea of static relay and their application		
	3rd	problem solving class		
9th	1st	Unit :Protection scheme-introduction, relays for generator protection	9th	1. Testing of the dielectric strength of transformer oil and air
	2nd	relays for transformer , buchholtz relay		
	3rd	problem solving class		
10th	1st	test and assignment	10th	2. Study of different types of circuit breaker and isolator
	2nd	protection of feeders and bus bar, over current and earth fault protection		
	3rd	distance protection for transmission system		
	1st	relays for motor protection and problems	11th	3. Plot the time current characteristics of over current relay
	2nd	Unit :5 Over Voltage Protection -introduction		
	3rd	protection of system against over voltage, causes of over voltages		
12th	1st	utility of ground wire and lightning arrestors	12th	4. Power measurement using CTs and PTs
	2nd	rod gap , horn gap , metal oxide type		
	3rd	transmission line protection against over voltage and substation protection		
13th	1st	problem solving class	13th	5. Earthing of different equipment
	2nd	class test		
	3rd	Unit 6 Various Types of tariffs -introduction , concept of tariffs		
14th	1st	block rate and flat rate tariffs	14th	6. Perform the over load and short circuit test of MCB
	2nd	maximum demand and two part tariff		
	3rd	problem related to tariff		
15th	1st	numerical problems	15th	7. Plot the time current characteristics of kitkat fuse wire.
	2nd	problem solving class		
	3rd	test and assignment		