Govt. Polytechnic ,Dhangar

Electrical Engineering Department

Lesson plan

Name of Faculty	**Mr. Parveen Kumar**
Discipline	**Electrical Engineering**
Semester	**6th**
Subject	**Electrical Power-II**
Lesson Plan Duration	**From 15 Feb 2024 to 14 June 2024**
Work load [Theory] Per Week	**[04]**

Week	Day	Theory Topic/ Assignment/ Test
1st	1	UNIT 1: Faults: Common type of faults in both overhead and underground systems,
	2	Symmetrical/unsymmetrical faults. Single line to ground fault
	3	Double line to ground fault
	4	3-phase to ground fault open circuit,
2nd	1	simple problems relating to fault finding.
	2	Revision and Doubt class
	3	Unit 2: Switch Gears Purpose of protective gear.
	4	Difference between switch,isolator and circuit breakers
3rd	1	Function of isolator and circuit breaker.
	2	Making capacity and breaking ,capacity of circuit breaker
	3	Principles of Arc extinction in OCB and ACB
	4	Constructional features of OCB, VCB, ACB
4th	1	Working of OCB, VCB, ACB
	2	Types of circuit breakers
	3	Bulk and minimum oil circuit breakers,
	4	Air blast circuit breakers
5th	1	SF6 circuit breakers
	2	Miniature circuit breakers ACB, ELCB,
	3	MCB for distribution and transmission system
	4	Revision and doubt class
6th	1	Notebook checking and Assignment
	2	Revision and class test
	3	Unit 3: Introduction of Protection Devices
	4	Fuses; function of fuse. Types of fuses, HV and LV fuses, rewire-able, cartridge,HRC
7th	1	Earthing: purpose of earthing
	2	Method of earthing, Equipment earthing
	3	Substation earthing, system earthing as per Indian Electricity rules.
	4	Methods of reducing earth resistance.
8th	1	Relays: Introduction and types of relays
	2	Construction and working of Electromagnetic relay
	3	Construction and working of numerical and thermal relay

	4	Induction type over-current, earth fault relays,instantaneous over current relay
9th	1	Construction and working of instantaneous over current relay
	2	Directional over-current, differential relays, their functions
	3	Distance relays & their functions
	4	Static numeric and digital relays and their applications
10th	1	Revision /Doubt class and class test
	2	Unit 4: Protection Scheme Relays for generator protection
	3	Relays for transformer, protection including Buchholtz relay protection
	4	Protection of feeders and bus bars, Over current and earth fault protection.
11th	1	Distance protection for transmission system
	2	Relays for motor protection
	3	Revision /Doubt class,Notebook and Assignment checking
	4	class test
12th	1	Unit 5: Introduction of Over-voltage Protection
	2	Protection of system against over voltages,
	3	Causes of over voltages
	4	Utility of ground wire
13th	1	Lightning arrestors & its types
	2	Rod gap, Horn gap, metal oxide type.
	3	Transmission Line protection against over-voltages and lightning
	4	Substation protection against over-voltages and lightning
14th	1	Revision and doubt classes
	2	Notebook and assignment checking
	3	Class test
	4	Unit 6: Introduction to various types of tarrifs
15th	1	Concept of Tariffs
	2	Block rate, flat rate, maximum demand
	3	Two part tariffs
	4	Simple problems
16th	1	Revision and doubt classes
	2	Notebook and assignment checking
	3	Class test
	4	Class test discussion
17th	1	Revision and doubt classes
	2	Previous year paper
	3	Previous year paper
	4	Revision and doubt classes
18th	1	Previous year paper
	2	Previous year paper
	3	Revision and doubt classes
	4	Revision and doubt classes