

Discipline: ELECTRICAL	Semester: 6 TH	Name of the Teaching Faculty: MONALISA PANI Lecturer in electrical
Subject: SGPD	No. of Days/per week class allotted:05	Semester From Date: 16-01-2024 To Date: 23-04-2024 No. of Weeks:15
Week	Class Day	Theory/Practical Topics
1 st	16/1/24	Essential Features of switchgear.
	17/1/24	Switchgear Equipment.
	17/1/24	Bus-Bar Arrangement..
	18/1/24	Switchgear Accommodation.
	20/1/24	Revision tutorial
2 nd	22/1/24	Short Circuit.
	24/1/24	Faults in a power system.
	25/1/24	Symmetrical faults on 3-phase system
	25/1/24	Limitation of fault current.
	27/1/24	Revision tutorial
3 rd	29/1/24	Percentage Reactance..
	30/1/24	Percentage Reactance and Base KVA.
	1/2/24	Short – circuit KVA..
	3/2/24	Reactor control of short circuit currents
	3/2/24	Revision tutorial
4 th	5/2/24	Location of reactors.
	5/2/24	Steps for symmetrical Fault calculations
	6/2/24	Solve numerical problems on symmetrical fault..
	7/2/24	Solve numerical problems on symmetrical fault.
	7/2/24	Revision Tutorial
5 th	8/2/24	Desirable characteristics of fuse element.
	8/2/24	Fuse Element materials.
	10/2/24	Class Test
	12/2/24	Types of Fuses and important terms used for fuses.
	13/2/24	Low and High voltage fuses
6 th	15/2/24	Current carrying capacity of fuse element
	17/2/24	Difference Between a Fuse and Circuit Breaker.
	19/2/24	Definition and principle of Circuit Breaker. Arc phenomenon and principle of Arc Extinction.
	20/2/24	Methods of Arc Extinction. Definitions of Arc voltage, Re-striking voltage and Recovery voltage.
	21/2/24	Revision tutorial
7 th	22/2/24	Classification of circuit Breakers. Oil circuit Breaker and its classification.
	24/2/24	Plain brake oil circuit breaker. Arc control oil circuit breaker.
	24/2/24	Low oil circuit breaker. Maintenance of oil circuit breaker.
	26/2/24	Air-Blast circuit breaker and its classification.
	26/2/24	Sulphur Hexa-fluoride (SF6) circuit breaker.
8 th	28/2/24	Vacuum circuit breakers.
	29/2/24	Switchgear component. Problems of circuit interruption.

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	2/3/24	Resistance switching. Circuit Breaker Rating.
	4/3/24	Definition of Protective Relay. Fundamental requirement of protective relay.
	6/3/24	Basic Relay operation Electromagnetic Attraction type Induction type.
9 th	4/3/24	Definition of following important terms. . Pick-up current. Current setting. Plug setting Multiplier. Time setting Multiplier
	6/3/24	Classification of functional relays Induction type over current relay (Non-directional)
	6/3/24	Induction type directional power relay
	7/3/24	Induction type directional over current relay
	9/3/24	Differential relay Current differential relay Voltage balance differential relay.
10 th	10/3/24	Types of protection
	12/3/24	Protection of alternator. Differential protection of alternators.
	13/3/24	Balanced earth fault protection.
	14/3/24	Protection systems for transformer, Buchholz relay
	15/3/24	Protection of Bus bar. Protection of Transmission line
11 th	18/3/24	Internal assessment
	19/3/24	Internal assessment
	20/3/24	Internal assessment
	21/3/24	Internal assessment
	23/3/24	Internal assessment
12 th	27/3/24	Different pilot wire protection (Merz-price voltage Balance system)
	28/3/24	Explain protection of feeder by over current and earth fault relay.
	30/3/24	Voltage surge and causes of over voltage.
	2/4/24	Internal cause of over voltage.
	3/4/24	Revision Tutorial
13 th	4/4/24	External cause of over voltage (lightning)
	6/4/24	Mechanism of lightning discharge.
	8/4/24	Types of lightning strokes.
	9/4/24	Harmful effect of lightning
	10/4/24	Revision tutorial
14 th	11/4/24	Lightning arresters and Type of lightning Arresters. Rod-gap lightning arrester. Horn-gap arrester. Valve type arrester.
	15/4/24	Surge Absorber
	16/4/24	Static relays.
	18/4/24	Advantage of static relay.
	18/4/24	Revision tutorial
15 th	19/4/24	Instantaneous over current relay.
	20/4/24	Instantaneous over current relay.
	22/4/24	Principle of IDMT relay.
	23/4/24	Principle of IDMT relay.
	23/4/24	Revision tutorial

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