

Lesson Plan			
	Discipline:Electrical Engineering	Semester-6th Summer 2023	Name of the Teaching Faculty: Sri Rajesh Kumar Sahoo.
Sl. No.	Subject:-SGPD SEC-B	No. Of Days/Week class allotted:05	Semester From date: 14/02/2023 To date: 23/05/2023. No of weeks: 15
	Weeks/Months	Class Day	Topic
1	1st Week	1st (14/02/2023)	INTRODUCTION TO SWITCHGEAR- Essential Features of switchgear
		2nd (15/02/2023)	Switchgear Equipment. Bus-Bar Arrangement
		3rd (15/02/2023)	Switchgear Accommodation.
2	2nd Week	1st (16/02/2023)	Short Circuit. Faults in a power system
		2nd (20/02/2023)	FAULT CALCULATION- Symmetrical faults on 3-phase system
		3rd (21/02/2023)	Limitation of fault current.
		4th (22/02/2023)	Percentage Reactance
		5th (22/02/2023)	Percentage Reactance and Base KVA. Short – circuit KVA., Reactor control of short circuit currents.
3	3rd Week	1st (23/02/2023)	Location of reactors
		2nd (27/02/2023)	Steps for symmetrical Fault calculations.
		3rd (28/02/2023)	Solve numerical problems on symmetrical fault.
		4th (01/03/2023)	FUSES- Desirable characteristics of fuse element
		5th (01/03/2023)	Fuse Element materials. Types of Fuses and important terms used for fuses
4	4th Week	1st (02/03/2023)	Low and High voltage fuses
		2nd (6/03/2023)	Current carrying capacity of fuse element
		3rd (9/03/2023)	Difference Between a Fuse and Circuit Breaker
5	5th Week	1st (13/03/2023)	CIRCUIT BREAKERS- Definition and principle of Circuit Breaker
		2nd (14/03/2023)	Arc phenomenon and principle of Arc Extinction
		3rd (15/03/2023)	Methods of Arc Extinction Tutorial
		4th (15/03/2023)	Definitions of Arc voltage, Re-striking voltage and Recovery voltage.
		5th (16/03/2023)	Oil circuit Breaker and its classification.
6	6th Week	1st (20/03/2023)	Plain brake oil circuit breaker, Arc control oil circuit breaker
		2nd (21/03/2023)	Low oil circuit breaker, Maintenance of oil circuit breaker
		3rd (22/03/2023)	Air-Blast circuit breaker and its classification
		4th (22/03/2023)	Sulphur Hexa-fluoride (SF6) circuit breaker
		5th (23/03/2023)	Vacuum circuit breakers
7	7th Week	1st (27/03/2023)	Switchgear component
		2nd (28/03/2023)	Problems of circuit interruption
		3rd (29/03/2023)	Resistance switching, Circuit Breaker Rating
		4th (29/03/2023)	PROTECTIVE RELAYS- Definition of Protective Relay
8	8th Week	1st (03/04/2023)	Fundamental requirement of protective relay.
		2nd (04/04/2023)	basic Relay operation, Electromagnetic Attraction type, Induction type
		3rd (05/04/2023)	Pick-up current, Current setting, Plug setting Multiplier, Time setting Multiplier

9	9th Week	1st (5/04/2023)	Classification of functional relays
		2nd (6/04/2023)	Induction type over current relay (Non-directional)
		3rd (10/04/2023)	Induction type directional power relay.
		4th (11/04/2023)	Induction type directional over current relay
10	10th Week	1st (12/04/2023)	Differential relay, Current differential relay
		2nd (12/04/2023)	Voltage balance differential relay
		3rd (13/04/2023)	Protection of alternator.
		4th (17/04/2023)	PROTECTION OF ELECTRICAL POWER EQUIPMENT AND LINES- Protection of alternator.
		5th (18/04/2023)	PROTECTION OF ELECTRICAL POWER EQUIPMENT AND LINES- Protection of alternator.
11	11th Week	1st (19/04/2023)	Differential protection of alternators
		2nd (19/04/2023)	Balanced earth fault protection
		3rd (20/04/2023)	Protection systems for transformer
		4th (24/04/2023)	Buchholz relay
		5th (25/04/2023)	Protection of Bus bar.
12	12th Week	1st (26/04/2023)	Protection of Transmission line.
		2nd (26/04/2023)	Different pilot wire protection (Merz-price voltage Balance system)
		3rd (27/04/2023)	Explain protection of feeder by over current and earth fault relay
		4th (01/05/2023)	Explain protection of feeder by over current and earth fault relay
13	13th Week	1st (02/05/2023)	PROTECTION AGAINST OVER VOLTAGE AND LIGHTNING- Voltage surge and causes of over voltage
		2nd (03/05/2023)	Internal cause of over voltage (lighting)
		3rd (03/05/2023)	External cause of over voltage (lighting)
		4th (04/05/2023)	Mechanism of lightning discharge.
		5th (08/05/2023)	Types of lightning strokes, Harmful effect of lightning
14	14th Week	1st (09/05/2023)	Lightning arresters, Rod-gap lightning arrester.
		2nd (10/05/2023)	Horn-gap arrester
		3rd (10/05/2023)	Valve type arrester, Surge Absorber
		4th(11/05/2023)	STATIC RELAY- Advantage of static relay
		5th (15/05/2023)	STATIC RELAY- Advantage of static relay
15	15th Week	1st (17/05/2023)	Instantaneous over current relay
		2nd (17/05/2023)	Principle of IDMT relay
		3rd (18/05/2023)	Revision
		4th(22/05/2023)	Revision
		5th(23/05/2023)	Revision