

Lesson Plan			
	Discipline:Electrical Engineering	Semester-6th Summer 2024	Name of the Teachng Faculty: Sri SIBANI SANKAR SWAIN.
Sl. No.	Subject:-SGPD SEC-B	No. Of Days/Week class allotted:05	Semester From date: 16/01/2024 To date: 26/04/2023. No of weeks: 15
	Weeks/Months	Class Day	Topic
1	1st Week	1st (16/01/2024)	INTRODUCTION TO SWITCHGEAR- Essential Features of switchgear
		2nd (17/01/2024)	Switchgear Equipment.
		3rd(18/01/2024)	Bus-Bar Arrangement
		4th (20/01/2024)	"Switchgear Accomodation"
2	2nd Week	1st (22/01/2024)	Short Circuit. Faults in a power system
		2nd (24/01/2024)	FAULT CALCULATION- Symmetrical faults on 3-phase system
		3rd(25/01/2024)	Limitation of fault current.
		4th (27/01/2024)	Percentage Reactance
3	3rd Week	1st (29/01/2024)	Location of reactors
		2nd (30/01/2024)	Steps for symmetrical Fault calculations.
		3rd (31/01/2024)	Solve numerical problems on symmetrical fault.
		4th (01/02/2024)	FUSES- Desirable characteristics of fuse element Fuse Element materials. Types of Fuses and important terms used for fuses
		5th(03/02/2024)	Percentage Reactance and Base KVA. Short – circuit KVA., Reactor control of short circuit currents.
4	4th Week	1st (05/02/2024)	Low and High voltage fuses
		2nd (06/02/2024)	Current carrying capacity of fuse element
		3rd (07/02/2024)	Difference Between a Fuse and Circuit Breaker
		4th(08/02/2024)	important terms used for fuses and circuit breaker
		5th(10/02/2024)	important terms used for fuses and circuit breaker

5	5th Week	1st (12/02/2024)	CIRCUIT BREAKERS- Definition and principle of Circuit Breaker
		2nd (13/02/2024)	Arc phenomenon and principle of Arc Extinction
		3rd (15/02/2024)	Methods of Arc Extinction Tutorial
		4th (17/02/2024)	Definitions of Arc voltage, Re-striking voltage and Recovery voltage.
6	6th Week	1st (19/02/2024)	Plain brake oil circuit breaker, Arc control oil circuit breaker
		2nd (20/02/2024)	Low oil circuit breaker, Maintenance of oil circuit breaker
		3rd (21/02/2024)	Air-Blast circuit breaker and its classification
		4th (22/02/2024)	Sulphur Hexa-fluoride (SF6) circuit breaker
		5th (24/02/2024)	Vacuum circuit breakers
7	7th Week	1st (26/02/2024)	Switchgear component
		2nd (27/02/2024)	Problems of circuit interruption
		3rd (28/02/2024)	Resistance switching, Circuit Breaker Rating
		4th (29/02/2024)	PROTECTIVE RELAYS- Definition of Protective Relay
		5th(02/03/2024)	Oil circuit Breaker and its classification.
8	8th Week	1st (04/03/2024)	Fundamental requirement of protective relay.
		2nd (06/03/2024)	basic Relay operation, Electromagnetic Attraction type, Induction type
		3rd (07/03/2024)	Pick-up current, Current setting, Plug setting Multiplier, Time setting Multiplier
		4th(09/03/2024)	Pick-up current, Current setting, Plug setting Multiplier, Time setting Multiplier
9	9th Week	1st (11/03/2024)	Classification of functional relays
		2nd (12/03/2024)	Induction type over current relay (Non-directional)
		3rd (13/03/2024)	Induction type directional power relay.
		4th (14/03/2024)	Induction type directional over current relay
		5th((16/03/2024)	Induction type directional over current relay
10	10th Week	1st (18/03/2024)	Dfferential relay, Current differential relay
		2nd (19/03/2024)	Voltage balance differential relay
		3rd (20/03/2024)	Protection of alternator.
		4th (21/03/2024)	PROTECTION OF ELECTRICAL POWER EQUIPMENT AND LINES- Protection of alternator.
		5th (22/03/2024)	PROTECTION OF ELECTRICAL POWER EQUIPMENT AND LINES- Protection of alternator.
11	11th Week	1st (27/03/2024)	Differential protection of alternators
		2nd (28/03/2024)	Balanced earth fault protection
		3rd (30/03/2024)	Protection systems for transformer
		1st (02/04/2024)	Protection of Transmission line.

12	12th Week	2nd (03/04/2024)	Different pilot wire protection (Merz-price voltage Balance system)
		3rd (04/04/2024)	Explain protection of feeder by over current and earth fault relay
		4th (06/04/2024)	Explain protection of feeder by over current and earth fault relay
13	13th Week	1st (08/04/2024)	PROTECTION AGAINST OVER VOLTAGE AND LIGHTNING- Voltage surge and
		2nd (09/04/2024)	Internal cause of over voltage (lighting)
		3rd (10/04/2024)	External cause of over voltage (lighting)
		4th (13/04/2024)	Mechanism of lightning discharge.
14	14th Week	1st (15/04/2024)	Lightning arresters, Rod-gap lightning arrester.
		2nd (16/04/2024)	Horn-gap arrester
		3rd(18/04/2024)	Rod-gap lightning arrester.
		4th(20/04/2024)	Horn-gap arrester
15	15th Week	1st (22/04/2024)	Instantaneous over current relay
		2nd (23/04/2024)	Static relay advantage of static relay
		3rd(24/04/2024)	Instantaneous over current relay
		4th(25/04/2024)	Principle of IDMT relay