

Lesson Plan			
	Discipline:Electrical Engineering	Semester-6th Summer 2024	Name of the Teaching Faculty: Sri HRUSIKESH NAYAK
Sl. No.	Subject:-SGPD	No. Of Days/Week class allotted:05	Semester From date: 16/01/2024 To date: 26/04/2024. No of weeks: 15
	Weeks/Months	Class Day	Topic
1	1st Week	1st (16/01/2024)	1.1 Essential Features of switchgear. 1.2 Switchgear Equipment.
		2nd (19/01/2024)	1.3 Bus-Bar Arrangement.
2	2nd Week	1st (22/01/2024)	1.4 Switchgear Accommodation.
		2nd (22/01/2024)	1.5 Short Circuit
		3rd (24/01/2024)	1.6 Short circuit. 1.7 Faults in a power system.
3	3rd Week	1st (29/01/2024)	2.1 Symmetrical faults on 3-phase system.
		2nd (29/01/2024)	2.2 Limitation of fault current.
		3rd (30/01/2024)	2.3 Percentage Reactance.
		4th (31/01/2024)	2.4 Percentage Reactance and Base KVA.
		5th (02/02/2024)	2.5 Short – circuit KVA.
4	4th Week	1st (05/02/2024)	2.6 Reactor control of short circuit currents.
		2nd (05/02/2024)	2.7 Location of reactors. 2.8 Steps for symmetrical Fault calculations.
		3rd (06/02/2024)	2.9 Solve numerical problems on symmetrical fault
		4th (07/02/2024)	2.9 Solve numerical problems on symmetrical fault
		5th (09/02/2024)	3.1 Desirable characteristics of fuse element
5	5th Week	1st (12/02/2024)	3.2 Fuse Element materials.
		2nd (12/02/2024)	3.3 Types of Fuses and important terms used for
		3rd (13/02/2024)	3.4 Low and High voltage fuses.
		4th (16/02/2024)	3.5 Current carrying capacity of fuse element.
6	6th Week	1st (19/02/2024)	3.6 Difference Between a Fuse and Circuit Breaker.
		2nd (19/02/2024)	4.1 Definition and principle of Circuit Breake
		3rd (20/02/2024)	4.2 Arc phenomenon and principle of Arc Extinction.
		4th (21/02/2024)	4.3 Methods of Arc Extinction.
		5th (23/02/2024)	4.4 Definitions of Arc voltage, Re-striking oltage and
7	7th Week	1st (26/02/2024)	4.5 Classification of circuit Breakers. 4.6 Oil circuit Breaker and its classification.
		2nd (26/02/2024)	4.7 Plain brake oil circuit breaker. 4.8 Arc control oil circuit breaker
		3rd (27/02/2024)	4.9 Low oil circuit breaker. 4.10 Maintenance of oil circuit breaker.
		4th (28/02/2024)	4.11 Air-Blast circuit breaker and its classification. 4.12 Sulphur Hexa-fluoride (SF6) circuit breaker
		5th (01/03/2024)	4.13 Vacuum circuit breakers.

8	8th Week	1st (04/03/2024)	4.14 Switchgear component.
		2nd (04/03/2024)	4.15 Problems of circuit interruption.
		3rd (06/03/2024)	4.16 Resistance switching.
9	9th Week	1st (11/03/2024)	4.17 Circuit Breaker Rating.
		2nd (11/03/2024)	5.1 Definition of Protective Relay. 5.2 Fundamental requirement of protective relay.
		3rd (12/03/2024)	5.5 Definition of following important terms. 5.5.1. Pick-up current. 5.5.2. Current setting. 5.5.3. Plug setting Multiplier. 5.5.4. Time setting Multiplier
		4th (13/03/2024)	5.6 Classification of functional relays
		5th (15/03/2024)	5.7 Induction type over current relay (Non-directional)
		10	10th Week
2nd (18/03/2024)	5.9 Induction type directional over current relay.		
3rd (18/03/2024)	5.10.1. Current differential relay 5.10.2. Voltage balance differential relay.		
4th (18/03/2024)	5.11 Types of protection		
5th (18/03/2024)	6.1 Protection of alternator.		
11	11th Week	1st (27/03/2024)	6.2 Differential protection of alternators.
12	12th Week	1st (02/04/2024)	6.3 Balanced earth fault protection.
		2nd (03/04/2024)	6.4 Protection systems for transformer
		3rd (05/04/2024)	6.5 Buchholz relay.
13	13th Week	1st (08/04/2024)	6.6 Protection of Bus bar
		2nd (08/04/2024)	6.7 Protection of Transmission line
		3rd (09/04/2024)	6.8 Different pilot wire protection (Merz-price voltage Balance system)
		4th (10/04/2024)	6.9 Explain protection of feeder by over current and earth fault
		5th (12/04/2024)	7.1. Voltage surge and causes of over voltage.
14	14th Week	1st (15/04/2024)	7.2. Internal cause of over voltage.
		2nd (15/04/2024)	7.3. External cause of over voltage (lighting)
		3rd (16/04/2024)	7.4. Mechanism of lightning discharge. 7.5. Types of lightning strokes
		4th (19/04/2024)	7.6. Harmful effect of lightning. 7.7. Lightning arresters and Type of lightning Arresters.
15	15th Week	1st (22/04/2024)	7.7.1. Rod-gap lightning arrester. 7.7.2. Horn-gap arrester
		2nd (22/04/2024)	7.7.3. Valve type arrester. 7.8. Surge Absorber
		3rd (23/04/2024)	8. 1 Advantage of static relay. 8. 2 Instantaneous over current relay.
		4th (24/04/2024)	8. 1 Advantage of static relay. 8. 2 Instantaneous over current relay.
		5th (26/04/2024)	8. 3 Principle of IDMT relay.