

DISCIPLINE – ELECTRICAL ENGG	SEMESTER 6 TH	NAME OF THE TEACHING FACULTY- JYOTIRMAYEE SETHY,LECT(ELECT.)	
SUB-SGPD	No Of Days Per Week Class Alloted-3	SEMESTER FROM 22.12.2025 to 18.04.2026 NO OF WEEK – 16 WEEKS	
WEEK	CLASS DAY	THEORY	STATUS
1 ST WEEK	1 ST day 2 nd day 3 rd day	INTRODUCTION TO SWITCHGEAR 1.1 Essential Features of switchgear. 1.2 Switchgear Equipment. 1.3 Bus-Bar Arrangement..	
2 ND WEEK	1 ST day 2 nd day 3 rd day	1.4 Switchgear Accommodation. 1.5 Short Circuit. 1.6 Short circuit. 1.7 Faults in a power system.	
3 RD WEEK	1 ST day 2 nd day 3 rd day	FAULT CALCULATION 2.1 Symmetrical faults on 3-phase system. 2.2 Limitation of fault current	
4 TH WEEK	1 ST day 2 nd day 3 rd day	2.3 Percentage Reactance. 2.4 Percentage Reactance and Base KVA. 2.5 Short – circuit KVA	
5 TH WEEK	1 ST day 2 nd day 3 rd day	2.6 Reactor control of short circuit currents. 2.7 Location of reactors. 2.8 Steps for symmetrical Fault calculations. 2.9 Solve numerical problems on symmetrical fault.	
6 TH WEEK	1 ST day 2 nd day 3 rd day	CIRCUIT BREAKERS 4.1 Definition and principle of Circuit Breaker. 4.2 Arc phenomenon and principle of Arc Extinction. 4.3 Methods of Arc Extinction.	
7 TH WEEK	1 ST day 2 nd day 3 rd day	4.4 Definitions of Arc voltage, Re-striking voltage and Recovery voltage. 4.5 Classification of circuit Breakers. 4.6 Oil circuit Breaker and its classification. 4.7 Plain brake oil circuit breaker. 4.8 Arc control oil circuit breaker.	

		4.9 Low oil circuit breaker.	
8 TH WEEK	1 ST day 2 ND day 3 RD day	4.10 Maintenance of oil circuit breaker. 4.11 Air-Blast circuit breaker and its classification. 4.12 Sulphur Hexa-fluoride (SF6) circuit breaker. 4.13 Vacuum circuit breakers. 4.14 Switchgear component. 4.15 Problems of circuit interruption. Internal assessment 1	
9 TH WEEK	1 ST day 2 ND day 3 RD day	4.16 Resistance switching. 4.17 Circuit Breaker Rating. PROTECTIVE RELAYS 5.1 Definition of Protective Relay. 5.2 Fundamental requirement of protective relay.	
10 TH WEEK	1 ST day 2 ND day 3 RD day	5.3 Basic Relay operation 5.3.1. Electromagnetic Attraction type 5.3.2. Induction type 5.4 Definition of following important terms 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.	
11 TH WEEK	1 ST day 2 ND day 3 RD day	5.6 Classification of functional relays 5.7 Induction type over current relay (Non-directional) 5.8 Induction type directional power relay. 5.9 Induction type directional over current relay.	
12 TH WEEK	1 ST day 2 ND day 3 RD day	5.10 Differential relay 5.10.1. Current differential relay 5.10.2. Voltage balance differential relay. 5.11 Types of protection	
13 TH WEEK	1 ST day 2 ND day 3 RD day	Class test of ch-1	
14 TH WEEK	1 ST day 2 ND day 3 RD day	Class test of ch-2&4	

15 TH WEEK	1 ST day 2 ND day 3 RD day	Class test of ch-5	
16 TH WEEK	1 ST day 2 ND day 3 RD day	Revision for semester exam	

24/12/2025