

## GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN

Discipline : ELECTRICAL ENGG.		Semester: 5th Sem	Name of the Teaching Faculty : MANOJ KUMAR PRADHAN	
Subject :Power Electronics and PLC LAB		No. of Periods/ per week class allotted : 3+3	Semester From date : 01-07-2024 To Date : 8-11-2024	
MONTH	Week	Day	Topics	
JULY	WEEK 1	2nd	G-1	Study of switching characteristics of a power transistor.
		6th	G-II	Study of switching characteristics of a power transistor.
	WEEK 2	2nd	G-1	Study of V-I characteristics of SCR
		6th	G-II	Study of V-I characteristics of SCR
	WEEK 3	2nd	G-1	Study of V-I characteristics of TRIAC.
		6th	G-II	Study of V-I characteristics of TRIAC.
	WEEK 4	2nd	G-1	Study of V-I characteristics of DIAC.
		6th	G-II	Study of V-I characteristics of DIAC.
	WEEK 5	2nd	G-1	Study of drive circuit for SCR & TRIAC using DIAC
	AUGUST	WEEK 1	6th	G-II
WEEK 2		2nd	G-1	Study of drive circuit for SCR & TRIAC using UJT.
		6th	G-II	Study of drive circuit for SCR & TRIAC using UJT.
WEEK 3		2nd	G-1	To study phase controlled bridge rectifier using resistive load
		6th	G-II	To study phase controlled bridge rectifier using resistive load
WEEK 4		2nd	G-1	To study series Inverter.
		6th	G-II	To study series Inverter.
WEEK 5		2nd	G-1	Study of voltage source Inverter
		6th	G-II	Study of voltage source Inverter
SEPTEMBER		WEEK 1	2nd	G-1
	WEEK 2	2nd	G-1	To study single-phase Cyclo-converte
		6th	G-II	To perform the speed control of DC motor using Chopper.
	WEEK 3	2nd	G-1	PLC Programming 1. Introduction/Familiarization PLC Trainer & its Installation with PC (a) Learn the basics and hardware components of PLC (b) Understand configuration of PLC system (c) Study various building blocks of PLC (d) Determine the No. of digital I/O & Analog I/O
		6th	G-II	To study single-phase Cyclo-converter
2nd	G-1	Demonstrate PLC and Ladder diagram-Preparation downloading and running		

	<b>WEEK 4</b>	6th	G-II	<b>PLC Programming</b> 1. Introduction/Familiarization PLC Trainer & its Installation with PC (a) Learn the basics and hardware components of PLC (b) Understand configuration of PLC system (c) Study various building blocks of PLC (d) Determine the No. of digital I/O & Analog I/O
<b>OCTOBER</b>	<b>WEEK 1</b>	2nd	G-1	Execute Ladder diagrams for different Logical Gates
		6th	G-II	Demonstrate PLC and Ladder diagram-Preparation downloading and running
	<b>WEEK 3</b>	2nd	G-1	Execute Ladder diagrams using timers & counters
		6th	G-II	Execute Ladder diagrams for different (i) Logical Gates (ii) using timer and counter
	<b>WEEK 4</b>	2nd	G-1	Execute the Ladder Diagrams with model applications (i) DOL starter (ii)Star- Delta starter
6th		G-II	Execute the Ladder Diagrams with model applications (i) DOL starter (ii)Star- Delta starter	
<b>WEEK 5</b>	2nd	G-1	Execute the Ladder Diagrams with model applications (i) Stair case lighting	
<b>NOVEMBER</b>	<b>WEEK 1</b>	6th	G-II	Execute the Ladder Diagrams with model applications (i) Stair case lighting (ii) Traffic light controller
	<b>WEEK 2</b>	2nd	G-1	Execute Ladder diagrams with model applications (ii) Traffic light controller