LESSON PLAN

SUB: POWER ELECTRONICS & PLC LAB

BRANCH:- ELECTRICAL ENGG.

SEMESTER: 5TH

NAME OF FACULTY: - ABHIPSA DUTTA

GOVERNMENT POLYTECHNIC, BHADRAK

SESSION:2025-26

Hod Electrical 07-25

HOD (ELECT.)
G.P.BHADRAK

Academic Co-ordinator

Academic Co-ordinator

Principal
Govt. Polytechnic Bhadrak

Principal
Govt.Polytechnic
Bhadrak

DISCIPLINE: ELECTRICAL ENGG.	SEMESTER 5TH	NAME OF THE TEACHING FACULTY ABHIPSA DUTTA (Lect. in Elect. Engg.)
SUBJECT: POWER ELECTRONICS & PLC LAB	NO. OF DAYS/WEEK CLASS ALLOTTED – 45 (3P/week)	SEMESTER FROM DATE: 14.07.2025 to 15.11.2025
WEEK	CLASS DAY	PRACTICAL TOPICS
1st	01	Study of switching characteristics of a power transistor
	02	Study of switching characteristics of a power transistor
2nd	01	Study of V-I characteristics of SCR
	02	Study of V-I characteristics of SCR
3rd	01	Study of V-I characteristics of TRIAC
	02	Study of V-I characteristics of TRIAC
4th	01	Study of V-I characteristics of DIAC
	02	Study of V-I characteristics of DIAC
5th	01	Study of drive circuit for SCR & TRIAC using DIAC.
	02	Study of drive circuit for SCR & TRIAC using DIAC
6th	01	To study series Inverter.
	02	To study series Inverter.
7TH	01	Study of voltage source Inverter.
	02	Study of voltage source Inverter.
8TH	01	To perform the speed control of DC motor using Chopper.
	02	To perform the speed control of DC motor using Chopper.
9TH	01	To study single-phase Cyclo-converter
	02	To study single-phase Cyclo-converter
10TH	01	Introduction/Familiarization PLC Trainer & its Installation with PC

		02	Introduction/Familiarization PLC Trainer & its Installation with PC
11TH		01	Learn the basics and hardware components of PLC Understand configuration of PLC system
		02	Learn the basics and hardware components of PLC Understand configuration of PLC system
12TH		01	Study various building blocks of PLC Determine the No. of digital I/O & Analog I/O
		02	Study various building blocks of PLC Determine the No. of digital I/O & Analog I/O
13TH		01	Execute the different Ladder Diagrams
		02	Execute the different Ladder Diagrams
14TH		01	Demonstrate PLC and Ladder diagram-Preparation downloading and running Execute Ladder diagrams for different Logical Gates
		02	Demonstrate PLC and Ladder diagram-Preparation downloading and running Execute Ladder diagrams for different Logical Gates
15TH		01	Execute the Ladder Diagrams with model applications (i) DOL starter (ii)Star- Delta starter
		02	Execute the Ladder Diagrams with model applications (i) DOL starter (ii)Star- Delta starter

Abhipsa Dutta.

SIGNATURE OF THE FACULTY

Lect.in Elect.Engg.
Govt.Poly.Bhadrak