

GOVERNMENT POLYTECHNIC NUAPADA

DEPARTMENT OF ELECTRICAL ENGINEERING

LESSON PLAN

| DISCIPLINE: ELECTRICAL ENGINEERING | SEMESTER: 5TH SEM | NAME OF THE TEACHING FACULTY: MR. MUKESH KUMAR SAHU | |
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| SUBJECT: PR-2: PE&PLC LAB | NO. OF DAYS/WEEK CLASS ALLOTTED: 03 | SEMESTER FROM DATE: 15-09-2022 TO 22-12-2022 NO. OF WEEKS ALLOTTED: 14 WEEKS | |
| WEEK | CLASS DAY | DATE | THEORY / PRACTICAL TOPICS |
| 1 ST | 01 | 15-09-2022 | LIST OF EXPERIMENTS (I) Power Electronics |
| | | | 1. Study of switching characteristics of a power transistor. |
| 2 ND | 01 | 22-09-2022 | 2. Study of V-I characteristics of SCR. |
| 3 RD | 01 | 29-09-2022 | 3. Study of V-I characteristics of TRIAC. |
| 4 TH | 01 | 13-10-2022 | 4. Study of V-I characteristics of DIAC. |
| 5 TH | 01 | 20-10-2022 | 5. Study of drive circuit for SCR & TRIAC using DIAC. |
| 6 TH | 01 | 27-10-2022 | 6. Study of drive circuit for SCR & TRIAC using UJT |
| 7 TH | 01 | 03-11-2022 | 7. To study phase-controlled bridge rectifier using resistive load. |
| 8 TH | 01 | 10-11-2022 | 8. To study series Inverter. |
| | | | 9. Study of voltage source Inverter. |
| 9 TH | 01 | 17-11-2022 | 10. To perform the speed control of DC motor using Chopper. |
| 10 TH | 01 | 24-11-2022 | 11. To study single-phase Cyclo-converter |

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| 11 TH | 01 | 01-12-2011 | (II) 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 |
| 12 TH | 01 | 08-12-2022 | 2. Execute the different Ladder Diagrams (a) Demonstrate PLC and Ladder diagram Preparation downloading and running (b) Execute Ladder diagrams for different Logical Gates (c) Execute Ladder diagrams using timers & counters |
| 13 TH | 01 | 15-12-2022 | 3. Execute the Ladder Diagrams with model applications (i) DOL starter (ii) Star-Delta starter |
| 14 TH | 01 | 22-12-2022 | 4. Execute Ladder diagrams with model applications (i) Stair case lighting (ii) Traffic light controller |
| | | | REVISION CLASSES Q&A DISCUSSION |

Mukesh Kumar Sahu...

Sign. Of Faculty

Sign. Of H.O.D.

Sign. Of Academic
Coordinator

Principal
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