

GOVT. POLYTECHNIC SAMBALPUR

LESSON PLAN

Discipline : ELECTRICAL ENGG.	Semester: 5th Sem	Name of the Teaching Faculty : Mrs Lipsarani Bagh
Subject : PE & PLC	No. of Days / per week class allotted : 04	Semester From date : 01.08.2023 To Date : 30.11.2023 No. of Weesks : 15
Week	Class Day	Topics
1ST AUG	1st	Chapter 1 (power electronics device construction) 1.1.scr,disc,triac,mosfet,igbt,gto construction
	2nd	1.2. two transistor analogy of scr
	3rd	1.3. gate characteristic of scr characteristic scr
	4th	1.5. turn on methods of scr
2ND AUG	1st	1.6. turn off methods of scr
	2nd	1.7.voltage and current rating of scr
	3rd	1.8. protection of scr
	4th	1.9. firing ckts
3RD AUG	1st	Chapter 2 (converter,ac regultorand hopper) 2.1. rectifiers
	2nd	2.2. working of single phase half wave converter
	3rd	2.3. freewheeling diode
	4th	2.4. fully controlled converter
4TH AUG	1st	2.5. three phase half wave controlled converter
	2nd	2.6. three phase fully controlled converter
	3rd	2.7. ac regulator
	4th	2.8. step up and step down chopper
1ST SEPT	1st	Chapter 3 (inverters and cycloconverter) 3.1.classify inverter
	2nd	3.2. working of series inverter
	3rd	3.3. working of parallel inverter
	4th	3.4working of bridge inverter
2ND SEPT	1st	3.5.basic of cycloconverter
	2nd	3.6.step up and step down cyclo converter
	3rd	3.7. application of cyclo converter
	4th	3.step up cyclonoverter working detail
3RD SEPT	1st	Chapter 4 (application of power electronic ckt)
	2nd	4.2. factor affecting speed of dc motor
	3rd	4.3. speed control of dc shunt motor using converter

	4th	4.4. speed control of shunt motor using chopper
4TH SEPT	1st	4.5. factor affecting speed of ac motor
	2nd	4.6. speed control of Induction motor using ac regulator
	3rd	4.7. speed control using v/f control
	4th	4.8. working of ups, 4.9.battery charging ckt
1ST OCT	1st	4.10.switched mode power supply
	2nd	4.11. Sodium vapor lamps.
	3rd	4.13. Neon lamps
	4th	4.14. High lumen output & low consumption fluorescent lamps.
2ND OCT	1st	Chapter 5 (introduction to plc)
	2nd	5.2. advantages of plc
	3rd	5.3. different parts of plc
	4th	5.4. application of plc
3RD OCT	1st	5.5. ladder diagram
	2nd	5.6 no,nc switch
	3rd	5.7ladder diagram AND gate,OR gate,NOT gate
	4th	5.8.ladder for NAND,NOR,EX-OR
1ST NOV	1st	5.9.Timers
	2nd	5.10.Counters
	3rd	5.11.ladder diagram using timer and counter
	4th	5.12.plc instruction set
2ND NOV	1st	5.13.dol starter
	2nd	5.13.1.star delta starter
	3rd	5.13.2. stare case lightning
	4th	5.13.3. traffic light control.
3RD NOV	1st	5.13.4.temperature controller
	2nd	5.14.special controller
	3rd	5.14.1.DCS
	4th	5.14.2.SCADA SYSTEM
4TH NOV	1st	5.15.computer control
	2nd	5.15.1.data acquisition
	3rd	5.15.2..direct digital control system
	4th	5.15.3.basic diagram of digital control



Signature of Faculty



Signature of HOD Electrical Engineering Department