GOVT. POLYTECHNIC SAMBALPUR
LESSON PLAN

Discipline : ELECTRICAL ENGG.	Semester: 5th Sem	Name of the Teaching Faculty : SUSMITA PRADHAN
Subject : power electronics	No. of Days / per week class allotted : 04	Semester From date : 04.10.2021 To Date : 08.01.20222
Week	Class Day	Topics
1ST(04.10.2021 TO 09.10.2021)	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 1.4.switching characteristic scr
	4th	1.5. turn on methods of scr
2ND(18.10.2021 TO 23.10.2021)	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(25.10.2021 TO 30.10.2021)	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(01.11.2021 TO 06.11.2021)	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
5TH(08.11.2021 TO 13.11.2021)	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
6TH(15.11.2021 TO 20.11.2021)	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

7TH(22.11.2021 TO 27.11.2021)	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

8TH(29.11.2021 TO 04.12.2021)	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

9TH(06.12.2021 TO 11.12.2021)	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.

10TH(13.12.2021 TO 18.12.2021)	1st	**Chapter 5 (introduction to plc)** 5.1. plc 5.2. advantages of plc
	2nd	5.3. different parts of plc 5.4. application of plc
	3rd	5.5. ladder diagram 5.6 no,nc switch
	4th	5.7ladder diagram AND gate,OR gate,NOT gate 5.8.ladder for NAND,NOR,EX-OR

11TH(20.12.2021 TO 25.12.2021)	1st	5.9.Timers 5.10.Counters
	2nd	5.11.ladder diagram using timer and counter 5.12.plc instruction set
	3rd	5.13.dol starter 5.13.1.star delta starter
	4th	5.13.2. stare case lightning 5.13.3. traffic light control.

12TH(27.12.2021 TO 01.01.2022)	1st	5.13.4.temperature controller
	2nd	5.14.special controller
	3rd	5.14.1.DCS
	4th	5.14.2.SCADA SYSTEM

13TH(03.01.2021 TO 08.01.2022)	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

for

4/1/2021

H.O.D (Elect)