

LESSON PLAN-2020		
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR		
Discipline- ELECTRICAL	Semester- 5TH	Name of teaching faculty-Sonali Susmita Tripathy
SUBJECT- POWER ELECTRONICS AND PLC	No of days/ per week class allotted-	SEM From date- 01/09/2020 No of weeks-16
Week	Class day	Theory Topics
1st	01.09.20	construction, operation & VI characteristics of power diode
	03.09.20	construction, operation & VI characteristics of SCR
	04.09.20	construction, operation & VI characteristics of DIAC
	05.09.20	construction, operation & VI characteristics of TRIAC
2nd	07.09.20	construction, operation & VI characteristics of Power MOSFET
	08.09.20	construction, operation & VI characteristics of GTO
	10.09.20	construction, operation & VI characteristics of IGBT
	11.09.20	Two transistor theory of SCR
	12.09.20	Switching characteristics of SCR
3rd	14.09.20	Gate characteristics of SCR
	15.09.20	TURN ON METHODS OF SCR
	17.09.20	turn off method of SCR
	18.09.20	DO
	19.09.20	Voltage current rating
4th	21.09.20	protection of SCR
	22.09.20	FIRING CKT
	24.09.20	DO
	25.09.20	SNUBBER CIRCUIT
	26.09.20	Class test
5th	28.09.20	controlled rectifier technique
	29.09.20	-DO-
1st	1.10.20	single phase half wave controlled converter with R load and RL load
	2.10.20	-DO-
	05.10.20	freewheeling diode, single phase fully controlled converter with R and RL load
2nd	06.10.20	three phase half wave controlled converter with R load
	08.10.20	three phase fully controlled converter with R load
	09.10.20	working of single phase AC regulator
	10.10.20	Principle of step of step down chopper
3rd	12.10.20	IST INTERNAL
	14.10.20	IST INTERNAL
	15.10.20	IST INTERNAL
	16.10.20	control mode of chopper

	17.10.20	operation of chopper in all 4 quadrant
4th	19.10.20	DO
	20.10.20	Classify inverters
	22.10.20	working of series inverter
	23.10.20	working of parallel inverter
5th	27.10.20	working of single phase bridge inverter
	29.10.20	explain basic principle of cyclo converter
	30.10.20	working of step up step down cyclo converter
	31.10.20	DO
1st	2.11.20	Application of cyclo converter
	3.11.20	Class test
	5.11.20	List application of power electronics circuit
	6.11.20	list the factor affecting the speed of DC motor
	7.11.20	speed control of DC motor using converter
2nd	9.11.20	speed control of DC motor using chopper
	10.11.20	List the factor affecting the speed of AC motor
	12.11.20	Speed control of induction motor by using AC voltage regulator
	13.11.20	Speed control of induction motor by using converter and inverter
	13.11.20	class test
3rd	16.11.20	working of UPS with block diagram
	17.11.20	Battery charger circuit using SCR
	19.11.20	Working and application of SMPS
	20.11.20	Introduction to PLC
	21.11.20	Advantages and Application of PLC
4th	23.11.20	Different parts of PLC with block diagram and its working
	24.11.20	class test
	26.11.20	ladder diagram
	27.11.20	DO
	28.11.20	Description of contacts and coils
5th	30.11.20	PLC instruction set
1st	01.12.20	Ladder diagram for AND OR and NOT gate
	3.12.20	Ladder diagram for combination circuit using NAND NOR AND OR gate
	04.12.20	Timers T-ON T-OFF RTO
	05.12.20	Counter CTU,CTD
2nd	07.12.20	LADDER DIAGRAM USING TIMER AND COUNTER
	08.12.20	ladder diagram for star delta and DOL starter, staircase lighting, traffic light control, temperature control
	10.12.20	DO

	11.12.20	basics DCS and SCADA system
	12.12.20	Computer control Data Acquisition, Direct digital control system
HOD		PRINCIPAL