

YEAR/ SEM : III/II B.TECH (R-15)
LAB CODE/LAB NAME : A60291 POWER ELECTRONICS & SIMULATION LAB
INCHARGE (TEACHER/LAB STAFF) : CH VENKATESH/ K NARESH

CYCLE-I

1. STUDY OF CHARACTERISTICS OF SCR, MOSFET AND IGBT.
2. GATING FIRING CIRCUITS FOR SCR
3. SINGLE PHASE AC VOLTAGE CONTROLLER WITH R & RL LOAD
4. SINGLE PHASE FULLY CONTROLLED CONVERTER WITH R & RL LOAD.
5. FORCED COMMUTATIONS CIRCUITS (CLASS A, CLASS B, CLASS C, CLASS D, CLASS E)
6. DC JONES CHOPPER.
7. SINGLE PHASE PARALLEL INVERTER.
8. SINGLE PHASE CYCLOCONVERTER WITH R & RL LOADS.

CYCLE-II

9. SINGLE PHASE HALF CONTROLLED BRIDGE CONVERTER WITH R LOAD.
10. THREE PHASE HALF CONTROLLED BRIDGE CONVERTER WITH R LOAD
11. SINGLE PHASE SERIES INVERTER.
12. SINGLE PHASE BRIDGE CONVERTER WITH R & RL LOAD.
13. SINGLE PHASE DUAL CONVERTER WITH R LOAD
14. OPERATION OF MOSFET BASED CHOPPER
15. SIMULATION OF SINGLE PHASE FULL CONVERTER USING RLE LOAD AND SINGLE PHASE AC VOLTAGE CONTROLLER USING RLE LOAD.
16. SIMULATION OF RESONANT PULSE COMMUTATION CIRCUIT AND BUCK CHOPPER.
17. SIMULATION OF SINGLE PHASE INVERTER WITH PWM CONTROLLER

S.No	Equipment	Quantity	Specifications	Image
1	SCR, MOSFET AND IGBT	1	CHARACTERISTICS	
2	SCR KIT	1	GATE FIRING	
3	AC VOLTAGE CONTROLLER	1	1-PHASE	
4	FULLY CONTROLLED CONVERTER	1	1-PHASE	
5	FORCED COMMUTATION	1	KIT	

6	DC JONES	1	CHOPPER	
7	1-PHASE INVERTER	1	PARALLEL	
8	1-PHASE INVERTER	1	SERIES	
9	SYCLO CONVERTER	1	1-PHASE	
10	FULL/HALF CONTROLLED BRIDGE	1	3-PHASE	