

CHAPTER-1

UNDER STAND THE CONSTRUCTION AND WORKING OF POWER ELECTRONICS DEVICES

- 1.Explain the construction and operation of power diode?
- 2.Explain the construction and operation of power diode?
- 3.Draw the VI characteristics of SCR and Power Diode?
- 4.Explain different protection scheme of SCR?
- 5.Explain the gate protection of SCR?
- 6.What is the two transistor analogy of SCR?
- 7.Draw the switching characteristics of SCR?
- 8.Explain over voltage and over current protection of SCR?
- 9.What is snubber circuit?
- 10.Explain different turn off method of SCR?
- 11.Draw the VI characteristics of DIAC and TRIAC?
- 12.Explain the construction and operation of Power Mosfet?
- 13.Explain different firing Circuit?
- 14.What is UJT pulse triggering?
- 15.Explain the gate protection Scheme of SCR?

CHAPTER-2

UNDERSTAND THE WORKING OF CONVETER AC REGULATOR AND CHOPPERS

- 1.Explain the single phase fully controlled converter with resistive load?
- 2.Explain the single phase fully controlled converter with RL Load?
- 3.Explain why we need free wheeling diode?
- 4.Explain the working of three phase half wave controlled converter with Resistive Load?
- 5.What are different control mode of chopper?
- 6.Explain the operation of chopper in all four quadrant?
- 7.Explain the working of step up and Step down chopper?
- 8.What are different control technique of a rectifier?
- 9.Explain the working of a single phase AC Regulator?
- 10.Explain the working of three phase fully controlled converter with Resistive load?

CHAPTER -3

UNDER STAND THE INVERTERS AND CYCLO CONVETER

1. Clasiify different types of inverters?
- 2.Explain the working of single phase step up cyclo converter?
- 3.What is cyclo converter ?
- 4.Explain the working of single phase step down cyclo converter?
- 5.Explain the basic principle of Cyclo-Converter?
- 6.Explain the working of series inverter?
- 7.Explain the working of parallel inverter?
- 8.Explain the working of single phase bridge Inverter?
- 9.What is voltage source inverter?
- 10.What is current source inverter?

CHAPTER -4

UNDER STAND APPLICATION OF POWER ELECTRONICS CIRCUITS

- 1.What is Switch mode power supply?
- 2.Explain the working and application of SMPS?
- 3.What is online UPS?
- 4.What is off-line UPS?
- 5.Explain the working of UPS with Block Diagram?
- 6.Explain how SCR is used as Battery Charger?
- 7.Explain the speed control DC shunt motor using Chopper?
- 8.Explain the speed control of DC shunt motor using Converter?
- 9.Explain the speed control Induction Motor by using converter and inverters by (v/f control)?
- 10.Write down how speed of Induction motor controlled by AC Voltage Regulator?

CHAPTER -5

PLC AND ITS APPLICATION

1. What is PLC and What is the advantage of PLC?
2. Explain different part of PLC by drawing block diagram of each part of PLC?
3. Describe the ladder diagram for a)
AND gate
b) OR gate
c) NOT gate
4. Draw the ladder diagram of following
 - a) DOL starter and STAR-DELTA starter
 - b) Stair case lighting.
 - c) Traffic light control
 - d) Temperature Light control
5. What is differences between CTU and CTD?