



- b) Current controlled device
  - c) Frequency controlled device
  - d) None of the above
- Q.5 When a SCR is in the forward blocking state
- a) All the 3 junctions are reverse biased
  - b) The anode and cathode junctions are forward biased but the gate junction is reverse biased.
  - c) The anode junction is forward biased but the cathode and gate junctions are reverse biased
  - d) The anode and gate junctions are forward biased but the cathode junction is reverse biased
- Q.6 If gate current is increased, the anode-cathode voltage at which SCR conducts is .....
- a) Increased                      b) Decreased
  - c) Maximum                      d) Least
- Q.7 The three terminals of MCT
- a) Anode, cathode, gate
  - b) Collector, emitter, gate
  - c) Drain, source, base
  - d) Drain, source, gate
- Q.8 Chopper converts
- a) AC to DC                      b) DC to AC
  - c) DC to DC                      d) AC to AC
- Q.9 A single phase full wave fully controlled bridge converter uses
- a) 4SCRs                      b) 6SCRs
  - c) 2SCRs                      d) 3SCRs

- Q.10 A TRIAC is a ..... switch
- a) Bidirectional                      b) Unidirectional
  - c) Manual                      d) None of the above

### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What is the duty cycle of a chopper?
- Q.12 Latching current for the GTOs is ..... as compared to conventional thyristors. (Fill in the blank)
- Q.13 What do you mean by triggering of SCR?
- Q.14 Draw the symbol of UJT.
- Q.15 Why heat sinks are used?
- Q.16 Write the full form of SCS and draw its symbol.
- Q.17 What is LDR?
- Q.18 How many SCRs are needed in a half-wave single-phase controlled rectifier?
- Q.19 Define holding current.
- Q.20 How many modes of operation are there for a TRIAC?

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Differentiate between natural and forced commutation.
- Q.22 Why series operation of SCRs is needed?
- Q.23 What is the meaning of the term phase control?
- Q.24 Why fly wheeling diode is used in rectifiers?