

- Q.18 What is an Inverter? Explain the working of series Inverter.
- Q.19 Explain the working principle of Single Phase Half Wave Converter Drives.
- Q.20 Write a short note on Voltage Source Inverter Drive.
- Q.21 Explain the working of Off-Line UPS.
- Q.22 Explain Battery Charger circuit using SCR with the help of a diagram.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 What is Tiggering? What are the methods of Tiggering? Explain Gate Triggering.
- Q.24 What is Chopper? Explain types of choppers in detail.
- Q.25 Explain working principle of VFD with the help of block diagram.

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3rd Sem / Branch : Automation & Robotics Subject:- Drives and Control System

Time : 3Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 A SCR is a
- a) Two layer two junction device
 - b) Three layer two junction device
 - c) Four layer three junction device
 - d) Four layer four junction device
- Q.2 TRIAC is equivalent to
- a) Two SCRs connected in parallel
 - b) Two SCRs connected in anti-parallel
 - c) One SCR, one Diode connected in parallel
 - d) One diode, one SCR connected in anti-parallel
- Q.3 A single phase full wave fully controlled bridge rectifier uses_____

- a) 4 SCRs b) 6 SCRs
- c) 2 SCRs d) 8 SCRs

Q.4 A Class-E chopper can operate in

- a) 1st and 2nd quadrant
- b) 2nd and 3rd quadrant
- c) 1st and 4th quadrant
- d) All of the four quadrant

Q.5 Field control method is used in DC Motors to get

- a) Speed above normal speed
- b) Speed below normal speed
- c) Both a and b
- d) None of the above

Q.6 The power supply which is used to get continuous power supply for load is known as

- a) Regulated power supply
- b) Unregulated power supply
- c) Uninterruptible power supply
- d) Switched Mode Power supply

SECTION-B

Note: Objective type questions. All questions are compulsory. (6x1=6)

Q.7 Draw the symbol of DIAC

Q.8 Define Commutation.

Q.9 The speed of motor increases with the increase in _____

Q.10 In a Dual Converter, one converter operates as _____ and other as _____

Q.11 SMPS stands for _____

Q.12 A inverter converts _____ into _____

SECTION-C

Note: Short answer type questions. Attempt any Eight questions out of ten questions. (8x4=32)

Q.13 Explain the V-I characteristics of a SCR.

Q.14 Explain the working of UJT as Relaxation Oscillator

Q.15 Explain the working of Fan Regulator using Thyristor.

Q.16 Explain the working of single phase fully controlled full wave bridge rectifier.

Q.17 Differentiate between class A and class B chopper.