SECTION-D

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

Q.23 Draw and explain construction, working and V-I characteristics of SCR. (CO1)

Q.24 Define and classify Inverter? Explain Series parallel and Bridge inverter with neat diagram. (CO3)

Q.25 Define and classify UPS? Explain each type of UPS with neat diagram and list its applications? (CO5)

Roll No. .....

3rd Sem.
Branch : Automation & Robotics
Sub.: Drives & Control Systems

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

Q.1 An SCR is a _____ device: (CO1)

a) Unidirectional b) Bidirectional

c) Tri directional d) All of the above

Q.2 A Diac has (CO1)

a) One terminal b) Two terminals

c) Three terminals d) Four terminals

Q.3 A single _____ phase full wave fully controlled bridges rectifier uses. (CO2)

a) 2 SCRs b) 3 SCRs

c) 4 SCRs d) 6 SCR2

Q.4 A class _____ E chopper can operate in (CO3)

a) 1st and 2nd quadrant b) 2nd & 3rd quadrant

c) 1st & 4th quadrant d) All the four quadrants

Q.5 Field control method is used in DC motor to get (CO4)

a) Speed above normal speed

b) Speed below normal speed

c) Both A & B

d) None of above

Q.6 Uninterruptible power supply is used in (CO5)

a) Computers

b) Communications links

c) Essential instrumentation

d) All of the above

SECTION-B

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

Q.7 An SCR is a _____ layer _____junction device. (CO1)

Q.8 A DIAC is used to _____ TRIAC. (CO1)

Q.9 The use of freewheeling diode improves the waveshape of _____. (CO2)

Q.10 The device which convert DC into AC is _____. (CO3)

Q.11 DC motor provide _____ starting torque. (CO4)

Q.12 SMPS stands for _____. (CO5)

SECTION-C

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

Q.13 Explain the two transistor analogy of an SCR. (CO1)

Q.14 Explain fan speed control circuit using Traic. (CO1)

Q.15 Explain the working of Single Phase fully controlled full wave rectifier. (CO2)

Q.16 Explain the single phase half wave controlled rectifier with resistive and inductive load. (CO2)

Q.17 What is Chopper? Explain types of chopper. (CO3)

Q.18 What are the advantages and disadvantages of AC drives. (CO4)

Q.19 Explain the working of DC Chopper drive in Regenerative Braking mode. (CO4)

Q.20 What is VFD? Draw and explain its various blocks? (CO4)

Q.21 Write any four difference between ON Line UPS and OFF Line UPS. (CO5)

Q.22 Explain the working principle of SMPS with its application. (CO5)