

No. of Printed Pages : 4
Roll No.

221044

**4th Semester/ECE, ECE
(For Speech & Hearing Impaired)
Subject: Power Electronics**

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 The silicon Controlled Rectifier (SCR) is a _____ device.
- a) Unidirectional
 - b) Bidirectional
 - c) Tri directional
 - d) Multidirectional
- Q.2 The triac is _____.
- a) Like a unidirectional SCR
 - b) Like a bidirectional SCR
 - c) Not a thyristor
 - d) A four-terminal device
- Q.3 In a SCR, the 'holding current' refers to _____.
- a) The maximum current an SCR can with stand
 - b) The minimum current needed to keep the SCR in the ON state
 - c) The current flowing through the gate terminal
 - d) The current flowing through the anode terminal

Q.4 After peak point, the UJT operates in the _____ region.

- a) Saturation
- b) Cut-Off
- c) Negative resistance
- d) None of the above

Q.5 In a three phase (50 Hz) full converter, the ripple frequency in output voltage?

- a) 50 Hz
- b) 300 Hz
- c) 350 Hz
- d) 100 Hz

Q.6 Material used for making solar cell is _____

- a) Silicon
- b) Carbon
- c) Sodium
- d) Magnesium

SECTION-B

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

Q.7 DIAC stands for _____.

Q.8 An SCR is a _____ controlled device.

Q.9 An inverter converts _____.

Q.10 Write the full form of UPS.

Q.11 The SCR is a _____ layer device.

Q.12 A solar cell converts light energy into _____.

SECTION-C

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

Q.13 Explain any one method of SCR triggering.

Q.14 Write a note on selection of heat sink for thyristors?

Q.15 Explain series inverter.

Q.16 Write a note on role of power electronics?

Q.17 Define electric drives. Write any two disadvantages of AC drive over DC drive.

Q.18 How SCR works as switch, explain.

Q.19 Draw and explain V-I characteristics of UJT.

Q.20 List the components of solar power plants.

Q.21 Write short note on concept of high voltage DC transmission.

Q.22 Explain Fan regulator control using thyristor.

SECTION-D

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

Q.23 Explain construction and working principle of SCR.

Q.24 Define online and offline UPS. Explain the working of – online UPS. 4+4

Q.25 Write short notes on :

- a) Step down choppers.
- b) Dual converters.