

Electronics and Telecommunication Department

Course Code: ETU503

Date: 05/08/2016

Time: 12.00-1.00 p.m.

Course: Power Electronics

Duration: 1Hr

Max. Marks: 15

CT - I

Attempt any THREE of the following

1. Draw the Gate Characteristics and SCR static characteristics. And explain Gate Characteristics. 05
2. Mention the types of commutation. How class D commutation works. 05
3. What are the problems related with series connected SCRs? How will resolve the problem. 05
4. Write a short note on surge suppressor. 05

GOVERNMENT COLLEGE OF ENGINEERING, AMRAVATI

(An Autonomous Institute of Govt. of Maharashtra)

Electronics and Telecommunication Department

Class Test I

Sub: ETU 503

POWER ELECTRONICS

Marks: 15

Date: 6th Aug, 2015

Q1. Draw and explain the gate characteristics of an SCR in detail

4M

Q2. Explain the following current ratings of SCR

4M

- Average on state current
- Surge current rating
- Holding current
- Latching current

Q3. Draw the basic structure of IGBT with its symbols and explain its operation

3M

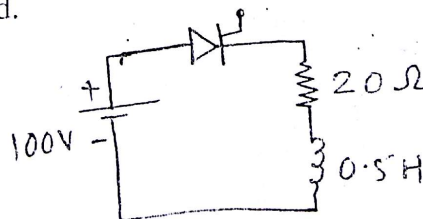
OR

Q4. Explain the operation and output characteristics of P-channel E-MOSFET

3M

Q5. The latching current of thyristor is 5mA. the duration of the firing pulse is 40us, will the thyristor get fired.

4M



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13 10

- Q1. Draw and explain the gate characteristics of an SCR in detail
Q2. Explain the following current ratings of SCR

4M
4M

3
2

- a. Average on state current
b. Surge current rating
c. Holding current
d. Latching current

Q3. Draw the basic structure of IGBT with its symbols and explain its operation

4M

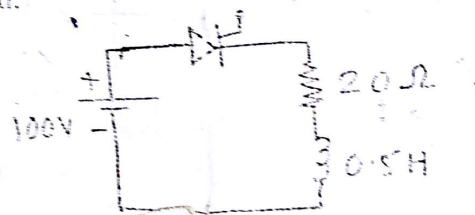
OR

- Q4. Explain the operation and output characteristics of P-channel E-MOSFET
Q5. The latching current of thyristor is 5mA. the duration of the firing pulse is 40us. will the thyristor get fired.

4M
3M

2M
2M

10mA



256
Electronics and Telecommunication Department

Course Code: ETUS03

Date: 04/08/2017

Time: 12.00 - 1.00 p.m.

Course: Power Electronics

Duration : 1 Hr

Max Marks: 15

CT - 1

Attempt the following

1. Explain static characteristics of an SCR. Define all important terms related to it. 5
2. Draw the waveforms for single phase bridge rectifier with inductive load. 5
Also derive an expression for output voltage
3. Discuss the working of three phase bridge rectifier with resistive load in discontinuous conduction mode. 5