

Total No. of Questions: 08

M.Tech.(Power System) (E-II 2013) (Sem.-2) ADVANCED POWER ELECTRONICS

Subject Code: MTPS-205A M.Code: 71374

Time: 3 Hrs. Max. Marks: 100

INSTRUCTION TO CANDIDATES:

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carries TWENTY marks.
- 1. Compare IGCT and GTO. Explain turn 'OFF' process of IGCT.
- 2. What are different breakdown processes in semiconductors? Describe avalanche breakdown in detail.
- 3. With the help of a neat diagram explain the working of IGBT. Compare IGBT and power MOSFET
- 4. Draw and explain V-I characteristics of filed control thyristor.
- 5. Write a note on new semiconductor materials for power devices.
- 6. What are different types of Snubber circuits? Draw neat and labeled circuit diagram of each type of Snubber circuit.
- 7. What is necessity of drive circuits? Discuss about de-coupled drive circuits.
- 8. Write short notes on the following:
 - (a) Power junction field-effect transistor.
 - (b) Power device protection in drive circuits.

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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