

D 70301

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Name.....

Reg. No.....

**FIFTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE
EXAMINATION, NOVEMBER 2014**

AI 09 505—POWER ELECTRONICS

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

Each question carries 2 marks.

1. What is power transistor ?
2. What is MCT ?
3. Define power factor.
4. What is a chopper ?
5. What is an isolation amplifier ?

(5 × 2 = 10 marks)

Part B

Answer any four questions.

Each question carries 5 marks.

1. Explain an application each for GTO and power MOSFET.
2. What are power diodes ? Briefly explain its types.
3. Explain a method for power factor improvement.
4. Explain the classification of choppers.
5. Write notes on switched mode power supply.
6. Briefly explain on synchronization circuits.

(4 × 5 = 20 marks)

Part C

Answer all questions.

Each question carries 10 marks.

1. Explain the working of TRIAC with its characteristics and explain one application of it.

Or

2. Explain the working of SCR with its characteristics and explain one application of it.

Turn over

3. Explain the working of three-phase convertor circuit.

Or

4. Explain the working of cyclo convertor.

5. Explain about MOSFET/IGBT choppers.

Or

6. Explain the working of McMurray Bedford inverter.

7. Explain the working of buck boost regulators.

Or

8. Explain simple drive circuits using power BJT, MOSFET and IGBT.

(4 × 10 = 40 marks)