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## EC-5005 (3) (CBGS)

### B.E. V Semester

Examination, December 2017

### Choice Based Grading System (CBGS)

### Industrial Electronics

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Discuss the principle working of Bridge type full wave rectifier.  
b) Discuss the principle working of series and shunt voltage regulator.  
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2. a) Discuss the constructional features and principle of operation of silicon controlled rectifier.  
b) Compare thyristor and transistor.
3. a) Discuss the triggering methods of SCR circuits.  
b) Discuss the principle working of three phase full wave rectifier.

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4. a) Explain the working of Diacs and Triacs.  
b) Discuss the working of power MOSFET.

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5. a) Discuss the principle working of Insulated Gate Bipolar Transistor (IGBT).  
b) Compare between power MOSFET, power transistor and power IGBT.
6. a) Explain the application of Op-Amp as Wien bridge oscillator.  
b) Discuss the application of Op-Amp in function generator.
7. a) Discuss the function and application of PLC.  
b) Discuss about the simple process control applications of PLC.
8. Write short notes on any two of the following:
  - a) SMPS
  - b) Quadracs
  - c) Line commutated converters

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