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**EC-601 (GS)****B.E. VI Semester**

Examination, December 2017

**Grading System (GS)****Industrial Electronics***Time : Three Hours**Maximum Marks : 70*

- Note:* i) Attempt any five questions.  
ii) All questions carry equal marks.

1. What are the requirements of a regulated power supply? Draw the block diagram for the same.
2. Compare linear and switched mode power supply with diagrams.
3. List the types of commutation methods. Describe any one of them with neat sketches.
4. Draw the dynamic characteristics of an SCR (Turn-on and turn-off) and explain the same.
5. Compare power transistor with power IGBT.

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6. Draw the switching characteristics of an power diode and explain.
7. Draw the circuit diagram of a Wein-bridge oscillator using op-amp, and derive the expression for frequency of oscillation.
8. Answer any four of the following:
  - a) What is the function of a bleeder resistor explain with diagram.
  - b) What are the various turn-on methods of an SCR? Describe any one of them.
  - c) How power transistor is different from a ordinary transistor?
  - d) Draw the circuit diagram of an integrator using op-amp.
  - e) List industrial applications of PLC.
  - f) Write relative merits and demerits of PLC over conventional relay controllers.

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