



C09-EE-604

**3765**

**BOARD DIPLOMA EXAMINATION, (C-09)  
OCTOBER/NOVEMBER-2018  
DEEE-SIXTH SEMESTER EXAMINATION**

POWER ELECTRONICS

Time : 3 Hours ]

[ Total Marks: 80

**PART-A**

3X10=30

- Instructions :**
1. Answer **All** questions.
  2. Each question carries **Three** marks.
  3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Draw the SCR firing circuit using UJT.
2. Compare SCR and LASCR in three aspects.
3. Draw the Volt-Ampere Characteristics of power BJT.
4. State the need of Freewheeling Diode.
5. State the applications of Choppers.
6. State the any three applications of Cyclo-Converts.
7. State the factors affecting the speed control of A.C. Motors.
8. State the factors affecting the speed of a D.C Motor.
9. Draw the Light Dimmer Circuit using DIAC and TRIAC.
10. State the Classifications of UPS.

## PART-B

10X5=50

*Instructions* : \*

1. Answer any **Five** questions
  2. Each question carries **ten** marks.
  3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.
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11. State the need of commutation of SCR and explain any one method of Commutation of SCR.
  12. Explain the forward bias and Reverse bias characteristics of SCR.
  13. Explain the control methods of Chopper with neat sketches.
  14. Explain the working of Single-Phase Half-wave fully Controlled converter with Resistive Load.
  15. Explain the working of a Simple Series Inverter.
  16. Explain the Working Single-Phase A.C.Voltage controller with a Sketch.
  17. Draw and Explain the Battery Charger Circuit using SCR.
  18. (b) Explain the working of TRIAC
    - (a) Draw the block diagram of ON-line UPS

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