



C09-EC-605

**3761**

**BOARD DIPLOMA EXAMINATION, (C-09)  
APRIL/MAY—2015  
DECE—SIXTH SEMESTER EXAMINATION  
INDUSTRIAL ELECTRONICS**

*Time : 3 hours ]*

*[ Total Marks : 80*

---

**PART—A**

3×10=30

**Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Draw the symbols of the following :
  - (a) DIAC
  - (b) SBS
  - (c) SCS
2. Draw the VI characteristics of DIAC.
3. Give any three advantages of GTO SCR over SCR.
4. Classify the converters in any two aspects.
5. Write the need of free wheeling diode in converter.
6. List three applications of AC regulator.
7. Classify inverters based on type of output voltage and type of connection.

/3761

1

[ *Contd...*

[WWW.MANARESULTS.CO.IN](http://WWW.MANARESULTS.CO.IN)

8. List the factors affecting speed of DC motor.
9. List three applications of inverter.
10. Mention the methods of generating ultrasonic waves.

**PART—B**

10×5=50

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **ten** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.
11. Explain the constructional details and VI characteristics of TRIAC with neat diagram.
  12. Explain the triggering of SCR using UJT with neat diagram and waveforms.
  13. Explain the working of single phase, half wave fully controlled converter using *R-L* load with neat sketch.
  14. Explain the operation of chopper in all four quadrants.
  15. Explain the operation of parallel inverter with neat sketch.
  16. Draw and explain the speed control of induction motor using voltage-frequency control.
  17. Explain the working of capacitive transducer with diagrams.
  18. Draw and explain the construction, working principle of thermocouple transducer.

★ ★ ★