C09–EC–**605**

3761

BOARD DIPLOMA EXAMINATION, (C–09)
OCT/NOV—2018
DECE—SIXTH SEMESTER EXAMINATION

INDUSTRIAL ELECTRONICS

Time : 3 hours]　　　　　　　　　　　　　　　[*Total Marks* : 80

PART—A　　　　　　　　　　　　10×3=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) TRIAC

(b) GTO SCR

(c) LASCR

2. Define turn-on time and turn-off time of SCR.

3. List any six applications of Power Electronic Devices.

4. What is an AC regulator?

5. What is the need of free wheeling diode?

6. List three applications of chopper.

7. What is a converter?

8. Mention three factors affecting speed of DC motor.

9. List the types of inverters.

10. Define the guage factor of strain guage.

PART—B   5×10=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

11. Explain the working of SCR using two-transistor analogy.

12. Explain the working of SMPS with neat block diagram.

13. Explain the working of single phase, fully controlled converter using R-L Load with neat sketch.

14. Explain the working principle of chopper in detail with neat sketch.

15. Explain the single phase bridge inverter using MOSFET with neat sketch.

16. Explain the speed control of DC shunt motor using chopper with neat sketch.

17. Explain construction and working of LVDT.

18. Explain magnetostriction oscillator as ultrasonic generator.

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