C14–EC–**602**

4736

BOARD DIPLOMA EXAMINATION, (C–14)
OCT/NOV—2018
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 used for *(a)* GTO SCR, *(b)* DIAC and *(c)* IGBT

2. Distinguish between SUS, SBS and LASCR in any 3 aspects.

3. Define gauge factor of a strain gauge.

4. Mention the applications of LVDT.

5. List the applications of induction heating.

6. Mention the applications of resistive welding.

7. List the types of PLCs.

8. Draw the ladder logic symbols for:

(a) Solenoid valve

(b) Latch coil

(c) Push button open

9. Define transfer function.

10. What are the requirements of good control system?

PART—B 10×5=50

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

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

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

11. (a) Draw and explain the volt-ampere characteristics of Dirac and Triac.

(b) Compare between LASCR and SCR.

12. Explain the working of SMPS with block diagram.

13. Explain the construction, working principle and applications of capacitive transducers.

14. Draw and explain pulsed–echoultrasonic flaw detector.

15. (a) Explain the principle of dielectric heating.

(b) Mention the applications of dielectric heating.

16. Draw the basic circuit of AC resistive welding and explain its working.

17. Explain the working of PLC on SCAN method.

18. Explain the closed loop control system with the help of a block diagram.

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