* 4736 *

C14–EC–602

4736

BOARD DIPLOMA EXAMINATION, (C–14)

SEPTEMBER/OCTOBER - 2020

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. Write any four applications of DIAC.

2. Draw the symbols for SBS, SCS and LASCR.

3. List the applications of LVDT.

4. Mention the methods of generating ultrasonic waves.

5. Compare induction heating and dielectric heating methods in three aspects.

6. Mention the applications of resistive welding.

7. State the need for PLC.

8. Draw any three ladder logic symbols.

9. Define transfer function.

10. Compare open-loop and closed-loop control systems in any three aspects.

PART—B

10×5=50

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

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

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

11. Explain the construction and working of SCR with a neat sketch.

12. Explain the working of SMPS with block diagram.

13. Explain the working principle and construction of thermocouple transducer.

14. Draw and explain the working of pulsed-echo ultrasonic flaw detector with neat diagram.

15. Explain the principle of resistive welding.

16. Explain the electrodes used in dielectric heating and method of coupling to RF generator.

17. Explain the working of PLC on scan method.

18. *(a)* Explain the control system with a neat block diagram.

(b) State the use of Laplace transforms in control system.

★ ★ ★