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C14–EC–602

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BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—2017

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. List any six thyristor family devices.

2. Write any three applications of TRIAC.

3. Write any three applications of strain gauge.

4. Write three applications of capacitive transducer.

5. Define welding. Write any two advantages of welding.

6. Write any three applications of induction heating.

7. Write any three applications of PLC statement lists.

8. What are the different types of PLCs?

9. Write any three differences between open-loop and closed-loop control systems.

10. Define transfer function.

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. Draw and explain the thyristor circuit triggered by UJT with waveforms. 4+4+2=10

12. *(a)* Explain the working of switched mode power supply with block diagram. 4+3=7

(b) Write about the pulse width modulation voltage control of UPS. 3

13. Explain the working principle, construction and applications of LVDT.

14. Explain the application of transducer in servo motors.

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

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

17. Explain about the ladder diagram.

18. Explain open-loop control system with two examples.

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