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BOARD DIPLOMA EXAMINATION, (C-16)

MAY/JUNE—2023

DECE - FIFTH 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 circuit symbols of TRIAC, SUS and SCS.
2. List any three applications of DIAC.
3. State the need of uninterrupted power supply.
4. List any three applications of SMPS.
- * 5. What is piezoelectric effect?
6. List any six applications of ultrasonics.
7. State the principle of dielectric heating.
8. List different types of electrical welding methods.
9. State the need for industrial automation.
10. Mention the merits and demerits of open loop control system.

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PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the construction and working of SCR.
12. Explain the construction and working of UJT.
13. Explain the speed control of DC motor using SCR with waveforms.
14. Explain the PWM voltage control of inverters.
15. Explain the construction and working of LVDT.
16. Draw and explain the construction and working of magnetostriction ultrasonic generator.
17. Draw and explain the HF power source for induction heating and list the advantages.
18. Explain the closed loop control system with block diagram and list two examples.

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