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C16-EC-505**6633**

BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER/NOVEMBER—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. List any three applications of SCR.
2. Define intrinsic stand off ratio of UJT.
3. State the need of inverters.
4. Mention the applications of inverters.
5. Classify transducers based on principle of operation and applications.
6. State magnetostriction effect.
7. List the applications of induction heating.
8. List the applications of dielectric heating.
9. Mention the merits and demerits of closed loop control system.
10. State the need for industrial automation.

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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. Draw and explain two transistor model of SCR with V-I characteristics.
12. Explain the construction and working of DIAC with V-I characteristics.
13. Explain the working principle of controlled rectifier.
14. Explain the working of MOSFET based UPS.
15. Explain the construction and working of LVDT.
16. Draw and explain the construction and working of piezoelectric ultrasonic generator.
17. Explain the basic circuit of AC resistance welding system.
18. Explain the working of *P-L-C* system with a block diagram.

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