6633

BOARD DIPLOMA EXAMINATION, (C-16)

MARCH/APRIL—2021

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 six different thyristor family devices.

2. Distinguish among SVS, SBS and SCS.

3. List the applications of SMPS.

4. Explain the working principle of inverter.

5. Classify transducers based on principle of operation.

6. Explain piezoelectric effect.

7. List applications of dielectrical heating.

8. Classify industrial heating methods.

9. Define transfer function.

10. Give any three examples of closed loop control system.

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 with a neat sketch.

12. Explain construction and working of UJT.

13. Explain different triggering modes of TRIAC with neat diagrams.

14. Explain the working of ON-LINE UPS with neat diagram.

15. Explain the constructional details and working principle of strain gauge.

16. Explain the construction and working of magnetostriction oscillator and explain how ultrasonics are generated.

17. Draw and explain basic circuit for AC resistance welding.

18. Explain PLC system with a block diagram.

★ ★ ★