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C09-EC-605

3761

BOARD DIPLOMA EXAMINATION, (C-09)

JUNE—2019

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 three thyristor family devices.
2. List any three applications of SCR.
3. Draw the V-I characteristics of DIAC.
4. Classify the converters.
5. What is the necessity of free-wheeling diode?
6. What is the working principle of chopper?
7. Classify the inverters.
8. List any three applications of inverters.
9. Mention the factors affecting the speed of DC motors.
10. Define the term ultrasonics.

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[Contd...

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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 the criterion for valuation is the content but not the length of the answer

11. Draw and explain of V-I characteristics of SCR.
12. Draw and explain the block diagram of SMPS.
13. Draw and explain single phase half wave fully controlled converter with resistive load.
14. Explain the operation of single phase ac regulator.
15. Explain the working of voltage source inverter.
16. Explain the speed control of induction motor by using converters and inverters (V/F control).
17. Explain the construction and working principle of LVDT.
18. Explain the working principle of thermocouple transducer and list the applications.

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