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C14-EC-602

4736

BOARD DIPLOMA EXAMINATION, (C-14)

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. Draw the symbols of TRIAC, UJT and RCT devices.
2. Compare SUS and SBS in any three aspects.
3. State any three applications of Strain gauge.
4. List any three uses of MEMS.
5. Classify industrial heating methods.
6. Mention three types of Electric Welding.
7. State any three applications of PLCs.
8. Give three ladder logic symbols.
9. Define system and control system.
10. Give three merits and demerits of open loop control.

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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. Explain the principle of operation and V-I characteristics of SCR with neat sketches.
12. Explain the working of MOSFET based inverter circuit.
13. Explain the working principle of Thermocouple transducer and list any three applications.
14. Explain the working of pulsed-echo ultrasonic flaw detector with a neat sketch.
15. Explain the principle of induction heating and list any three applications.
16. Draw the basic circuit of AC resistive welding and explain its working.
17. Explain architecture of PLC.
18. (a) Classify control systems. 5
(b) Compare open loop and closed loop control systems. 5

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