



C16S-EC-502

5851

BOARD DIPLOMA EXAMINATION, (C-16S)

NOVEMBER - 2019

DECE - V 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) Answer should be brief and straight to the point.

- 1 List any three applications of power electronic devices.
- 2 Write the comparison between BJT and Power BJT.
- 3 Classify the transducers on the basis of applications.
- 4 Write any three applications of strain gauge.
- 5 Define welding.
- 6 List any three applications of dielectric heating.
- 7 Write the need of PLC.
- 8 Draw any six Ladder diagram symbols.

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- 9 Define control system.
- 10 Write any three differences between open loop and closed loop control system.

PART - B

10×5=50

Instructions :

- (1) Answer any FIVE questions.
- (2) Each question carries TEN marks.
- (3) Answer should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11 Explain the construction and volt ampere characteristics of a DIAC with neat diagrams.
- 12 Explain the working of SMPS with block diagram.
- 13 Explain the construction and working principle of a LVDT.
- 14 Draw and explain the Pulsed echo ultrasonic Flaw detector.
- 15 Draw the circuit of HF power source for induction heating and explain its working.
- 16 (a) Explain the principle of resistive welding. 5
(b) Draw and explain the power supply module in PLC. 5
- 17 Explain the basic principle of operation of PLC.
- 18 Explain an open loop control system with any two examples.