



C09-EC-605

3761

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH / APRIL - 2019

DECE - VI 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 Sketch the ISI circuit symbol of SUS, SBS, SCS.
- 2 Mention any three Ratings of SCR.
- 3 List any three applications of power electronic devices.
- 4 Classify converters.
- 5 Draw the circuit of 3- phase half wave controlled converter using resistive load.
- 6 List any three applications of chopper.
- 7 Draw the circuit of three phase inverter.
- 8 List any three applications of inverter.
- 9 List three factors affecting the speed of DC motor.
- 10 Mention any three applications of LVDT.

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[Contd...

PART - B**10×5=50**

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

- 11** (a) Give the constructional details of DIAC. **5**
- (b) Draw and explain the V-I characteristics of DIAC in forward and reverse bias. **5**
- 12** Explain briefly the working of insulated gate bipolar transistor (IGBT) with neat diagram.
- 13** Explain the working of single phase fully controlled converter with R-L load relevant circuit and waveforms.
- 14** Explain the working principle of chopper with circuit and waveforms.
- 15** Explain the principle of AC voltage control using phase control with simple circuit and draw waveform.
- 16** Explain speed control of induction motor by using AC voltage controller with relevant circuit and graphs.
- 17** Explain the working principle and construction of potentiometric transducer.
- 18** Draw and explain pulsed echo ultrasonic flaw detector.
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