



C09-EC-605

3761

**BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2015
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. Give the list of important ratings of an SCR.
2. Explain the working of RCT.
3. Draw the *V-I* characteristics of SCR.
4. List the applications of choppers.
5. List the applications of converters.
6. State the need of freewheeling diode.
7. List the factors affecting the speed of DC motors.
8. Give the classification of inverters.

9. List the ^{*} applications of ultrasonics.

10. Give the classification of transducers.

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 the circuit of SCR triggering using UJT. 5+5=10

12. Explain the construction and working of TRIAC using neat diagrams and *V-I* characteristics. 5+5=10

13. Draw and explain the working of single-phase full-wave fully controlled converter with resistance load. 5+5=10

14. Explain the operation of chopper in all four quadrants. 10

15. Explain the working of single-phase bridge inverter. 10

16. Explain the speed control of induction motor using AC voltage controller. 10

17. Explain the working principle and construction of resistance strain gauge. 10

18. Explain the working principle, construction and applications of LVDT. 4+4+2=10
