



C09-EC-605

3761

**BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2013
DECE—SIXTH SEMESTER EXAMINATION
INDUSTRIAL ELECTRONICS**

Time : 3 hours]

[Total Marks : 80

PART—A

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 different devices in thyristors family.
2. Mention the applications of triac.
3. Draw the block diagram of SMPS.
4. List the applications of chopper.
5. What is the need of free-wheeling diode in converters?
6. Write the classification of converters based on volt-ampere characteristics and types of phases.

*

C09-EC-605

7. Mention the factors that affect the speed of AC motors.
8. List the types of inverters.
9. Draw the schematic diagram of 3- bridge inverter.
10. Mention the applications of thermocouple transducers.

PART—B

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 construction and working of SCR with a neat sketch.
12. Write short notes on the following :
 - (a) SUS
 - (b) SBS
 - (c) SCS
 - (d) LASCR

*

13. Explain the working of single-phase half-wave fully controlled converter with resistive load.
14. Explain the working of 3- fully controlled converter with resistive load.

*

C09-EC-605

- 15.** Explain the operation of three-phase inverter with neat diagram.
- 16.** Explain the speed control of 3- induction motor using AC voltage controllers.
- 17.** Explain the working of pulsed echo ultrasonic flaw detector with the help of neat diagram.
- 18.** Explain the working principle and construction of piezoelectric transducer and strain guage.
