

**B.TECH SEM - III (2007 COURSE) MECHANICAL ENGG./  
PRODUCTION ENGG. : SUMMER - 2018  
SUBJECT: INDUSTRIAL ELECTRONICS AND ELECTRICAL TECHNOLOGY**

Day : **Wednesday**  
Date : **23/05/2018**

**S-2018-2586**

Time : **02.30 PM TO 05.30 PM**  
Max. Marks: 80

---

**N. B. :**

- 1) **Q.No.1 and Q. No.5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions in from each Section.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Answer the both the sections should be written in the **SEPARATE** answer books.
  - 4) Draw neat and well labeled diagram **WHEREVER** necessary.
  - 5) Assume suitable data, if necessary.
- 

**SECTION-I**

- Q.1** a) Explain different application of d.c. motors. (05)  
b) Draw figure of stepper motor and explain. (05)  
c) Draw constructional view of an alternator. (04)
- Q.2** a) Explain different methods of speed control for shunt and series motor. (06)  
b) Draw constructional diagram of d.c. machine and explain different parts. (07)
- Q.3** a) Name starting methods of 3 phase induction motor, explain any one in detail. (06)  
b) Explain A.C. series motor. (07)
- Q.4** a) Explain regulation of an alternator. (06)  
b) Explain different methods of starting of synchronous motor. (07)

**SECTION-II**

- Q.5** a) Explain construction and working of IGBT. (05)  
b) Write a note on sequential timers. (05)  
c) Explain coreless induction type furnace. (04)
- Q.6** a) Discuss operation of light dimmer. (06)  
b) Explain construction and working of SCR. (07)
- Q.7** a) Explain Op-Amp as comparator. (06)  
b) Explain Op-Amp as instrumentation amplifier. (07)
- Q.8** a) Explain principles of LASER and its applications. (06)  
b) Explain Ajax-Wyatt furnace. (07)

\* \* \* \* \*