

Roll No.

Total No. of Pages :02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards E-II) (Sem.-7,8)

MECHATRONICS

Subject Code : DE/ME-3.8

Paper ID : [A3092]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Answer briefly :

- a. Define transducer.
- b. Define mechatronics.
- c. What are the applications of light sensor?
- d. What is pulse modulation?
- e. What are advantages of hydraulic over pneumatic system?
- f. What is the function of solenoid?
- g. Draw diagram of open loop system.
- h. What are the applications of microprocessor?
- i. How analog signal can be converted in to digital signal?
- j. What is solid state switch?

SECTION-B

2. Explain working of DC motor with neat diagram.
3. Write a note on embedding of microprocessor into a mechatronics system.
4. Explain difference between open loop and closed loop control system.
5. What are the various applications of mechatronics in other fields?
6. Explain architecture of microprocessor 8050.

SECTION-C

7. Explain construction and working principle of operational amplifier with neat sketch.
8. Explain multiplexes and digital signal processing.
9. Explain different types of sensors and their applications.

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