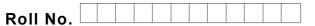
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Total No. of Pages :02

Total No. of Questions : 09

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### B.Tech.(ME) (2011 Onwards E-II) (Sem.-7,8) **MECHATRONICS** Subject Code :DE/ME-3.8 M.Code :72024

# Time: 3 Hrs.

Max. Marks: 60

# **INSTRUCTION TO CANDIDATES :**

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- SECTION-B contains FIVE questions carrying FIVE marks each and students 2. 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 What is solenoid?
- irstRanker.com b. What is the use of RTD?
  - c. What is RVDT?
  - d. What is Load Cell?
  - e. What are the constituent elements of measurement systems?
  - What do you mean by piezoelectric sensor? f.
  - g. Define Mechatronics.
  - h. What is Quick Exhaust Valve?
  - i. Define Error.
  - j. Why are pilot operated valves used?



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### **SECTION-B**

- 2. What is Control Engineering? What is meant by sequential control and illustrate your answer by an example?
- Explain the working of double acting hydraulic actuator with sketch. 3.
- 4. How sensors are selected for the specific use? Discuss various Temperature sensors.
- 5. Explain the architecture microprocessor with neat sketch.
- 6. What are the various types of valves used in pneumatic systems?

#### **SECTION-C**

- 7. Discuss any four types of commonly used transducers with neat sketch.
- 8 What is Operational Amplifier? Discuss various methods of using the operational us www.firstRanker.com amplifiers.
- 9. Write short noteson :
  - Stepper Motor а
  - b. Proximity sensor

**NOTE** : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.