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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (E-I 2011 Onwards) (Sem.-6) **MECHATRONICS** Subject Code : DE/ME-3.8 Paper ID : [A2429]

Time: 3 Hrs.

Roll No.

INSTRUCTION TO CANDIDATES :

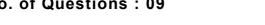
- SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks 1. each.
- SECTION-B contains FIVE questions carrying FIVE marks each and students 2. have to attempt any FOUR questions.
- SECTION-C contains THREE questions carrying TEN marks each and students 3. have to attempt any TWO questions.

SECTION-A

1. Answer briefly :

- a. What are the constituent elements of measurement systems? 1stRanke
- b. Define resolution.
- c. What is proximity sensor?
- d. Define hysteresis error.
- e. Define Op Amp.
- f. What is a servo motor?
- g. What is transducer?
- h. Draw the symbol of Twin pressure valve.
- i. What do you understand by solid state switches?
- j. What is ADC?





Max. Marks: 60



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SECTION-B

- 2. Differentiate between measurement and control system.
- 3. What is procedure for selection of transducers?
- 4. Differentiate between hydraulics and pneumatics.
- Explain the functioning of differential operational amplifier. 5.
- 6. Explain the control methodology and functioning of stepper motor.

SECTION-C

- 7. What is actuation system? Discuss the linear actuators with the aid of neat sketch.
- 8. Discuss the any four displacement sensors with their diagrams.
- 9. Write short note on :
- www.FirstRanker.com a. Pulse-modulation
 - b. Light sensors