P5342

[6187]-523A
T.E. (Robotics & Automation Engineering) (Insem)
SENSORS TECHNOLOGY
(2019 Pattern) (Semester - I) (311504 (A))

Time : 1 Hour]   *[Max. Marks : 30*

Instructions to the candidates:

  1)   *All questions are compulsory i.e. Solve Q.1 or Q.2, Q.3 or Q.4.*

  2)   *Assume suitable data, if necessary.*

  3)   *Use of electronic pocket calculator is allowed.*

  4)   *Neat diagrams must be drawn wherever necessary.*

Q1) a)   What is DAQ (Data Acquisition System)? Explain with the block diagram. **[8]**

  b)   Explain Active and Passive transducer with a suitable examples. **[7]**

OR

Q2) a)   What is Signal Conditioning Circuit? Explain different types of Signal Conditioning Circuit. **[8]**

  b)   Explain basic principle of Transducer with suitable block diagram. Write different characteristics of Transducers. **[7]**

Q3) a)   Explain basic principle of MEMS microphone. Write a different applications of MEMS. **[8]**

  b)   Write short note on the following with a suitable examples. **[7]**

   i)   Transduction methods

   ii)   Transducer and Inverse Transducer

OR

Q4) a)   Explain Calorimetric sensor with suitable diagram. Explain how calorimetric sensor is used to detect the glucose in solvent. **[8]**

  b)   Explain the working principle of pellistor. Write several applications of pellistor. **[7]**

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