Oct-22/TE/Insem - 623

T.E. (Robotics and Automation Engineering)
SENSORS TECHNOLOGY
(2019 Pattern) (Semester - I) (311504(A))

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

1) *Solve Q.1 or Q.2, Q.3 or Q.4*
2) *Figure to the right indicates full marks.*
3) *Neat diagram must be drawn wherever necessary.*
4) *Assume Suitable data if necessary.*
5) *Use of Logarithmic Table, Slide rule is Electronic pocket calculator is allowed*

Q1) a) Explain Precision Op-amp with their Characteristics. **[7]**

 b) Explain in detail Performance Characteristics of Sensor. **[8]**

OR

Q2) a) What is DAS explain with suitable diagram **[7]**

 b) Write a short note on

  i) Conditioning bridge circuit

  ii) Amplifying and Linearizing bridge outputs **[8]**

Q3) a) Explain in detail Accelerometer **[7]**

 b) Explain the following terms **[8]**

  i) Cell Based Biosensor

  ii) MEMS Microphones

OR

Q4) a) Explain in detail different types of Transduction methods used in Sensor **[7]**

 b) Write a short note on **[8]**

  i) Mechanical Actuator

  ii) Molecule based Biosensor