

R18

Code No: 157EN

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, February/March - 2022

ELECTRONIC SENSORS

(Common to CE, ME, EIE)

Time: 3 Hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) How will you select the transducers for our need?
b) Distinguish between precision and accuracy. [7+8]
2. Classify the different types of transducers. Explain the basic requirements of a transducer. [15]
- 3.a) Mention the Construction of Gas thermometric sensors and explain the applications of it.
b) Write a short note on thermal infrared sensor. [7+8]
- 4.a) Discuss about the working principle of acoustic temperature Sensor.
b) Mention the Construction of Heat Flux sensors and explain the applications of it. [7+8]
5. Explain the principle of Angular Movement Transducers. Derive the relevant mathematical expressions. Explain the working of it. [15]
- 6.a) Discuss the working principle of Magneto-resistive sensors.
b) Write about Hall effect sensors. [8+7]
- 7.a) What are electro analytic methods?
b) Explain the Concept of nuclear radiation sensors. [7+8]
- 8.a) Explain the different sensors for environmental monitoring.
b) What is the difference between sensor and smart sensor? [7+8]

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