

Code No: 138GY

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, September - 2020

SENSORS AND TRANSDUCERS

(Common to EEE, CSE, IT)

Time: 2 Hours

Max. Marks: 75

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

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- 1.a) Give the classification of transducers. Explain the basic requirements of a transducer.
b) Distinguish between precision and accuracy. [10+5]
2. Indicate the basic stages that constitute a measuring system and explain their functions. [15]
3. State various dynamic characteristics of a transducer and elaborate each characteristic. [15]
4. Obtain the response of a transducer for (a) impulse and (b) step inputs. [15]
5. Explain the construction and working of Bonded and unbonded strain gauges. [15]
6. Explain the working of Hot wire anemometer and its application for the measurement of flow rate of fluids. [15]
- 7.a) Discuss the principle of operation of a LVDT. Also, state its advantages and disadvantages.
b) Explain the working principle of capacitor microphone. [12+3]
8. Explain the working principle and applications of the Hall-Effect transducers. [15]

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