

Code No: 137DN

**R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, October/November - 2020

**INSTRUMENTATION AND CONTROL SYSTEMS**

(Common to ME, AME)

Time: 2 Hours

Max. Marks: 75

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

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1. Considering mercury thermometer as an example, give the functional description of various elements. [15]
2. Explain the construction and working of capacitance transducer for displacement measurement. [15]
3. With the help of a diagram explain the construction and working of optical pyrometer. [15]
4. Explain the use of thermal conductivity gauges for low pressure measurement. [15]
5. Give the constructional details of bubbler level indicator and explain its working. Also, list out its advantages over other level measuring techniques. [15]
6. Give the functional description of various elements of piezo electric accelerometer. [15]
7. What are elastic force meters? Explain their construction and working. [15]
- 8.a) Differentiate between open loop and closed loop control systems.  
b) Explain the rules governing the construction of block diagrams. [7+8]

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