

Code No: 09A70304

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, June/July - 2014

INSTRUMENTATION AND CONTROL SYSTEMS

(Common to ME, AME)

Time: 3 Hours

Max. Marks: 75

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

1. What are the different sources of errors in measuring instruments? Suggest and explain the methods for elimination or minimization of the errors.
2. Explain the principle of working of a pyrometer. With the help of neat sketches explain a pyrometer and state its advantages of the same.
3. With the help of line diagrams explain the construction, working and advantages of thermal conductivity gauges.
4. What is the principle of working of magnetic flow meter? What are its advantages over other types of flow meters?
5. Explain the construction, working and applications of vibrometer.
6. Explain the use of electrical strain gauges for bending strains.
7. Give the classification of dynamometers. Explain how dynamometers can be used to measure the forces acting in different directions in a machine tool.
- 8.a) Explain the advantages of open loop control.
b) Discuss about speed control systems.

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