

R09

Code No: 09A31003

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B.Tech II Year I Semester Examinations, May/June-2013

Transduction of Physical Variables

(Common to EIE, ICE)

Time: 3 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

1. List out the methods of corrections for Interfering and modifying inputs. [15]
- 2.a) Describe the frequency response of First Order instrument.
b) Obtain the response of Second order instrument when it is subjected to a Step input. [7+8]
- 3.a) Explain the constructional features and principle of operation of Pressure Thermometers.
b) Explain Pyro electric detectors and associated electronics. [8+7]
- 4.a) Discuss how high pressure measurement is carried out in industries.
b) Draw the block diagram of Null Balance and vibrating Cylinder Pressure Sensor and explain. [7+8]
- 5.a) Describe the working principle and construction of Ionization gauge for Vacuum measurement.
b) Briefly explain Sound Level meter. [8+7]
- 6.a) List put the sources of errors in Pitot Static tube.
b) What are the advantages of Laser Doppler Velocimeter? Explain LDV. [7+8]
- 7.a) Ultrasonic Flow meter is mostly suited for volume Flow measurement. Justify.
b) Describe the working principle and construction of Vortex Shedding Flow meter. [8+7]
- 8.a) Define Standard. Why do you think Standards are needed? Explain Standard.
b) Differentiate Resistance and Current Standards. [7+8]

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