



M 25884

Reg. No. :

Name :

VIII Semester B.Tech. Degree (Supplementary – Including Part Time)
Examination, October 2014
(2007 Admn. onwards)

PT 2K6/2K6 EE 801 : INSTRUMENTATION SYSTEMS

Time : 3 Hours

Max. Marks : 100

Instruction : Answer all questions.

- I. a) Describe a transducer that can be used for measuring moisture.
b) Explain the principle of operation of hall effect transducer.
c) What are the properties of an instrumentation amplifier ?
d) Discuss about PCM as applied to telemetry.
e) Explain observational errors and random errors.
f) Define and explain accuracy and precision.
g) Develop a transfer function model of a pressure gauge.
h) What are the inputs used for testing an instrument ? Sketch the response due to these inputs for a first order system. **(8×5=40)**
- II. a) Define transducer. What are the criteria for selection of transducer ? Explain the general characteristics of transducers. **15**

OR

- b) Describe the working of transducers (one each) that can be used for measuring the following :
i) velocity
ii) liquid level and
iii) temperature. **15**

P.T.O.



III. a) Describe the various types of filters used in instrumentation systems. 15

OR

b) Explain time division and frequency division multiplexing. 15

IV. a) Discuss about display system building blocks. 9

b) Explain probability error and guarantee error. 6

OR

c) Explain in detail, magnetic recorders. 15

V. a) Explain the various components of a digital data acquisition system. 15

OR

b) Describe a process control system for level. 15

(8x2=16)

15

OR

15

P.T.O.