Roll No .....

MEIC - 105

M.E./M. Tech., I Semester

Examination, June 2016

Industrial and Process Instrumentation

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Discuss various types of transducers with examples. What are the basic requirements of a transducer?
   b) For a transducer describe the following:
      i) Input characteristics
      ii) Transfer characteristics
      iii) Output characteristics

2. a) Describe the different methods for measurement of thickness.
   b) What is pH value? Describe the working of a pH meter.

3. a) Explain the different methods used for measurement of humidity.
   b) Describe the methods of measurement of pressure using capacitive transducers.

4. a) Discuss the rational of cascade control system and demonstrate why it provides better response than simple feedback control with an example.
   b) Explain the concept of feed forward control with the example of distillation column.

5. With the neat diagrams explain the continuous and discontinuous controller modes in process control.

6. a) How can we control the top and bottom product composition in a distillation column?
   b) Briefly explain the control schemes in the distillation column.

7. Describe the design scheme for a thermal power plant.

8. a) Explain about the selection of controllers for different process.
   b) Compare and contrast the difference between feed forward and feedback control.

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