Roll No.

24358

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B. Tech. (ME) 6th Sem.

Examination – May, 2015

MEASUREMENT AND INSTRUMENTATION

Paper: ME-310-F

Time: Three Hours]

[Maximum Marks: 100

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note: Question No. 1 is compulsory and attempt any one question from each of the four Sections. All questions carry equal marks.

- 1. (a) State the law of intermediate metals in the context of thermo couples.
 - (b) Explain the types of control system.
 - (c) What is sensor?
 - (d) What do you mean by standards in Mechanical Instrument?

(e) What is ramp input signal?

 $5\times 4=20$

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P. T. O.

2. Write the short note on the following:

(a) Zero order, First order and Second order. 10

(b) Accuracy, Precision, Resolution and Threshold. 10

3. Explain the functional element of a Measurement System and how are you classify the Instrument? 20

SECTION - B

- 4. Explain the Construction, Working principle of linear variable Differential Transducer and Piezo electric transducer in detail.
- **5.** Write the short note on the following: $2 \times 10 = 20$
 - (a) Opto Electrical Transducer.
 - (b) Photo conductive Transducer.

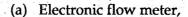
SECTION - C

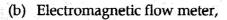
- 6. (a) Explain the various relative Measuring Device. 10
 - (b) Explain the elastic force device and Separation of force components.
- Explain the Electro Mechanical Methods with suitable diagram.

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8. Write short note on the following:







- (c) Hot wire Anemometer.
- **9.** Explain the Non-Electrical Methods for temperature measurement in detail.

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