

SECTION – A

Roll No.

24358

B. Tech. 6th Semester (ME)

Examination – May, 2019

MEASUREMENT & INSTRUMENTATION

Paper : ME-310-F

Time : Three Hours] [Maximum Marks : 100

Before answering the questions, 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 : Attempt *five* questions in all, selecting *one* question form each Section. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Answer the following questions :

- (a) Define range and span of the instruments. 5
- (b) Define the term comparator. Name any *two* types of comparator. 5
- (c) What is Ramp Input Signal ? 5
- (d) What is Strain Gauge Rosette ? 5

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- 2. (a) What is Static Calibration ? How it is done in Mechanical Measuring Instrument ? 10
- (b) Describe the difference between deflection and null type of instruments with suitable examples. 10
- 3. Explain formulation of differential equations for dynamic performance. 20

SECTION – B

- 4. Explain eddy current and magnetostrictive transducers with its applications. 20
- 5. Describe the analog and digital transducers with the help of industrial applications. 20

SECTION – C

- 6. Describe the term Noise-Fringe and absolute motion devices. https://www.haryanapapers.com 20
- 7. Explain the compensators and differentiating and integrating elements. 20

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SECTION – D

8. What do you mean by calibration of pressure measuring devices ? Explain the construction and working of variable area meter. 20
9. Explain the Selective Radiation Pyrometer with the help of sketch and it's industrial applications. 20