

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

### SECTION – A

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. 20
7. Explain the compensators and differentiating and integrating elements. 20

### 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 its industrial applications. 20