

**R18**

**Code No: 158DP**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.Tech IV Year II Semester Examinations, July/August - 2022**

**MEASURING INSTRUMENTS**

**(Common to EEE, CSE, IT)**

**Time: 3 Hours**

**Max.Marks:75**

**Answer any five questions  
All questions carry equal marks**

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- 1.a) Discuss about the statistical analysis of measurement data with an example.
- b) A 0-150V voltmeter has a guaranteed accuracy of 1 percent of full scale reading. The voltage measured by instruments is 75V. Calculate the limiting error in percent. [8+7]
- 2.a) Explain in detail about Resistance Standards.
- b) Discuss about the different forms and methods of measurements. [7+8]
- 3.a) With a neat diagram, explain the operation of Resistive Temperature Detectors.
- b) Describe the working of Eddy current sensors and this application. [8+7]
- 4.a) What is a Potentiometer? Describe the working of Potentiometer with a neat sketch.
- b) Explain the working of a Differential capacitor with a neat diagram. [8+7]
- 5.a) Discuss the design of Linear Measurement Instruments in detail.
- b) Define a comparator. Discuss the functional requirements of a comparator. [8+7]
- 6.a) Describe the measurement of Rotational Velocity with a neat diagram.
- b) List the types of Accelerometers. Explain any one type of accelerometers in detail.[7+8]
- 7.a) Define Manometer. Briefly explain about inverted U-Tube Manometers in detail?
- b) With a neat sketch, explain the principle of Vibrating wire Force Transducer. [8+7]
- 8.a) Describe with neat sketch, the construction and working Variable area Flow meter.
- b) With a neat diagram explain the operation of two float viscometer. [8+7]

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