

Code No: 137CF

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, October/November - 2020

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Electronics and Communication Engineering)

Time: 2 Hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) What are the performance characteristics of measuring systems? Explain
- b) With a neat diagram, explain the working of DC voltmeter. [8+7]
- 2.a) How can the range of DC Ammeter and DC voltmeter be extended? Derive the expression to calculate shunt resistance and multiplier resistance.
- b) Explain the working of a digital multimeter with a schematic block diagram. [8+7]
- 3.a) Explain the working of Harmonic Analyzer with a neat diagram.
- b) With a neat diagram explain the operation of Square Wave Generator. [7+8]
- 4.a) Explain the operation of a Video Signal Generator.
- b) What are the applications of Power Analyzers? [7+8]
- 5.a) Describe the different part of a CRT with a help of a neat diagram
- b) With neat figure explain the construction and working principle of a digital storage oscilloscope. Compare its advantages over an analog CRO. [7+8]
- 6.a) Explain the concept of Dual Trace CRO.
- b) How are Lissajous patterns obtained in CRO? Explain. [7+8]
- 7.a) Describe the different principles of working of capacitive transducer.
- b) Explain the construction and principle of working of LVDT. [7+8]
- 8.a) What are the different methods for measurement of Liquid level? Explain any one method.
- b) Explain the generalized diagram of a digital data acquisition system. [8+7]

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