

Code No: 138FY**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year II Semester Examinations, September - 2020****ELECTRONIC MEASURING INSTRUMENTS****(Common to EEE, CSE)****Time: 2 Hours****Max. Marks: 75**

Answer any Five Questions
All Questions Carry Equal Marks

- 1.a) Define total uncertainty in the reading of an instrument and indicate the factors responsible for this.
- b) Explain different types of errors in a measuring system. [8+7]
- 2.a) Differentiate static and dynamic characteristics of measuring system.
- b) Define the term settling time of the instrument and indicate the factors responsible for it. [9+6]
3. Explain with help of block diagram of the working principle of function generator.[15]
4. Explain with help of block diagram of the working principle of pulse wave generator.[15]
- 5.a) How are resistors are checked using digital multimeters.
- b) Derive the expressions to calculate shunt resistance and multiplier resistance. [8+7]
- 6.a) Explain the internal structure of CRT and describe the principle of electrostatic focusing.
- b) Explain the various probes are used in CROs. [8+7]
- 7.a) With a neat diagram, explain the principle operation of X-Y plotter.
- b) Describe the principle of working and circuit diagram of a servo transducer. [8+7]
- 8.a) How the transducers are classified on the basis of principle of operation.
- b) Explain the working operation of strain gauge. Give its applications. [7+8]

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