

Code No: 55023

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester Examinations, December - 2014

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) What is meant by voltmeter sensitivity? Explain its relevance in circuit applications.
- b) Explain how the range of D.C voltmeter is extended.
- 2.a) Write about the operation and specifications of video signal generator.
- b) Write in detail about successive approximation type digital voltmeter.
- 3.a) Explain about spectrum analyzer with a neat block diagram.
- b) Differentiate wave analyzer and harmonic distortion analyzer.
- 4.a) Explain the technique of measuring resistance using Wheatstone bridge.
- b) Express the unknown resistance value in terms of the other circuit elements. Calculate the range of standard resistance in a Wheatstone bridge if the unknown resistance is in the range of 1-100 K and the other two arms have each 20 K.
- 5.a) Explain the following terms:
(i) Fluorescence (ii) phosphorescence (iii) persistence
- b) Write about Delay lines in oscilloscopes with circuit diagram.
- 6.a) Explain the X-Y recorders with the help of diagrammatic representation.
- b) Write about universal counters in detail.
- 7.a) Compare RTD with thermistor.
- b) Write a short note on Piezoelectric transducers.
- 8.a) Explain Data Acquisition Systems with neat block diagram.
- b) Explain a method of measurement of humidity and moisture.

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