JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech III Year II Semister Examinations, May/June – 2013
Electronic Measurements and Instrumentation
(Electronics and Communications Engineering)

Time: 3 hours   Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a) Define the terms Accuracy, Error, Precision, Resolution, Expected value and Sensitivity.
  b) What is the difference between secondary standards and working standards?
  c) Explain the working of a true value RMS voltmeter.   [15]

2. Explain with the help of neat circuit diagram the working of dual slope DVM.
                                                                              [15]

3.a) How broad band sweep frequencies generated using a sweep generator?
  b) List the various controls on the front panel of the pulse generator and mention their uses.   [15]

4. Draw the circuit diagram and explain the working of a heterodyne type wave analyzer.   [15]

5.a) Derive the criterion for balance of a Kelvin's bridge.
  b) Describe the operation of the Wheatstone bridge with neat circuit diagram.   [15]

6. Explain in-detail the principle, construction and operation a single beam CRO, with a neat diagram.   [15]

7.a) Explain the operating principles of LVDT.
  b) Explain the construction and operation of strain gauge system for the measurement of force.
  c) What is the difference between thermocouple and thermistor?   [15]

8.a) Compare a magnetic flow meter. With turbine flow meter
  b) What is the operating principle of a better gauge?
  c) Explain the operation of optical pyrometer.   [15]

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