

R09

Code No: 09A50406

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester 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**

- 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 Wheat stone 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]
