

# **SATHYABAMA UNIVERSITY**

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E - EEE /ETCE

Title of the paper: Measurements & Instrumentation

Semester: IV

Max. Marks: 80

Sub.Code: 6C0096

Time: 3 Hours

Date: 28-04-2008

Session: FN

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PART – A

(10 x 2 = 20)

Answer All the Questions

1. Define absolute error.
2. Define calibration and give the step for wattmeter calibration.
3. Give the advantages and disadvantages of Kelvin's double bridge method.
4. Define LVDT.
5. Define torque/weight ratio in measurements.
6. Give the advantages of moving coil meter.
7. Write the advantages of digital voltmeter over analog voltmeter.
8. Define storage oscilloscope.
9. Define harmonic distortion analyzer.
10. Define LED and LCD.

PART – B  
Answer All the Questions

(5 x 12 = 60)

11. With neat sketch explain the construction and operation of AF signal generator.  
(or)
12. (a) What are the various errors occurs in measurements and explain systematic error.  
(b) Explain the static and dynamic characteristics of instruments.
13. Explain the construction and operation of LVDT. Give its advantages and disadvantages.  
(or)
14. Explain the Kelvin's double bridge method of resistance measurements and obtain the balance equation.
15. Explain the construction and operation of PMMC instruments.  
(or)
16. Define DC potentiometer. Explain Crompton's type potentiometer with sketch.
17. Explain the frequency and phase difference measurements using digital storage oscilloscope.  
(or)
18. Explain the construction and operation of digital multimeter.
19. (a) Define spectrum analyzer.  
(b) Explain the construction and operation of spectrum analyzer  
(c) Give the application of spectrum analyzer  
(or)
20. (a) Explain the operation of magnetic tape recorders  
(b) Explain dual trace oscilloscope.

