SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E – EEE / ETCE
Title of the paper: Measurements and Instrumentation
Semester: IV Max.Marks: 80
Sub.Code:6C0096(2006-2007) Time: 3 Hours
Date: 08-05-2009 Session: FN

PART – A (10 x 2 = 20)

Answer ALL the Questions

1. What is measurement and measuring instruments?

2. What is signal generator? How it differs from oscillator?

3. What are the basic requirements of a transducer?

4. Draw circuit of wein's bridge and its phasor diagram.

5. Compare moving coil and moving iron instruments.

6. What is the difference between analog voltmeter and digital voltmeter?

7. What are the various applications of cathode ray oscilloscope?

8. What the advantages and disadvantages between digital techniques over analog?

9. What is a recorder? Give the classification of recorder.

10. How does a wave analyzer differ from a harmonic distortion analyzer?

PART – B (5 x 12 = 60)

Answer All the Questions

11. Define random errors and explain how they are analyzed statistically.

(or)

12. Describe with the help of block diagram of sweep frequency. Give its application.

13. Explain the principle of linear variable differential transducer.

(or)

14. Derive the balance equations for the Maxwell's inductance bridge and draw its phasor.

15. Explain the construction and working of PMMC meter with a neat sketch. Derive the torque equation.

(or)

16. Explain the construction and working of D'Arsonval galvanometer.

17. Explain the working principle of digital storage oscilloscope and its advantages.

(or)

18. Explain the working principle of digital multimeter with block diagram.

19. Explain working principle X-Y recorders how it is differ from X-T recorders.

(or)

20. Explain the principle of spectrum analyser with neat diagram.