SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E /B.Tech – CSE/IT
Title of the paper: Principles of Communication Engineering
Semester: III Max. Marks: 80
Sub.Code: 11307/12307(2004/2005)/6C0046 Time: 3 Hours
Date: 21-11-2007 Session: FN

PART – A (10 x 2 = 20)

Answer All the Questions

1. What is the need for modulation?

2. What is meant by frequency scintillation?

3. Plot the spectral representation of FM.

4. What is Carson's rule?

5. Define Nyquist sampling rate.

6. What are the errors present in the Delta modulation?

7. Give examples of ASK signals.

8. What is ISI?

9. What is frequency hopping?

10. Differentiate Block code & Cyclic code.

PART – B (5 x 12 = 60)

Answer All the Questions

11. Explain the working principle of linear modulator for generating AM.

(or)

12. Explain the principle of operation of double super heterodyne AM receiver with block diagram.

13. Explain about Armstrong FM transmitter with Relevant block diagram.

(or)

14. Write about FOSTER SEELY discriminator for Frequency modulation.

15. Explain about
    (a) TDM (4)
    (b) FDM (4)
    (c) Quadrature Multiplexing (4)

(or)

16. With neat block diagram write about PCM scheme.

17. Compare performance of digital modulation systems Based on probability of error.

(or)

18. Explain about generation and detection of PSK.

19. Explain about direct sequence spread spread spectrum.

(or)

20. Apply Shannon – Fano coding procedure for the Message ensemble.

[x] = [x1 x2 x3 x4 x5 x6 x7 x8]

[P] = [1/4 1/8 1/16 1/16 1/16 1/4 1/16 1/8]