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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
Max. Marks :80
Sub. Code :411307-412307-511307-512307-6C0046 Time : 3 Hours
Date :10/11/2009 Session :FN

PART - A (10 x 2 = 20)

Answer ALL the Questions

1. Define Modulation index.

2. Compare AM, FM and PM.

3. What is the function of Armstrong Modulator?

4. Define Spectrum.

5. State Sampling Theorem.

6. Sketch various Data Formats.

7. List out the differences between coherent and non coherent techniques.

8. Write down the Probability of error expression for PSK Signals.

9. Calculate the entropy of the source symbol probabilities. [0.3 0.5 0.2]

10. Construct cyclic encoder for the given polynomial $g(x) = 1 + x^2$.

PART – B (5 x 12 = 60)

Answer All the Questions

11. Explain in Detail about the generation of AM,DSBSC AM,SSBSC AM.

(or)

12. Explain in detail about Superhetrodyne Receiver, synchronous Detector.
13. Describe briefly about FM Transmitter and FM Receiver.

(or)

14. Derive the Mathematical representation of Angle Modulator.

15. Explain in detail about PCM Techniques.

(or)

16. Describe briefly about Time division, Frequency division and Quadrature Multiplexing.

17. Derive an expression of Probability of error for PSK Systems.

(or)

18. Derive an expression of Probability of error for FSK Systems.

19. Compute Huffman code and find efficiency and Redundancy for the symbol probabilities. [0.1 0.2 0.09 0.01 0.4 0.2]

(or)

20. Describe briefly about Direct sequence spread spectrum.