

# 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 (2006/2007) Time: 3 Hours

Date: 07-11-2008

Session: FN

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PART – A

(10 x 2 = 20)

Answer All the Questions

1. Define modulation.
2. What is superhetrodyne receiver?
3. Compare AM and FM.
4. Define modulation index for FM.
5. State sampling theorem.
6. Give the application of Delta modulation.
7. What is baud rate?
8. Differentiate FSK and PSK.
9. Write short notes on spread spectrum.
10. What is Entrophy?

PART – B  
Answer All the Questions

(5 x 12 = 60)

11. Draw the block diagram of AM transmitter and explain its operation.  
(or)
12. Explain with neat diagram, the envelope detector and synchronous detector.
13. Derive the mathematical expression for FM wave. Draw the frequency spectrum and explain and explain.  
(or)
14. With neat circuit diagram, explain the foster-seeley discriminator.
15. Describe the encoding and decoding of PCM with necessary diagram.  
(or)
16. Explain the function of FDM with neat diagram. Give its applications.
17. Discuss in detail, the M-array modulation with necessary diagram.  
(or)
18. Describe the working of QPSK digital modulation technique.
19. Write short notes on
  - (a) Cyclic code
  - (b) Convolutional code(or)
20. With an example, explain shanon's fano coding technique.