Reg. No. :

Question Paper Code: 33806

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Third Semester

Information Technology

01UIT306 - ANALOG AND DIGITAL COMMUNICATION

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. Why is FM superior to AM in performance?

2. Draw the frequency spectrum and mention the bandwidth of AM signal.

3. Give the equation for average probability of symbol error for coherent binary PSK.

4. What are the advantages of PSK as compared to FSK?

5. Determine the relationship between the pulse rate and bit rate.

6. What does the term catastrophic cyclic code represent?

7. State sampling theorem.

8. What are the disadvantages of digital transmission?

9. Define pseudo noise sequence.

10. List the various multiple access techniques.

PART - B (5 x 16 = 80 Marks)

11. (a) What is the principle of Frequency modulation? Derive expression for the FM wave and draw its spectrum. (16)

Or

(b) Explain the method of generating FM signal using direct and indirect method. (16)

12. (a) (i) Explain the principle of FSK receiver. (8)

(ii) Compare BPSK and QPSK. (8)

Or

(b) Explain the generation and detection of coherent BPSK system in detail. (16)

13. (a) Explain the functional description of digital communication system in detail. (16)

Or

(b) Define channel modeling and also briefly explain the Gilbert model of bursty channels. (16)

14. (a) What is pulse modulation? Discuss about various pulse modulation schemes. (16)

Or

(b) What is pulse modulation? Discuss about various pulse modulation schemes. (16)

15. (a) Explain the two types of FH spread spectrum systems with suitable diagrams. (16)

Or

(b) (i) Describe the operation of a CDMA multiplexing system. (10)

(ii) List the advantages of CDMA over TDMA multiple access scheme. (6)

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