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Question Paper Code: 31836

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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. Define amplitude modulation.
2. Draw the frequency spectrum and mention the bandwidth of AM signal.
3. Write the relationship between the minimum bandwidth required for an FSK system and the bit rate.
4. What are the advantages of PSK as compared to FSK?
5. What is meant by fading?
6. What does the term catastrophic cyclic code represent?
7. State sampling theorem.
8. How eye pattern is obtained?
9. State the balance property of random binary sequence.
10. Define pseudo noise sequence.

PART - B (5 x 16 = 80 Marks)

11. (a) Describe the frequency analysis of angle modulated waves. Explain their bandwidth requirements. (16)

Or

- (b) Explain the method of generating FM signal using direct and indirect method. (16)
12. (a) What is carrier recovery? Discuss how carrier recovery is achieved by the squaring loop and costas loop circuits. (16)

Or

- (b) Explain the generation and detection of coherent QPSK system in detail. (16)
13. (a) Describe about analog and digital channel model. (16)

Or

- (b) What are the common problems associated with the channels? Explain about satellite channels and telephone channels. (16)
14. (a) Describe in detail about the adaptive delta modulation system. (16)

Or

- (b) What is pulse modulation? Discuss about various pulse modulation schemes. (16)
15. (a) Explain the source coding of speech for wireless communication. (16)

Or

- (b) Explain DS-SS system with coherent BPSK. (16)
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