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Question Paper Code: 31541

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2016

Fifth Semester

Electronics and Communication Engineering

01UEC501 - DIGITAL COMMUNICATION

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define flat-top sampling.
2. Write the function of source encoder.
3. Define impulse sampling.
4. Differentiate uniform and non uniform quantization.
5. What is matched filter?
6. What is figure of merit?
7. What is offset QPSK?
8. Differentiate coherent and non-coherent detection.
9. What is an tjam?
10. What is frequency hoping spread spectrum?

PART - B (5 x 16 = 80 Marks)

11. (a) With neat block diagram, explain the function of digital communication system. (16)

Or

(b) Explain in detail about various definitions of bandwidth and derive the bandwidth of digital signal. (16)

12. (a) Discuss in detail about different types of sampling and quantization. (16)

Or

(b) Explain about the various encoding techniques for analog sources. (16)

13. (a) Explain in detail about the correlator type and matched filter type receiving filter. (16)

Or

(b) Write a detailed note on maximum likelihood detector and its error probability. (16)

14. (a) Explain in detail about the PSK modulation. (16)

Or

(b) Write short notes on non coherent detection systems. (16)

15. (a) What is meant by PN-sequence? Explain the generation and properties of the PN-sequences in detail. (16)

Or

(b) Explain the operation of direct-sequence spread spectrum and its processing gain. (16)
