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Question Paper Code: 35806

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Information Technology

01UIT506 – WIRELESS COMMUNICATION

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Differentiate cellular telephony and cordless telephony.
2. Explain the significance of frequency reuse in cellular networks.
3. Express simplified path loss as a function of distance used for system design.
4. State the use of outage probability.
5. Define digital modulation.
6. What are narrowband channels?
7. State the function of adaptive equalizers and what are the operating modes of it?
8. Define Macroscopic diversity.
9. Define multiplexing.
10. What is OFDM?

PART - B (5 x 16 = 80 Marks)

11. (a) List a few examples of wireless communication systems and explain and compare any three in detail. (16)

Or

- (b) Discuss briefly about the various methods for improving average and capacity in cellular systems. (16)

12. (a) Write a notes on radio wave propagation. (16)

Or

- (b) Explain in detail about empirical path loss models (16)

13. (a) Discuss in detail about small-scale multipath measurements. (16)

Or

- (b) Write about impulse response model of a multipath channel in detail. (16)

14. (a) Describe the need for algorithms in adaptive equalization. Compare ZF, LMS and RLS algorithms of adaptive equalization. (16)

Or

- (b) (i) Explain maximum likelihood sequence estimation equalizer in detail. (10)

- (ii) Compare all adaptive equalization algorithms. (6)

15. (a) Explain in detail – GSM system architecture. (16)

Or

- (b) Write a case study for representation of IEEE 802.11a wireless LAN elaborately on par with recent trends and standards. (16)