Reg. No. :

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

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. What is meant by footprint?

3. Express simplified path loss as a function of distance used for system design.

4. State the use of outage probability.

5. List three important effects of small scale multipath propagation.

6. What are narrowband channels?

7. What are the applications of non linear equalizers?

8. Define Macroscopic diversity.

9. State any three services by GSM.

10. State the use of cyclic prefix.

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)

(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) Illustrate briefly about various empirical path loss models. (16)

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

Or

(b) (i) Explain about the fading effects due to multipath time delay spread. (8)

(ii) Write short notes on Rayleigh and Ricean distributions. (8)

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

Or

(b) Discuss in detail about RAKE receiver. (16)

15. (a) (i) Illustrate the block diagram of IS-95 transmitter. (8)

(ii) Give a detailed description of OFDM transceiver. (8)

Or

(b) Discuss about reverse CDMA channel. (16)

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