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Question Paper Code: 36402

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

Sixth Semester

Electronics and Communication Engineering

01UEC602 - WIRELESS COMMUNICATION SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the three most important effects of small-scale multipath propagation?
2. Define range in cellular systems.
3. Compare slow fading and fast fading.
4. Define coherence bandwidth.
5. State advantages of offset-QPSK.
6. Define cyclic prefix.
7. State the principle of diversity.
8. Mention any four common methods of micro diversity.
9. Compare the performance of Frequency Division Multiple Access (FDMA) and Time Division Multiple Access (TDMA).
10. Mention the advantages of CDMA technique.

PART - B (5 x 16 = 80 Marks)

11. (a) Describe in detail about requirements of wireless communication systems. (16)

Or

(b) Distinguish different types of noises in wireless systems. (16)

12. (a) Discuss in detail about wideband channel models. (16)

Or

(b) What are narrow band models, explain the significance of each model. (16)

13. (a) Explain with neat diagram about Binary Phase Shift Keying (BPSK) based transmission and reception technique. (16)

Or

(b) (i) Derive the expression for probability of error in Flat-Fading channel. (8)

(ii) Explain the concept of cyclic prefix in OFDM. (8)

14. (a) Explain with diagram, the different techniques available for signal combining. (16)

Or

(b) Explain in detail about: (i) Frequency diversity (ii) Polarization diversity. (16)

15. (a) Draw a block diagram and explain in detail about direct sequence spread spectrum. (16)

Or

(b) Compare and contrast 2G, 3G and 4G wireless network standards with its merits and demerits. (16)
