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Question Paper Code: 22024

M.E. DEGREE EXAMINATION, MAY 2014.

Second Semester

Communication Systems

01PCM204 - CDMA SYSTEMS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. Differentiate DS-SS and FH-SS.
2. What is false alarm in a CDMA system?
3. What are Spreading codes?
4. What is IS-95?
5. What is the concept of WCDMA?
6. What is IMT 2000?
7. Differentiate FDD and TDD systems.
8. What is UTRA?
9. What are the properties of prime code?
10. What is the principle of Multiwavelength Optical CDMA network?

PART - B (5 x 14 = 70 Marks)

11. (a) Draw the circuit diagram of an Early-late gate synchronizer and derive the early - late gate measurement statistics. (14)

Or

- (b) Derive the expression for information capacity of Spread Spectrum systems. (14)
12. (a) Explain in detail about physical and logical channels of IS - 95 system. (14)

Or

- (b) Explain the process of Handover in IS - 95 CDMA system. (14)
13. (a) Explain the modulation and demodulation techniques used in CDMA 2000. (14)

Or

- (b) Explain the process of handoff and power control in 3G systems. (14)
14. (a) Explain the types of multiuser detection techniques. (14)

Or

- (b) Discuss the performance parameters of a multicarrier CDMA system. (14)
15. (a) Explain the experimental setup of a transmitting end and receiving end with optical encoders and decoders in a S/CDMA network. (14)

Or

- (b) Discuss the performance analysis of multiwavelength CDMA with carrier hopping prime code. (14)

PART - C (1 x 10 = 10 Marks)

16. (a) Compare the features of Optical CDMA with Conventional CDMA. (10)

Or

- (b) Compare IS-95 with CDMA 2000. (10)