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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech IV Year II Semester Advanced Supplementary Examinations October-2020

WIRELESS COMMUNICATION & NETWORKS

(Electronics & Communication Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 Discuss the following Examples of Wireless Communication Systems in detail. 6M
- i) Paging Systems 6M
- ii) cordless telephone Systems

OR

- 2 Give the details about the following types of mobile communications in detail. 6M
- i) TDMA 6M
- ii) CDMA

UNIT-II

- 3 a Explain fading effects due to Doppler spread. 6M
- b Discuss Flat fading and Frequency selective fading. 6M

OR

- 4 a Explain in detail the small scale multipath propagation and its different Measurements. 8M
- b Discuss Rayleigh & Ricean distributions. 4M

UNIT-III

- 5 Explain the following in detail. 6M
- i) Decision Feedback Equalization (DFE) 6M
- ii) ML Symbol Detection.

OR

- 6 Explain the following in detail. 6M
- i) Least Mean Square Algorithm (LMS) 6M
- ii) Recursive Least Squares Algorithm (RLS).

UNIT-IV

- 7 a Explain the challenges in Multicarrier systems. 4M
- b Draw and explain the block diagram of a multicarrier OFDM system. 8M

OR

- 8 a Develop the concept of multicarrier modulation techniques in OFDM with suitable diagrams. 6M
- b Given an OFDM system with bandwidth 10MHz and number of subcarriers 1024. The cyclic prefix comprises of 1/8 of number of samples from the tail of OFDM symbol prefixed in the front. Calculate the total time of the resulting OFDM with cyclic prefix. 6M

UNIT-V

- 9 a Explain Packet switching with neat diagram. 6M
- b Explain registration tunneling. 6M

OR

- 10 a Explain the difference between wireless and fixed telephone network. 6M
- b Explain the mobile IP operation. 6M

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