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Question Paper Code: BES002



INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)

M.Tech I Semester End Examinations (Regular) - February, 2017

Regulation: IARE-R16

WIRELESS LANS AND PANS
(Embedded Systems)

Time: 3 Hours

Max Marks: 70

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Discuss about technical issues in wireless communication and explain the drawbacks of first and second generation cellular mobile communication. [7M]
- (b) Explain the concept of CSMA in detail. [7M]
2. (a) Write a short note of first, second, third and fourth generation of Wireless communication. [8M]
- (b) Briefly explain about ALOHA protocol [6M]

UNIT – II

3. (a) With a neat block diagram, explain frequency hopping concept. [7M]
- (b) List out the properties of pseudo noise sequence used in direct sequence spread spectrum system. [7M]
4. (a) Explain the Importance of wireless LANS. [7M]
- (b) Write a short notes on UHF narrowband technology [7M]

UNIT – III

5. (a) What is IEEE 802.11? Explain the overview of it. [7M]
- (b) Discuss in detail about the medium access control layer frame format [7M]
6. (a) What is the significance of physical layer? With design flow diagram, explain different sub layers present with- in the sub layer. [7M]
- (b) Discuss in detail about control field in MAC frames. [7M]

UNIT – IV

7. (a) With a frame format, explain the different frames available in bluetooth. [7M]
- (b) Explain the basic search for paging algorithm in the bluetooth. [7M]
8. (a) Explain the interference between Bluetooth and IEEE802.11 [7M]
- (b) Discuss in brief about traffic engineering. [7M]

UNIT – V

9. Write a short note on [14M]
- i. Physical Layer w.r.t IEEE 802.15.4
 - ii. Data Link layer w.r.t IEEE 802.15.4
10. (a) Explain the architecture of Zigbee technology with Zigbee components and network topology. [7M]
- (b) Explain the architecture of IEEE 802.15.3 [7M]