Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 11343

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2012.

Sixth Semester/Eighth Semester

Electronics and Communication Engineering

EC 1016 — WIRELESS NETWORKS

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Mention the classification of Diversity techniques.

2. How is integration of voice and data traffic carried out?

3. What is cell splitting and when it is done?

4. List the different channel borrowing techniques.

5. State the important features of CDMA-2000.

6. Give the frame format of IS-95.

7. What is the difference between a probe and a beacon signal in 802.11?

8. Differentiate between HIPERLAN-1 and HIPERLAN-2.

9. Give the interoperability mechanism adopted in Bluetooth and WLAN device.

10. Draw the protocol stack for Bluetooth.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain in detail the design of wireless modems. (8)

(ii) Describe VWB pulse transmission. (8)

Or

(b) Comprehend on Random access method for data oriented networks.

12. (a) (i) Describe the architecture of cellular networks. (8)

(ii) Explain the use of directional antennas in cell sectoring technique. (8)

Or

(b) (i) Describe the reuse partitioning mechanism of a cluster with seven cells. (8)

(ii) Explain how channel allocation and capacity expansion are carried out in cellular networks. (8)

13. (a) (i) Compare FCA and DCA frequency assignment techniques for IS-95. (8)

(ii) Describe the forward channel in W-CDMA. (8)

Or

(b) (i) Describe the frame format of IMT-2000 and highlight its features. (8)

(ii) Explain the architecture of GPRS system. (8)

14. (a) (i) Discuss the two basic technologies required for Home Networking. (8)

(ii) Explain the layered protocol architecture of IEEE 802.11 WLAN. (8)

Or

(b) (i) Explain the Handoff procedure in IEEE 802.11. (8)

(ii) Describe the relation between logical and transport channels in HIPERLAN-2. (8)

15. (a) Write short notes on the following :

(i) The Hopping sequence mechanism in Bluetooth. (8)

(ii) Architecture of Geolocation system. (8)

Or

(b) (i) Discuss the Geolocation standards for E-911 services. (8)

(ii) Explain the significance of Home RF. (8)
