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Question Paper Code : 21412

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Sixth 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.   Name the factors to be considered in the design of wireless Modems.

2.   What is the difference between the received signal strength of two terminals located in 10m, and 1Km from a base station in an open area?

3.   How does closed loop power control is done in GSM networks?

4.   Define cell splitting.

5.   The MAC Layer of 802.11 has four address fields when compared to 802.3-Why?

6.   Compare OFDM and spread spectrum technology for the WLAN application

7.   What is IEEE 802.15 and how is it related to Blue tooth and Home RF?

8.   Differentiate between remote and self- positioning system.

9.   Handoff decisions in wireless network are performed using Received signal strength measurements. Name the forward channel in IS-95 that is used for this purpose.

10. Compare the channel access mechanism of HIPERLAN-1 with HIPERLAN —2.

PART B — (5 × 16 = 80 marks)

11. (a) Describe in detail the various transmission techniques applied in wireless networks.

Or

(b) Explain the integration of voice in the Data — oriented networks by presenting the details of QOS, Service integration and IP telephony.

12. (a) Discuss the various expansion techniques adopted in cellular networks to increase the capacity.

Or

(b) Explain the mobility management algorithms that work to maintain the continuity of the call in progress during had off.

13. (a) Write detailed notes on SMS and GPRS.

Or

(b) With a neat sketch, explain the architecture of CDMA networks.

14. (a) Discuss the technical issues related to Physical and MAC layer of WLAN addressed by IEEE 802.11 standard.

Or

(b) Compare and contrast HiPERLAN with IEEE 802.11 WL.AN with relevant diagrams.

15. (a) Give a detail explanation on any two wireless geo-location technology with relevant diagrams.

Or

(b) Discuss on the interference range, probability of collision and empirical studies on interference between Blue tooth and 802.11.

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