

Register Number:

M.E DEGREE EXAMINATIONS: JUNE 2012

Second Semester

COMMUNICATION SYSTEMS

COM504: Mobile Communication Networks

Time: Three Hours

Maximum marks: 100

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. What do you understand by the term 'hotspot'?
2. Write a note on cell sectoring.
3. Enumerate the different radio propagation models.
4. Briefly explain dwell time.
5. What is the use of visitor location register database in GSM?
6. List down the classification of GSM control channels
7. Give any four requirements of wireless LAN.
8. What are the three types of transition defined by IEEE802.11?
9. Name any four applications of a wireless sensor network.
10. What is a sensor node?

PART B (5 x 16 = 80 Marks)

11. a) (i) Explain the methods adopted to increase system capacity. (8)
(ii) Explain TDMA in detail. (8)

(OR)

b) (i) Explain in detail the evolution of wireless networks. (10)
(ii) Write a brief note on mobility management procedures. (6)
12. a) (i) Explain the different handoff techniques used in cellular mobile communication. (8)
(ii) Explain the various outdoor radio propagation models. (8)

(OR)

b) With neat diagrams explain IS-95 forward link in detail.
13. a) (i) Draw the protocol architecture of SS7 and explain. (8)
(ii) Write a brief note on VLR, HLR and AuC. (8)

(OR)

b) Explain in detail the Call and Network Management procedures.

14. a) (i) Draw and explain IEEE802.11 MAC frame format. (8)
(ii) List the services offered by 802.11 (8)

(OR)

- b) (i) Write in detail about IEEE 802.11a standard. (10)
(ii) Draw and explain the structure of mobile ad-hoc networks. (6)

15. a) (i) Explain the MAC protocol in sensor network. (8)
(ii) Draw and explain Berkeley motes sensor node architecture. (8)

(OR)

- b) (i) Write in detail about the evolving standards in sensors networks. (8)
(ii) Explain in detail location discovery mechanism in wireless sensor networks. (8)
