

**M.E DEGREE EXAMINATIONS: JUNE 2011**

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. List the possible techniques that can enhance the Cellular coverage capacity.
2. What are the two functions of Mobility management?
3. What is W-CDMA?
4. Mention the Indoor propagation models.
5. What is the function of G-MSC?
6. Define MAP.
7. What is PCF access scheme?
8. Mention the significance of mobile Ad Hoc networks.
9. What is meant by Data gathering?
10. What are the advantages of Clustered architecture in sensor architecture?

**PART B (5 x 16 = 80 Marks)**

11. a) Explain the architecture and features of the first generation AMPS cellular standard.

**(OR)**

- b) Explain the different channel division methods in detail and compare their performances

12. a) Describe the Outdoor radio propagation models in detail with necessary diagrams.

**(OR)**

- b) (i) What is GSM? Explain the architecture of GSM with a neat sketch. (10)

- (ii) Describe the services possible with a GSM standard. (6)

13. a) (i) Explain the signalling protocol SS7 with its network services part and user part in detail. (12)

- (ii) Discuss the performance of SS7 and list the advantages of Common channel signaling (4)

**(OR)**

b) Explain the Call management procedure and the architecture of network management.

14. a) Explain the Wireless local area networks and discuss the different forms of WLAN products with neat sketch.

**(OR)**

b) (i) Describe the 802.11a standard in detail with neat sketches. Comment on its PDU.(10)

(ii)What are the key parameters of 802.11a standard? (6)

15. a) Define Data dissemination. Explain the dissemination procedure in the Sensor networks.

**(OR)**

b) (i) Explain the MAC protocols in detail for Sensor networks. (12)

(ii)Write a short note on Location discovery in Sensor networks (4)

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