

Total No. of Questions : 8]

[Total No. of Pages : 2

[2098]

**M.Tech. II Semester Computer Science & Engineering (Full Time)  
Examination September - 2008**

**Mobile Computing**

**2E8903**

**Paper - (10CPE-22)**

**Time : 3 Hours**

**Maximum Marks : 80**

**Min. Passing Marks : 28**

**Instructions to Candidates:**

*Attempt any five questions marks of questions are indicated against each question*

1. a) Describe handover procedures in different situations for cellular systems. (6)  
b) Describe the system architecture at a GSM system. (10)
2. a) Explain the term interference in the space, time, frequency, and code domain. What are counter-measures in SDMA, TDMA, FDMA and CDMA systems? (10)  
b) Where are advantages and disadvantages at reservation scheme for MAC? How are collisions avoided during data transmission? (6)
3. a) Why are so many different identifiers/addresses (MSISDN, TMSI, IMSI) needed in GSM? Give reasons and distinguish between User-related and system-related identifiers. (8)  
b) Compare IEEE 802.11, Hiper LAN2 and Bluetooth with regard to their ad-hoc capabilities. (8)
4. a) Describe synchronization and power management features of both infrastructure network and adhoc network in 802.11 LAN. (8)  
b) Describe basic DFWMAC-DCF using CSMA/CA for IEEE 802.11 WLAN (8)

2E8903]

(1)

[Contd....

5. a) Give frame format for IEEE 802.11 PHY frame using FHSS and DSSS. Explain purpose of each field of frames. (8)
- b) Explain tunneling and encapsulation mechanisms in mobile network layer. (8)
6. a) Describe following classical TCP improvements :
- i) Indirect TCP
  - ii) Snooping TCP
  - iii) Mobile TCP (16)
7. a) What do you mean by consistency in file system? Describe features at coda file system. (6)
- b) Describe wireless transaction protocol for WTP class 0, class 1 and class 2. (10)

8. Write short notes on following rtuonline.com

- ✓ a) Capacity planning in cellular network (5)
  - ✓ b) Routing in ad-hoc networks. (5)
  - ✓ c) Demand assigned multiple access DAMA (3)
  - ✓ d) Packet reservation multiple access PRMA (3)
-