



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)**

**Branch : Information Technology
08.801 : MOBILE COMPUTING (F)**

Time : 3 Hours

Max. Marks : 100

PART – A

(Answer **all** questions)

1. Explain the phenomenon Cell-breathing.
2. Brief all the four types of hand over in GSM.
3. Draw a neat diagram showing Slow and Fast hopping in FHSS, given with 4 frequency channels and user data of '01011'.
4. Explain how hidden and exposed terminal problems are solved by MACA.
5. Explain LEO satellite system.
6. Explain the roles of 'To DS' and 'From DS' fields in MAC frame defined by IEEE 802.11.
7. Write the applications of Bluetooth.
8. What are mobile ad-hoc networks ?
9. What is the basic purpose of DHCP ? Name the entities of DHCP.
10. What is WML ?

(10×4=40 Marks)

PART – B

(Answer **any one** question from each module)

Module – I

11. a) Explain the sequence various activities needed for mobile originated call (MOC) and mobile terminated call (MTC), with the help of diagrams, if needed. Explain the message flow for MTC and MOC.
- b) Explain how GSM offers security services ?

12

8

OR





12. a) What are the main benefits of a spread spectrum system ? How can spreading be achieved ? Explain. 10
- b) What is Modulation ? Explain different modulation schemes. 10

Module – II

13. a) Explain the Protocol Architecture of IEEE 802.11. 12
- b) Explain Digital Audio Broadcasting and Digital Video Broadcasting. 8

OR

14. a) Using IEEE 802.11, four stations are trying to access the medium during the following timings. S1-9.00 am, S3-after 20ms, S4-after 10ms, S2-after 5ms. DIFS is defined as 15ms. Back off time for the stations S1, S2, S3 and S4 are 14ms, 8ms, 12ms, 5ms respectively. Packet transfer time after accessing the medium by S1, S2, S3, and S4 are 5ms, 8ms, 7ms and 12ms respectively. Give the timing diagram for accessing the medium and transferring the data by all the stations and also show the time taken to complete the transactions using DFWMAC-DCF. 12
- b) Explain IEEE 802.11a and IEEE 802.B. 8

Module – III

15. a) Explain the steps involved in the IP packet delivery and Agent discovery among Mobile nodes. 12
- b) Explain some challenges involved in ad-hoc wireless networks routing. 8

OR

16. a) Explain Dynamic source routing algorithm. 10
- b) Describe traditional TCP, snooping TCP and Mobile TCP transmissions in detail. 10
-