

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ECE)/(ETE) (2011 Batch Elective-III) (Sem.-7,&8)

MOBILE COMPUTING

Subject Code : BTEC-919

Paper ID : [A3014]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. SECTION-B contains **FIVE** questions carrying **FIVE** marks each and students has to attempt any **FOUR** questions.
3. SECTION-C contains **THREE** questions carrying **TEN** marks each and students has to attempt any **TWO** questions.

SECTION-A

1. Write briefly :

- How does a Bluetooth device discover a Bluetooth network?
- What is the uplink and downlink frequency band for a GSM?
- Give the difference between a WAP and a portal.
- What is Frequency Reuse?
- Define Dwell Time.
- What is the role of MAC layer?
- Explain how one can tell the class of an IP address?
- Is a directional antenna useful for mobile phones? Why?
- Discuss one disadvantage of an Indirect TCP.
- Define generic routing encapsulation.

Section-B

2. (a) Write the differences between a macrocell, minicell and a microcell.
(b) Determine the number of channels/cluster and the total channel capacity for a cellular telephone area comprised of 10 clusters with 7 cells in each cluster and 10 channels in each cell.

3. Discuss three multiple access methods used in cellular systems.
4. What is Bluetooth? Where it is used? Also, describe the general format of packet and packet header in Bluetooth technology.
5. What is the purpose of agent advertisement in packet forwarding? Explain the message format of an agent advertisement packet with internet control message protocol and mobility extension.
6. Using appropriate diagrams, explain the two operational modes of an IEEE 802.11 wireless LAN.

SECTION-C

7. What is a Snooping TCP? Include in your explanation the role of snooping agent and flow of segments from server to the mobile host and in the reverse direction.
8. Define a MANET. List the main differences between Adhoc networks and other networks. What advantages do adhoc networks offer? Also, discuss the various issues related to MANET's.
9. Draw and explain the reference architecture and associated signaling interfaces for a GSM system. Also, explain the role of HLR, VLR and EIR.