

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2873

Roll No.

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

B.Tech.

(SEM. VIII) EVEN THEORY EXAMINATION 2012-13

MOBILE COMPUTING

Time : 3 Hours

Total Marks : 100

Note :- Attempt **all** questions. Each question carries equal marks.

1. Attempt any **four** parts of the following : (5×4=20)
 - (a) Explain the word “Mobile Computing” and also give suitable live example with merits of Mobile Computing.
 - (b) Compare the three generations of wireless telephone systems on the basis of features, technology used and applications.
 - (c) Why did we choose hexagonal shape for cells in cellular phone system ? What is frequency reuse ?
 - (d) What is General Packet Radio Service (GPRS) ? Describe its architecture in detail.
 - (e) What are the advantages and disadvantages of using a wireless transmission as compared to a fibre or wire transmission ?
 - (f) Describe various multiplexing techniques. Explain why a given bandwidth is used most efficiently in CDMA.
2. Attempt any **four** parts of the following : (5×4=20)
 - (a) Explain the issues and challenges of data management in third-generation mobile standards.

- (b) With neat sketch, explain architecture of 802.11 LAN and explain its MAC logic.
- (c) What is Bluetooth ? Define technical specifications of Bluetooth. Describe the Bluetooth stack operation.
- (d) What are the basic differences between wireless WAN and wireless LAN ? Discuss the common features of these.
- (e) List and define the entities of mobile IP and describe data transfer from a mobile node to a fixed node and vice-versa.
- (f) How does mobility affect data replicating on mobile platform ? Explain.
3. Attempt any two parts of the following : **(10×2=20)**
- (a) Explain the concept of "Frequency Reuse" as applied to cellular communications. What are the advantages of this approach ? How does it increase the capacity of the system ?
- (b) Describe the different data management issues related to mobile computing.
- (c) "CSMA/CD is not a suitable protocol for wireless LAN". Give reasons in favour of or against the statement.
4. Attempt any two parts of the following : **(10×2=20)**
- (a) Explain the various security threats during data transfer in mobile communication and give suitable example of authentication and privacy preceding for mobile computing.
- (b) Discuss the requirements for the design of Mobile agent systems.
- (c) Discuss various issues which are related to transaction processing in mobile computing.

5. Atten. . any **two** parts of the following : **(10×2=20)**
- (a) Explain with example :
- (i) Proactive routing and reactive routing protocols.
- (ii) Static and dynamic routing.
- (iii) Source routing.
- (b) What are the characteristics of MANET ? Explain the process of path discovery and path maintenance in DSR routing protocols.
- (c) Describe the working of AODV routing protocol in MANETs. Describe how routing table will be maintained in AODV routing protocol.