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

PAPER ID : 2155 Roll No. | | | | | | | | | | |

MCA

(SEM. V) ODD SEMESTER THEORY EXAMINATION 2013-14

MOBILE COMPUTING

Time : 3 Hours *Total Marks : 100*

Note :– Attempt **all** the questions. All questions carry equal marks.

1. Attempt any **two** parts : **(10×2=20)**

   (a) (i) Explain cellular communication. Discuss various channel allocation methods implemented in cellular systems.

   (ii) Explain the architecture of GSM system and discuss its subsystems.

   (b) What is mobile computing ? Discuss the evolution of mobile computing and its future applications.

   (c) (i) Discuss various issues of wireless communication medium.

   (ii) What is wireless telephony system ? Discuss its characteristic features.

2. Attempt any **two** parts : **(10×2=20)**

   (a) (i) What is Multiple Access Control (MAC) protocol for wireless LAN ? Explain the features of IEEE 802.11 protocol.

(ii) Explain implementation of transport layer protocol over wireless LAN.

(b) (i) Discuss the applications of wireless networking and compare it with wired LAN.

(ii) What is mobile IP ? Discuss its agent discovery process.

(c) (i) Discuss the principles of working of Bluetooth devices.

(ii) What is WAP ? Discuss its architecture.

3. Attempt any **two** parts : **(10×2=20)**

(a) Discuss methods for management of data over wireless and mobile environment.

(b) Explain the issues of file system for mobile wireless networks.

(c) Discuss advantage of data replication methodologies over mobile computing.

4. Attempt any **two** parts : **(10×2=20)**

(a) Discuss the security and fault tolerant strategies of mobile wireless networks in detail.

(b) What are mobile agents ? Explain the advantages of mobile agent programming in mobile computing.

(c) Explain the issues of transaction processing system in mobile computing environments.

5. Attempt any **two** parts : **(10×2=20)**

(a) What is an ad-hoc network ? Discuss various localization issues of this type of network.

(b) List some routing protocols of ad-hoc networks. Compare the DSDV method of discovering and managing route with DSR method.

(c) Write note on quality-of-service issue in ad-hoc networks.