

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

PAPER ID : 0156

Roll No.

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B.Tech.(SEM VIII) EVEN SEMESTER THEORY EXAMINATION,
2009-2010**MOBILE COMPUTING**

Time : 3 Hours

Total Marks : 100

Note : (i) Attempt *all* questions.(ii) All questions carry *equal* marks.**1. Attempt any four parts :** (4x5=20)

- (a) What are the various characteristics of mobile computing environment ? Discuss challenges being faced to support mobile computing.
- (b) What do you mean by hand-offs ? Differentiate hard and soft hand-off in wireless communication.
- (c) Compare the generations of wireless communication.
- (d) Explain the working of GSM, Global System for Mobile.
- (e) Discuss CDMA channel access method.
- (f) In context to cellular networks, explain the following terms :
 - (i) GPRS
 - (ii) Location management with HLR-VLR

2. Attempt any two parts : (2x10=20)

- (a) Discuss the basic principles of WAP protocol architecture. Identify the mapping of elements of HTTP systems to WAP systems.
- (b) Explain the different MAC protocols for IEEE 802.11 standards.
- (c) What kind of problems may arise, if TCP is implemented over wireless networks ? Explain.

3. Attempt any two parts : (2x10=20)

- (a) What do you mean by location dependent information system (LDIS) ? What may be various components and challenges being faced by them ?
- (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 : (2x10=20)

- (a) What do you understand Mobile agent ? Describe the model for mobile agent based computing.
- (b) Explain the various security threats during data transfer in mobile communication and give suitable example of authentication and privacy preceding for mobile computing.
- (c) Describe fault tolerance in mobile computing environment in details.

5. Attempt any two parts : (2x10=20)

- (a) Describe the working of AODV routing protocol in MANETs. Describe how routing table will be maintained in AODV routing protocol.
- (b) Explain the mechanisms to address quality of services and energy - efficient issues in MANETs.
- (c) What are the characteristics of MANETs ? Explain the process of path discovery and path maintenance in DSR routing protocols.

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