

## CE1.5-R4 : MOBILE COMPUTING

**NOTE :**

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

**Time : 3 Hours**

**Total Marks : 100**

1.
  - (a) Traditional IP cannot work for the Mobile System, Why ?
  - (b) Discuss some limitations of Mobile devices.
  - (c) What are the features of a WML script ?
  - (d) Explain with an example security issue in Mobile Computing.
  - (e) Discuss the role of Broadcast disks in Mobile Databases.
  - (f) Describe the transaction models in Mobile Database.
  - (g) How does Clusterhead Gateway Switch Routing Protocol (CGSR) maintain Cluster Membership of Cluster Node ? (7x4)
  
2. Write Short notes on following :
  - (i) Mobile Agent.
  - (ii) DSR Routing Algorithm.
  - (iii) Comparison of Bluetooth and Zigbee. (6+6+6)
  
3.
  - (a) Explain in detail the Symbian OS architecture.
  - (b) Describe the functions, services and architecture of a GPRS system.
  - (c) Describe pull based data dissemination. (6+8+4)
  
4.
  - (a) What are the basic components of the WAP architecture ? Draw WAP stack architecture and explain the significance of each network layer in details.
  - (b) "TCP has some limitations in mobile wireless systems." Justify the statement.
  - (c) Explain the need for location privacy in mobile computing and how it is implemented ? (6+6+6)

5. (a) Why data needs to be synchronized in a mobile system ? What are the various types of data synchronization ?  
(b) Describe the File system used for storage in mobile with an example. (9+9)
6. (a) Explain cache invalidation mechanism with advantages and disadvantages.  
(b) Differentiate between TCP-Reno and TCP-freeze.  
(c) What is the difference between Database Hoarding and Caching ? (6+6+6)
7. (a) Explain CSMA protocol and its types.  
(b) What is Mobile IP ? Explain discovery, registration and tunnelling in Mobile IP. (9+9)

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