BT-6/M06
Mobile Computing (2005-06)
Paper : CSE-302
Option – 01
Time: Three Hours
Maximum Marks: 100

Note: Attempt any FIVE questions by selecting at least ONE question from each section. All questions carry equal marks. Show each illustration clearly.

SECTION-A

1. (a) What is cellular system? Describe different components of a cellular system.

(b) If a total of 33 MHz of bandwidth is allocated to a particular FDD cellular telephone system which uses two 25 kHz simplex channels to provide full duplex voice and control channels, compute the number of channels available per cell if a system uses (i) four-cell reuse, (ii) seven-cell reuse, and (iii) 12-cell reuse. If 1 MHz of the allocated spectrum is dedicated to control channels, determine an equitable distribution of control channels and voice channels in each cell for each of the three systems.

2. (a) What is handoff? Define different strategies to detect handoff and discuss Intra-System Handoff (Inter-BS Handoff).

(b) What is Mobile IP? Consider two mobile hosts MH1 and MH2, their respective home agents HA1 and HA2 and their respective foreign agents FA1 and FA2. MH1 is in its home network (HA1), while MH2 is in a foreign network (FA2). Show the path taken by data packets when (a) MH1 first initiates data transfer with MH2. (b) MH1 now moves to a foreign network (FA1), (c) MH 2 now moves to its home network (HA 2).

Contd.
SECTION-B

3. What is CODA file system? Discuss its advantages and disadvantages.

4. Write short notes on the following:
   (a) Broadcasts Disks
   (b) (1, m) indexing.

SECTION-C

5. What is routing? Discuss Dynamic Source Routing (DSR) Protocol with the help of suitable example. Each step of illustration must contain appropriate pictorial representation. What are advantages and disadvantages in using DSR?

6. Discuss DSDV protocol with the help of suitable example in respect to route advertisement, route table structure, measure taken in topology changes, route selection criteria, etc. What are advantages and disadvantages in using DSDV?

SECTION-D

7. (a) Define transaction. What do we mean by ACID? Discuss with the help of suitable example.
   (b) Define Mobile Transaction with the help of suitable example.

8. Discuss Team Transaction with the help of suitable example. What are roles of constituent members? Explain.