CS/M.TECH (IT)/SEM-2/PGIT-203/09 **3**

CS/M.TECH (IT)/SEM-2/PGIT-203/09
DISTRIBUTED AND MOBILE COMPUTING SYSTEMS
SEMESTER - 2

Time : 3 Hours]　　　　　　　　　　　　　　　　　　　[Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A

Answer Q. No. 1 and any *three* from the rest.

1. What do you mean by the clock synchronization ? What is the importance of the drift rate in clock synchronization ?　　　　　　　　　2 + 3

2. What are the advantages of Distributed Computing System. Discuss some of the important concepts that a distributed operating system designer might use to improve the reliability of his or her system.　　　　　　　　　6 + 4

3. What is the difference between the file replication and file caching ? Describe the different protocol for Multicopy Update problem in distributed file system.　　　2 + 8

4. What are the different issues in load balancing approach ? Describe the different approaches for process transfer policies.　　　　　　　　　3 + 7

5. Why are election algorithms normally needed in a distributed system ? Describe the different cache validation schemes. Describe the steps in the Remote Procedure Call.

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2 + 3 + 5

GROUP - B

Answer *all* questions.

6.   Draw and explain the block diagram of GPRS.   14

7.   a)   What is Hand-off ? What are the basic differences between Hard hand-off and
          Soft hand-off ?   1 + 3

     b)   Explain different communication channels used in GSM.   4

     c)   Explain the significance of reuse distance. For a seven cell cluster GSM network
          if a cell diameter is 6 km then find out the reuse distance. What will be the
          reuse distance for twelve cells GSM of same diameter ?   2 + 1 + 1

     d)   For a standard GSM 900 system having 200 kHz bandwidth, calculate the
          number of different communication channels.   2

8.   Write short notes on any *one* of the following :   1 × 7

     a)   WAP

     b)   Mobile IP

     c)   Blue tooth

     d)   Adaptive Hand-off.

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END