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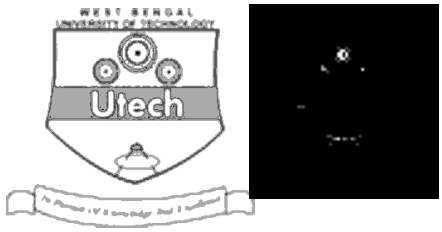
CS/M.TECH (IT)/SEM-2/PGIT-203/09
DISTRIBUTED AND MOBILE COMPUTING SYSTEMS (SEMESTER - 2)



1. ..... *Signature of Invigilator*

2. ..... *Signature of the Officer-in-Charge*

Reg. No. | | | | | | | | | | | | | | |

Roll No. of the Candidate | | | | | | | | | | | | | | |

CS/M.TECH (IT)/SEM-2/PGIT-203/09
ENGINEERING & MANAGEMENT EXAMINATIONS, JULY – 2009
DISTRIBUTED AND MOBILE COMPUTING SYSTEMS (SEMESTER - 2)

Time : 3 Hours] [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. You have to answer the questions in the space provided marked 'Answer Sheet'. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

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FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

Question Number											***Total Marks***	***Examiner's Signature***
Marks Obtained												

.....

Head-Examiner/Co-Ordinator/Scrutineer

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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.

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.

END