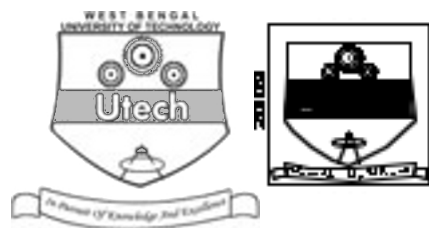


MOBILE COMPUTING (SEMESTER - 8)

CS/B.TECH(ECE-NEW)/SEM-8/EC-804C/09



1.
Signature of Invigilator

2.
Signature of the Officer-in-Charge

Reg. No.

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Roll No. of the
Candidate

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CS/B.TECH(ECE-NEW)/SEM-8/EC-804C/09
ENGINEERING & MANAGEMENT EXAMINATIONS, APRIL – 2009
MOBILE COMPUTING (SEMESTER - 8)

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. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
b) For **Groups – B & C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. 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

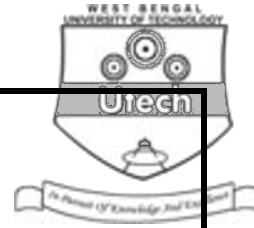
FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

	Group – A										Group – B					Group – C					Total Marks	Examiner's Signature
Question Number																						
Marks Obtained																						

.....
Head-Examiner/Co-Ordinator/Scrutineer

8878-C/E (27/04)



DO NOT WRITE ON THIS PAGE

- 8878-C/E (27/04)**

**GROUP – B****(Short Answer Type Questions)**Answer any *three* of the following.

3 × 5 = 15

2. a) What is multip-path propagation ?
 b) Compute the absolute mean-path loss at $d_0 = 3$ m and at $d = 22$ m for a mobile radio system operated in the 2.4 to 2.48 GHz authorized band (FCC). Assume the path loss exponent is $n = 3.5$.
 Assume the first two metres are LOS, afterwards NLOS propagation. 1 + 4
3. a) Draw and explain the waveform of MSK scheme used in Wireless System.
 b) State the advantage of MSK over BFSK. 4 + 1
4. a) What is normadic access ?
 b) Differentiate normadic access from ad-hoc networking. 2 + 3
5. What are the requirements of mobile IP ? Mention the different entities in a mobile IP. Define traingular routing. $1 \frac{1}{2} + 1 \frac{1}{2} + 2$
6. Why are special protocols for the support of micro mobility on the network layer needed ? 5

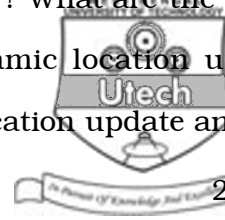
GROUP – C**(Long Answer Type Questions)**Answer any *three* questions.

3 × 15 = 45

7. a) What is Mobile IP ? 2
 b) Explain the operation of mobile IP with a diagram. 5
 c) What is tunneling ? Explain tunneling operation in a mobile network. 2 + 6
8. a) What are *discovery* and *registration* in mobile network ? 4
 b) Give the format of registration request and registration reply message. 3
 c) What is encapsulation for mobile IP ? What are the various types of encapsulation ? Explain any one encapsulation method. 2 + 2 + 4
9. a) Explain packet flow in mobile IP, if two mobile nodes communicate and both are in foreign Networks. What additional routes do packets take if reverse tunneling is required ? 6 + 2
 b) What is ICMP ? 2
 c) Compare the Palm OS and window CE based devices. 5



10. What is location management in cellular communication ? What are the various methods of location management ? What are static and dynamic location update ? Explain various dynamic location update schemes. Compare location update and paging.



2 + 2 + 3 + 6 + 2

11. Write short notes on any *three* of the following :

3 × 5

- a) WIMAX
- b) DSDV
- c) Mobile IP agent advertisement message
- d) WAP infrastructure
- e) WTLS.

END