

Hi-Tech Institute of Engineering & Technology	
DEPARTMENT OF CSE/IT/AI-ML	
1ST MODEL PAPER, ODD SEMESTER-2023-24,	
Semester: 7th	Course/Branch: B.TECH/CSE/IT
Subject Code: KCS 711	Subject Name: Mobile Computing
Faculty Name: Pranjal Singh	
Time: 3 Hours	Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION-A

1. Attempt all question in brief.

2x 10 =20

Q.No	Question	Marks
a.	What do you understand by Mobile Computing?	2
b.	Define handoffs.	2
c.	What is Bluetooth?	2
d.	Write benefits of GSM.	2
e.	Distinguish between collisions on PHY and MAC layer.	2
f.	Explain the need of mobile database.	2
g.	Define the term Multiple Access.	2
h.	Illustrate various persistent methods in CSMA.	2
i.	Write the name of channel assignment strategies in mobile radio propagation.	2
j.	How does a mobile agent function in a network?	2

SECTION-B

2. Attempt any THREE part of the following:

3x10 =30

Q.No	Question	Marks
a.	What is General Packet Radio Services (GPRS)? Describe its architecture.	10
b.	Compare the throughput efficiencies and vulnerable time of pure ALOHA and Slotted ALOHA with the help of proper formulation.	10
c.	Illustrate the MAHO technique and Queuing concept in hand off. Also explain the different types of handoff in mobile communication.	10
d.	Describe cellular systems with three levels and seven level clustering. Also explain the merits and demerits of it.	10
e.	What is Bluetooth? Explain the Bluetooth Protocol stack and describe the specific functionality of each protocol layer?	10

SECTION-C

3. Attempt any ONE part of the following:

1x10 = 10

Q.No	Question	Marks
a.	What are various characteristics of mobile computing? Discuss challenges being faced to support mobile computing.	10
b.	Explain TDMA, FDMA and CDMA.	10

4. Attempt any ONE part of the following:

1x10 = 10

Q.No	Question	Marks
a.	Describe various multiplexing techniques in brief. "CSMA/CD is not a suitable protocol for wireless LAN". Give reasons in favor of or against the statement.	10
b.	List and define the entities of Mobile IP and describe data transfer from a mobile node to a fixed node and vice versa.	10

5. Attempt any ONE part of the following:

1x10 = 10

Q.No	Question	Marks
a.	Explain adaptive clustering for wireless networks. How clustering is done in wireless transmission? Give a suitable example.	10
b.	Discuss the schemes of mobile transaction management. List out various issues concerned to transaction management.	10

6. Attempt any ONE part of the following:

1x10 = 10

Q.No	Question	Marks
a.	Explain Frequency Reuse concept with the help of proper cellular diagram. Also draw a cellular system with 19-cell reuse and locate the co-channel cells for this system.	10
b.	Explain Wi-Fi and WiMax Standards.	10

7. Attempt any ONE part of the following:

1x10 = 10

Q.No	Question	Marks
a.	What is the basic purpose of agent advertisement in packet forwarding? Explain the message format of agent advertisement.	10
b.	Describe, Briefly, design of Coda file system and hence explains the different states of Venus. Draw a State transition diagram of Venus.	10