Subject Code: KCA051

PAPER ID-410826

Roll No:

MCA
(SEM IV) THEORY EXAMINATION 2023-24
MOBILE COMPUTING

TIME: 3 HRS **M:MARKS: 100**

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

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a.	Describe "Ideally shape of a cell is Hexagonal".	02
b.	Tabulate the features of wired Networks and Mobile networks.	02
c.	Elaborate Hand Off.	02
d.	Explain HLR and VLR.	02
e.	Discuss data dissemination with reference to mobile computing?	02
f.	Discuss Disconnected operation in CODA file system.	02
g.	List four properties of transaction.	02
h.	Explain eavesdropping attack against mobile agent in mobile computing.	02
i.	Explain Ad-hoc network.	02
j.	List the QoS parameters in MANET.	02

SECTION B

2. Attempt any *three* of the following: 3 x 10 = 30

a.	Explain frequency reuse and frequency reuse distance with suitable diagram.	10
b.	Explain the GSM architecture with the help of diagram.	10
c.	Explain the process of disconnected operation performed in CODA.	10
d.	Discuss fault tolerance in mobile computing.	10
e.	Discuss reactive, proactive and hybrid routing protocols on basis of vital parameters.	10

SECTION C

3. Attempt any *one* part of the following: 1 x 10 = 10

a.	Discuss handover schemes with suitable diagram in reference to: Intra-cell handover Inter-cell, intra-BSC handover Inter-BSC, intra-MSC handover Inter MSC handover:	10
b.	Discuss GSM architecture with suitable diagram in reference to: The Mobile Station (MS) The Base Station Subsystem (BSS) The Network Switching Subsystem (NSS) The Operation Support Subsystem (OSS)	10

4. Attempt any *one* part of the following: 1 x 10 = 10

a.	Discuss I-TCP, and M-TCP with suitable diagram.	10
b.	Discuss registration process in Mobile IP with suitable diagram.	10

5. Attempt any *one* part of the following: 1 x 10 = 10

a.	Discuss Data-delivery mechanisms with its types with suitable diagrams.	10
b.	Describe data management in Mobile Computing with suitable example.	10

6. Attempt any *one* part of the following: 1 x 10 = 10

a.	Illustrate the mobile agent and security issues in mobile computing.	10
b.	Illustrate data replication in mobile environment.	10

7. Attempt any *one* part of the following: 1 x 10 = 10

a.	Examine the following MANET Protocols: DSDV TORA	10
b.	Compare AODV routing algorithm with DSR	10