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BTECH
(SEM VII) THEORY EXAMINATION 2024-25
MOBILE COMPUTING

TIME: 3 HRS

M.MARKS: 100

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

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

Q no.	Question	CO	Level
a.	Discuss the various security services offered by GSM.	1	K2
b.	Differentiate between HLR and VLR.	1	K3
c.	Discuss Mobile IP.	2	K2
d.	Distinguish between collisions on PHY and MAC layer.	2	K3
e.	Define Adaptive Clustering.	3	K2
f.	Define masquerade.	3	K2
g.	Explain the concept of Hand over.	4	K2
h.	Determine how does a mobile agent function in a network.	4	K3
i.	Discuss Global State Routing.	5	K2
j.	Define Ad Hoc Networks.	5	K2

SECTION B

2. Attempt any three of the following: 10 x 3 = 20

Q no.	Question	C O	Level
a.	Compare the features, technology, and applications of the three generations of wireless telephone systems.	1	K3
b.	Describe all IEEE 802.11 standards.	2	K2
c.	Describe CODA file system and also explain the clients in CODA? How Disconnected Operations are performed in CODA?	3	K2
d.	Discuss basic purpose of agent advertisement in packet forwarding? Explain the message format of agent advertisement.	4	K2
e.	Explain the (quality of service) QoS in different terms of mobile adhoc networks.	5	K2

SECTION C

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

Q no.	Question	C O	Level
a.	Compare SDMA, TDMA, FDMA and CDMA in terms of transmission techniques, signal separation, advantages, disadvantages and applications.	1	K3
b.	What is General Packet Radio Service (GPRS)? Describe its architecture in detail.	1	K2

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

Q no.	Question	C O	Level
a.	“CSMA/CD is not a suitable protocol for wireless LAN”. Give reasons in favors of or against the statement.	2	K2

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b.	Why does traditional TCP not perform well in wireless network? Discuss different approaches for TCP improvement.	2	K3
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5. Attempt any one part of the following: 10 x 1 = 10

Q no.	Question	CO	Level
a.	In a mobile wireless network, if nodes frequently move, Demonstrate how would adaptive clustering techniques help in maintaining efficient communication.	3	K3
b.	Describe the process of data replication in mobile computing. How conflict resolution is handled in data replication for mobile computers.	3	K2

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

Q no.	Question	CO	Level
a.	Discuss the schemes of mobile transaction management. List out various issues concerned to transaction management.	4	K2
b.	Explain the impact of mobility on data replication in mobile platforms. Highlight the challenges and solutions associated with maintaining consistency and reliability.	4	K2

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

Q no.	Question	CO	Level
a.	What are the characteristics of MANET? Explain the process of Path Discovery and Path Maintenance in DSR Routing Protocols.	5	K2
b.	Demonstrate the process of route discovery in Temporary Ordered Routing Protocol with suitable example.	5	K3