BTECH
(SEM-7) MOBILE COMPUTING 2021-22

TIME:3 HOUR   *Total Marks: 100*

Instruction: Attempt the questions as per the given instructions. Assume missing data suitably.

SECTION - A	
Attempt _All Parts_ in Brief	**2*10 = 20**

Q1	Questions	Marks
(a)	What are HLR and VLR in mobile computing ?	2
(b)	What is the purpose of handoff in mobile communication ?	2
(c)	Explain near and far problem in context to cellular network.	2
(d)	What.is mobile IP ?	2
(e)	What is adaptive clustering?	2
(f)	What is Bluetooth ?	2
(g)	What is wireless application protocol?	2
(h)	What is meant by transaction processing ?	2
(i)	Define fisheye state routing.	2
(j)	Describe Temporary Ordered Routing Algorithm (TORA) in brief.	2

SECTION - B

Attempt _Any Three_ of the following   3*10 = 30

Q2	Questions	Marks
(a)	What is general packet radio service (GPRS) ? Describe its architecture in detail.	10
(b)	Describe the architecture, protocol stack and applications of wireless application protocol.	10
(c)	What is data replication ? Describe the replication strategies in detail.	10
(d)	Discuss challenges in transaction processing. What are the counter measures to security threats in mobile computing environment ?	10
(e)	What do you understand by Mobile Ad-Hoc Networks (MANET) ? Describe some real life scenarios where it can be used.	10

SECTION - C

Attempt _Any One_ of the following   5*10 = 50

Q3	Questions	Marks
(a)	What are the various characteristics of mobile computing ? Discuss challenges being faced to support mobile computing.	10
(b)	Compare SDMA, TDMA, FDMA and CDMA in terms of transmission techniques, signal separation and applications ?	10

Q4	Questions	Marks
(a)	With neat sketch, explain architecture of 802 11 L N and explain its MAC logic.	10
(b)	Why does traditional TCP not perform well in wireless network ? Discuss different approaches for TCP improvement.	10

Q5	Questions	Marks
(a)	What is data management in computing? Describe the data management issues in detail.	10
(b)	Describe the file system in mobile computing. How disconnected operations are performed in CODA file system ?	10

Q6	Questions	Marks
(a)	Describe the Fault Tolerance issues involved in mobile computing ? What is the monitoring process ?	10
(b)	Describe the characteristics and applications of mobile agents. Why mobile agents are used ?	10

Q7	Questions	Marks
(a)	Discuss the DSDV with example and differentiate it from AODV. Explain proactive, reactive routing protocol.	10
(b)	What are the characteristics of MANET? Explain the process of path discovery and path maintenance in DSR routing protocols.	10