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B. TECH.
(SEM VII) THEORY EXAMINATION 2021-22
MOBILE COMPUTING

Time: 3 Hours**Total 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. What are HLR and VLR in mobile computing?
 - b. _____ n?
 - c. Explain near and Far Problem in context to cellular network.
 - d. What is Mobile IP?
 - e. What is adaptive clustering?
 - f. What is Bluetooth?
 - g. What is Wireless Application Protocol?
 - h.
 - i. Define Fisheye state routing.
 - j. Describe Temporary Ordered Routing Algorithm (TORA) in brief.

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a. What is General Packet Radio Service (GPRS)? Describe its architecture in detail.
 - b. Describe the architecture, protocol stack and applications of Wireless Application Protocol.
 - c. What is Data replication? Describe the replication strategies in detail.
 - d. Discuss challenges in transaction processing. What are the counter measures to security threats in mobile computing environment?
 - e. What do you understand by Mobile Ad-Hoc Networks (MANET)? Describe some real life scenarios where it can be used.

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) What are the various characteristics of mobile computing? Discuss challenges being faced to support mobile computing.
 - (b) Compare SDMA, TDMA, FDMA and CDMA in terms of transmission techniques, signal separation and applications?
- 4. Attempt any one part of the following: 10 x 1 = 10**
- (a) With neat sketch, explain architecture of 802.11 LAN and explain its MAC Logic.
 - (b) Why does traditional TCP not perform well in wireless network? Discuss different approaches for TCP improvement.
- 5. Attempt any one part of the following: 10 x 1 = 10**
- (a) _____ n
detail.
 - (b) Describe the file system in mobile computing. How Disconnected Operations are performed in CODA file system?
- 6. Attempt any one part of the following: 10 x 1 = 10**
- (a) Describe the Fault Tolerance issues involved in Mobile Computing? What is the Monitoring Process?
 - (b) Describe the characteristics and applications of Mobile agents. Why mobile agents are used?
- 7. Attempt any one part of the following: 10 x 1 = 10**
- (a) Discuss the DSDV with example and differentiate it from AODV. Explain proactive, reactive routing protocol.
 - (b) What are the characteristics of MANET? Explain the process of Path Discovery and Path Maintenance in DSR Routing Protocols.