Printed Pages: 02   **Sub Code:NIT-801/ECS-087**

Paper Id: | 113222 | **Roll No.** | | | | | | | | | | |

B TECH
(SEM-VIII) THEORY EXAMINATION 2018-19
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 is Mobile Computing?
   b.   What are the basic differences between wirelesses WAN and wireless LAN.
   c.   Describe Temporary Ordered Routing Algorithm (TORA).
   d.   In context to cellular network, explain near and Far Problem.
   e.   What do you mean by cell in cellular concept?
   f.   Explain Data Management issues.
   g.   What is Bluetooth?
   h.   Define Frequency Reuse.
   i.   What are the different GSM Services?
   j.   Explain MANET.

SECTION B

2.   **Attempt any *three* of the following:**   **10x3=3**

   a.   What are the various characteristics of mobile computing? Discuss challenges being faced to support mobile computing.
   b.   "CSMA/CD is not a suitable protocol for wireless LAN". Give reasons in favor of or against the statement.
   c.   What is General Packet Radio Service (GPRS)? Describe its architecture in detail.
   d.   With neat sketch, explain architecture of 802.11 LAN and explain its MAC Logic.
   e.   What are the characteristics of MANET? Explain the process of Path Discovery and Path Maintenance in DSR Routing Protocols.

SECTION C

3.   **Attempt any *one* part of the following:**   **10x1=10**

   a.   Why does traditional TCP not perform well in wireless network? Discuss different approaches for TCP improvement.
   b.   Describe multi-cluster Architecture. Discuss any one algorithm required to partition the network in to several clusters.

4.   **Attempt any *one* part of the following:**   **10x1=10**

   a.   Discuss the architecture of GSM. Also discuss the security issues to implement GSM.
   b.   Describe the Fault Tolerance issues involved in Mobile Computing? What is the Monitoring Process?

5. **Attempt any *one* part of the following:**   **10x1=10**

    a. List of entities of mobile IP & describe the data transfer from mobile node to a fixed node and vice-versa.

    b. What kinds of problem arise, if TCP is implemented over wireless network? Explain.

6. **Attempt any *one* part of the following:**   **10x1=10**

    a. Discuss the schemes of mobile transaction management. List out various issues concerned to transaction management.

    b. What do you mean by CODA file system and also explain the clients in CODA? How Disconnected Operations are performed in CODA?

7. **Attempt any *one* part of the following:**   **10x1=10**

    a. Discuss the WAP Architecture in detail. Write down the applications& principles of WAP.

    b. Name the main differences between Ad-hoc network & other network. What advantages do ad-hoc networks offer? Explain in detail by giving suitable example.