Registration No :

Total Number of Pages : 02   **B.Tech**
                                                                                          PIT7J004
7ᵗʰ Semester Regular / Back Examination 2019-20
MOBILE COMPUTING
BRANCH : IT
Max Marks : 100
Time : 3 Hours
Q.CODE : HRB131
**Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO
from Part-III.
The figures in the right hand margin indicate marks.**

Part- I

Q1   **Only Short Answer Type Questions (Answer All-10)**   **(2 x 10)**

   a) "MAC protocol designed for infrastructure based wireless network may not work
        Satisfactory in infrastructure-less environment." - Justify.

   b) Differentiate between hard hand-off and soft hand-off.

   c) Write the significance of GPRS tunnelling protocol.

   d) How windows phone operating system are different from android phone operating
        system?

   e) What is encapsulation in mobile IP.

   f) Compare between WCDMA and CDMA-2000

   g) List out the security issues in MANET.

   h) What are the requirements of SNDCP in GPRS?

   i) Distinguish between proactive and reactive protocols with suitable examples.

   j) State the advantages and limitations of M-commerce.

Part- II

Q2   **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**   **(6 x 8)**

   a) How does mobile IP works? What are the challenges with mobile IP with respect to
        high speed mobility vehicles? How does Cellular IP overcome these issues?

   b) Explain the various commercial application of Ad-hoc Sensor network.

   c) Describe the IEEE 802.11 MAC packet structure.

   d) Discuss the services that need to be provided by the Wireless LAN.

   e) Enumerate the transmission protocols in the Um interface in GPRS Networking
        Protocol

   f) Classify the various logical channels in GSM. Explain briefly.

   g) Explain the BSC & BTS Arrangement in GSM System.

   h) What is Inter-BS link Transfer. Explain using suitable diagrams. How it is differ from
        Inter System Handoff?

   i) How secured session is established in WTLS? Explain briefly.

   j) Describe the WCDMA Protocol Architecture.

   k) Distinguish between network architecture for Globalstar System and network
        architecture for Iridium System using suitable figures.

   l) Explain the Issues that concern M-commerce in terms of security and privacy.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Describe the GPRS protocol architecture using suitable schematics.   **(16)**

Q4   Discuss in detail the Bluetooth protocol stack.   **(16)**

Q5   Explain in detail WLL architecture with functionality of each components using suitable schematic diagrams.   **(16)**

Q6   Enumerate briefly the various operating system for mobile computing.   **(16)**