Roll No: ☐☐☐☐☐☐☐☐☐

The Assam Royal Global University, Guwahati
Royal School of Engineering and Technology (RSET)
B.Tech. 7th Semester
Semester End Examination,2023
Course Title: Mobile Computing
Course Code: CSE022D701

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.
The figures in the right-hand margin indicate marks.

Section – A

Q.1.   Attempt **all questions**.   2 x 8=16
   a. Why is frequency reuse used in mobile computing?
   b. Why Bluetooth uses FHSS?
   c. What are the limitations of wireless link?
   d. Why same routing protocol for wired network can't be used in wireless network?
   e. Why DCET protocol is outdated now a days?
   f. Write the functions of Home Location Register (HLR) and Visitors Location Register (VLR) in GSM.
   g. How a mobile node associates itself to access point in IEEE 802.11b std?
   h. List out important information stored in Subscriber Identity Module (SIM).

Q.2.   Attempt **any two** of the following   6 x 2=12
   a. Analyze the frame structure of LAPD protocol with suitable diagram.
   b. What are the differences between CDMA and TDMA? What will be sender output for data bit 1 and -1 if chip sequence is (1,-1,1,-1,1,-1,1,-1) ?
   c. Compare and contrast different layers of mobile protocol stack in base station for GSM.

Q.3.   Attempt **any two** of the following   7 x 2=14
   a. How hidden and exposed terminal problem has been solved using CSMA/CA?
   b. What is snooping TCP? How it is different from TCP ? Explain.
   c. Explain mobility management concept in details with suitable diagram in mobile computing.

Q.4.   Attempt **any two** of the following   7 x 2=14
   a. What is communication asymmetry? How are data delivery mechanisms classified in mobile computing?
   b. Explain different indexing techniques along with its use.
   c. Explain different data dissemination broadcast models.

Q.5.   Attempt **any two** of the following   7 x 2=14
   a. How Bluetooth architecture is different than ad hoc wireless network?
   b. Why Android OS is suitable for mobile computing?
   c. Analyze the protocol used in every layer while designing an ad hoc network for small amount of node.