USN ☐☐☐☐☐☐☐☐☐☐ **13MCA443**

Fourth Semester MCA Degree Examination, Dec.2017/Jan.2018
Mobile Computing and Wireless Communication

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1   a. Explain the three-tier architecture for mobile computing with a neat diagram. **(10 Marks)**
     b. What is context aware system? What all can be types of information needed for developing a fully context aware system? **(10 Marks)**

2   a. Describe different elements in the GSM architecture, with a neat diagram. **(10 Marks)**
     b. What are the various strengths of SMS? Discuss the difference between SMMT and SMMO. **(10 Marks)**

3   a. Explain GPRS attach procedure with PDP context. **(06 Marks)**
     b. Describe GPRS specific applications and list the limitations of GPRS. **(10 Marks)**
     c. Explain the functions of SGSN and GGSN in GPRS. **(04 Marks)**

4   a. Describe CDMA data protocol stack. **(10 Marks)**
     b. Explain different handoff techniques in CDMA. **(06 Marks)**
     c. List out any four differences between GSM and CDMA. **(04 Marks)**

5   a. Explain the design constraints for handheld devices. **(10 Marks)**
     b. What is mobile IP? Explain three basic capabilities of mobile IP. **(10 Marks)**

6   a. Describe smart client architecture with a suitable diagram and list different kinds of mobile operating system. **(10 Marks)**
     b. Discuss the smart client development cycle with a neat diagram. **(10 Marks)**

7   a. Explain the processing of wireless internet request. **(08 Marks)**
     b. What are the key benefits of WAP? **(07 Marks)**
     c. Write a short note on HTML. **(05 Marks)**

8   a. Explain MIDlet Lifecycle. How is provisioning done in MIDP application? **(12 Marks)**
     b. Explain security considerations in MIDP. **(08 Marks)**

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