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13MCA443

**Fourth Semester MCA Degree Examination, Dec.2019/Jan.2020**  
**Mobile Computing and Wireless Communication**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. What is Mobile Computing? Explain the three-tier architecture for mobile computing with neat diagram. (10 Marks)  
b. What do you understand by context? Explain context aware system in detail. (10 Marks)
- 2 a. Describe the GSM architecture with its constituent elements. (10 Marks)  
b. What are the various strengths of SMS? Explain SMMT and SMMO with an example. (10 Marks)
- 3 a. Explain the GPRS system architecture, with neat diagram. (10 Marks)  
b. Explain the different applications of GPRS and list the limitations of GPRS. (10 Marks)
- 4 a. Explain the major difference between GSM and IS-95. (10 Marks)  
b. What are the different spreading techniques? (04 Marks)  
c. Explain different handoff-techniques in mobile communication. (06 Marks)
- 5 a. Explain the design constraints in application for handheld devices. (10 Marks)  
b. What is Mobile IP? Explain tunneling in the context of Mobile IP. (10 Marks)
- 6 a. What is Smart Client architecture for user interface and data storage? Explain it. (10 Marks)  
b. Explain the various mobile operating systems. (10 Marks)
- 7 a. Explain the various steps involved in processing a wireless request. (10 Marks)  
b. Explain the following:  
i) WML ii) XHTML iii) HDML iv) HTML. (10 Marks)
- 8 Write short notes on the following:  
a. CDC  
b. CLDC  
c. MIDP  
d. Security considerations in MIDP. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.