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13MCA443

Fourth Semester MCA Degree Examination, June/July 2017

Mobile Computing and Wireless Communications

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Describe the functions of each tier of three-tier architecture in mobile computing. (10 Marks)
b. What is middleware? Discuss each middleware of GSM network. (10 Marks)
- 2 a. Explain call routing for a mobile terminating call in the context of GSM networks. (10 Marks)
b. Explain the SMS architecture with a neat diagram. (10 Marks)
- 3 a. Explain PDP context activation with respect to GPRS networks with a neat diagram. (10 Marks)
b. Explain the GPRS architecture with its constituent elements. (10 Marks)
- 4 a. Explain the IS-95 forward and reverse link channel structures in detailed. (10 Marks)
b. List the functional differences between GSM and CDMA. (05 Marks)
c. Define Handoff. Explain various handoffs in CDMA. (05 Marks)
- 5 a. List the design constraints for applications targeted for handheld devices. Explain each in detailed. (10 Marks)
b. Explain the tunneling operation in mobile-IP with a neat diagram. (10 Marks)
- 6 a. Explain the smart client architecture with a neat diagram. (10 Marks)
b. What are the various phases of smart client development? Explain the needs analysis phase and the design phase in detailed. (10 Marks)
- 7 a. Explain the various stages involved in wireless request processing. (10 Marks)
b. Explain the MIDlet lifecycle with a neat diagram. (10 Marks)
- 8 Write short notes on :
a. Cell cluster in GSM
b. Wi MAX
c. Data services in GPRS
d. Markup languages (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.