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10MCA51

Fifth Semester MCA Degree Examination, Dec.2014/Jan.2015
Object Oriented Modeling and Design Patterns

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. What is a model? Explain the various concepts of class modeling, with example. (12 Marks)
b. Draw the elaborated ATM class model diagrams. (08 Marks)
- 2 a. What is multiple inheritance? Discuss about the various concepts or kinds of multiple inheritance in advanced class modeling, with example. (12 Marks)
b. Draw the state diagram for a telephone line. (08 Marks)
- 3 a. What is use-case diagram? What are the guidelines of use – case models? Draw the use-case diagram for a vending machine. (10 Marks)
b. Discuss about activity models with guidelines and draw the activity diagram for stock trade processing. (10 Marks)
- 4 a. Explain the stages of software development. (08 Marks)
b. What are the steps to construct a domain class model? Explain any four steps with example. (12 Marks)
- 5 a. What are the steps to construct application interaction model? Explain any four steps with example. (10 Marks)
b. Discuss about the architectural styles that are common in existing system. (10 Marks)
- 6 a. Write short notes on : (with reference to class design)
i) Designing algorithm
ii) Design optimization. (10 Marks)
b. What is implementation? Explain any three steps to implement modeling with example. (10 Marks)
- 7 a. What is a pattern? Discuss about various pattern description template. (08 Marks)
b. Discuss about structure and dynamics of forwarder – receiver with a neat diagram. (12 Marks)
- 8 a. Explain the structure and implementation of command processor, with diagram. (12 Marks)
b. Write a program in C++ or Java to implement publisher subscriber pattern with a class diagram. (08 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.