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13MCA51

Fifth Semester MCA Degree Examination, Dec.2017/Jan.2018
Object Oriented Modeling & Design Patterns

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. What is object orientation? Explain briefly the stages involved in object oriented methodology. (10 Marks)
b. What do you mean by abstraction? Discuss different types of modeling techniques used for object oriented modeling and design. (10 Marks)
- 2 a. Discuss the terms aggregation and composition with example. (08 Marks)
b. Explain with a diagram, how an association class participates (06 Marks)
c. What are links and association? Write and explain UML notations for links and associations with an example. (06 Marks)
- 3 a. Define state diagram and state model. Draw the state diagram for telephone line with activities. (10 Marks)
b. What do you mean by states and events? Discuss different kinds of events. (10 Marks)
- 4 a. What is a use case? Explain the guidelines for use case models. (08 Marks)
b. What do you mean by swim lane? Explain briefly an activity diagram with swim lanes for servicing an airplane. (06 Marks)
c. Discuss sequence models. Draw the sequence diagram for a session with an online stock broker. (06 Marks)
- 5 a. List and explain different stages of software development process. (10 Marks)
b. Discuss about activity models with guidelines and draw the activity diagram for stock trade processing. (10 Marks)
- 6 a. Discuss the steps to construct a domain class model, with an example of ATM. (10 Marks)
b. Discuss the steps to construct an application interaction model with example. (10 Marks)
- 7 a. Discuss common architectural styles of system design. (10 Marks)
b. Discuss with example: (10 Marks)
(i) Enumerations (ii) Abstract class
- 8 a. What is a pattern? How it is categorized? Describe any one category with an example. (10 Marks)
b. Explain client-dispatcher-server design pattern. (10 Marks)

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1. On completing answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification appears to be considered as malpractice.