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10MCA51

Fifth Semester MCA Degree Examination, Dec. 2013/ Jan. 2014
Object – Oriented Modeling and Design Patterns

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. What is an object orientation? Hence explain the terms – identity, classification, inheritance and polymorphism. (10 Marks)
b. Define the following terms and hence, explain with example each :
i) Links and association
ii) Multiplicity
iii) Association-class
iv) Qualified association. (10 Marks)
- 2 a. What is generalization? With neat diagram, represent inheritance for graphic figures. (10 Marks)
b. What is an event and hence, explain in detail, the signal event, change event and time event. (10 Marks)
- 3 a. What do you mean by state? With neat diagram, explain state diagram for a telephone line system. (10 Marks)
b. List out and explain the following :
i) Guidelines for sequence models
ii) Guidelines for use case models. (10 Marks)
- 4 a. List and explain in detail, the sequence of well defined stages of software development. (10 Marks)
b. What are the high level questions to elaborate the initial systems concept? Hence explain with the help of ATM case study. (10 Marks)
- 5 a. What are the steps must be performed to construct a domain class model? Hence explain all the steps, in brief. (10 Marks)
b. What do you mean by implementation modeling? Hence describe the step – fine tuning classes. (10 Marks)
- 6 a. What is pattern? Describe pattern categories, in detail. (10 Marks)
b. How patterns are helpful in software development? Discuss. (10 Marks)
- 7 a. Explain forwarder – receiver design pattern, in brief. (10 Marks)
b. Explain client – dispatcher – server design pattern, in brief. (10 Marks)
- 8 Write short notes on :
a. Metadata
b. Active and passive objects
c. Usecase diagram
d. Idioms. (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.