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10MCA51

Fifth Semester MCA Degree Examination, Dec.2016/Jan.2017
Object Oriented Modeling and Design Pattern

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 is a class model? With a neat diagram, explain a class model of a work-station window management system. (10 Marks)
- 2 a. Define the following terms with an example :
 - i) Enumerations
 - ii) Association ends
 - iii) Aggregation
 - iv) Abstract classes
 - v) Workarounds. (10 Marks)
- b. With a neat diagram, describe the state for telephone line with activities. (10 Marks)
- 3 a. What is concurrency? Discuss the concurrency in advanced state modeling with an example. (10 Marks)
- b. What are the guidelines for sequence models? Explain the sequence model with a proper example. (10 Marks)
- 4 a. What is software development process? Explain the stages of software development process. (10 Marks)
- b. Write and explain the steps performed in constructing a domain state model with an example. (10 Marks)
- 5 a. What is analysis? What are the steps involved in constructing an application state model? Explain in detail. (12 Marks)
- b. What are the different aspects of reusability? Explain the reusable things. (08 Marks)
- 6 a. Explain the different steps involved in designing algorithms. (10 Marks)
- b. Explain the different tasks involved in design optimization. (10 Marks)
- 7 a. Write short notes on :
 - i) Tips of reverse engineering
 - ii) Wrapping. (10 Marks)
- b. What is a pattern? Explain the templates of pattern description. (10 Marks)
- 8 a. Explain forwarder-receiver pattern with diagram. (10 Marks)
- b. What are idioms? How do they differ from design patter? Explain the necessary steps for implementing the counted pointer idiom. (10 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.