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13MCA51

Fifth Semester MCA Degree Examination, June/July 2019
Objected Oriented Modeling and Design Patterns

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions.***

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.

1 a. What is object oriented development? Explain evidence for usefulness of OO development. **(10 Marks)**
b. Explain object oriented methodology and OO themes. **(10 Marks)**

2 a. What is a model? What purpose does it serve? Draw the class model for windowing management system. **(10 Marks)**
b. Explain different kinds of multiple inheritances and workarounds of advanced class modeling. **(10 Marks)**

3 a. Define state and events. Discuss the different kinds of events with an example. **(10 Marks)**
b. Explain concurrency of an object in the advanced state modeling. **(10 Marks)**

4 a. Define use-case models? Explain use-case diagram for vending machine. Hence describe guidelines. **(10 Marks)**
b. Explain sequence diagram for online stock brokerage system. Hence describe the guidelines for sequence diagram. **(10 Marks)**

5 a. Explain different stages of software development. **(10 Marks)**
b. What do you mean by system conception? What are the ways to find new system conception? Explain in detail what a good system concept must answer. **(10 Marks)**

6 a. Explain the steps to construct a domain class model. **(10 Marks)**
b. Explain the steps to construct a domain application interaction model. **(10 Marks)**

7 a. Explain common Architectural styles of system design. **(10 Marks)**
b. Write short notes on the following :
(i) Recursive downward (ii) Design optimization. **(10 Marks)**

8 a. What is pattern? Explain categories of pattern. **(10 Marks)**
b. Explain procedure to implement forward-receiver design. **(10 Marks)**

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