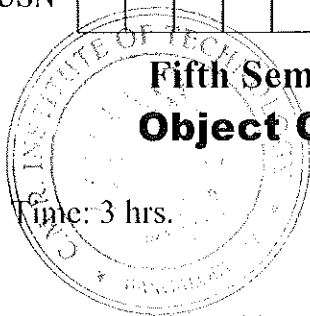


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10MCA51



Time: 3 hrs.

Max. Marks: 100

Fifth Semester MCA Degree Examination, June/July 2016
Object Oriented Modeling and Design Patterns

Note: Answer any FIVE full questions.

- 1 a. What is object orientation? Describe object oriented themes. (08 Marks)
b. Write a short notes on the following association and depict the UML diagram:
(i) Association end names
(ii) Association classes
(iii) Bags and sequences
(iv) Qualified associations. (12 Marks)
- 2 a. Describe aggregation and composition, draw their UML notation, with example. (10 Marks)
b. Draw and explain state diagram for a telephone line. (10 Marks)
- 3 a. Explain aggregation concurrency in advanced state modeling. (08 Marks)
b. Explain the concepts of use case model with vending machine as example. What are the guidelines for use case model? (12 Marks)
- 4 a. Explain sequence diagram, with an example. (10 Marks)
b. Explain the stages of software development. (10 Marks)
- 5 a. What are the different steps to construct a domain class model? Explain any four steps with examples. (12 Marks)
b. What are the several kinds of global resources that the software designer must identify? Explain. (08 Marks)
- 6 a. Explain the different steps involved in designing algorithms. (08 Marks)
b. What is reverse engineering? Compare reverse engineering vs forward engineering. (12 Marks)
- 7 Explain in detail, the forwarder - receiver design pattern, with a neat sequence diagram and class diagram. (20 Marks)
- 8 Illustrate in detail, the command processor design pattern, draw a sequence diagram and class diagram. (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.