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10MCA51

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

Time: 3 hrs. Max. Marks:100

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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