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Fifth Semester MCA Degree Examination, Dec.2015/Jan.2016
Object Oriented Modeling and Design Pattern

Max. Marks:100

Time: 3 hrs.

Note: *Answer any FIVE full questions.*

1 a. What is object oriented analysis and design? How it is different from normal analysis and design techniques? Explain with suitable example. **(10 Marks)**
   b. What do you mean by abstraction? Explain the different types of modeling techniques used for object oriented modeling and design. **(10 Marks)**

2 a. What is Abstract class? Explain the difference between Aggregation versus Composition with suitable example. **(10 Marks)**
   b. Define the following terms with example:
      i) Multiplicity
      ii) Association End Names
      iii) Ordering
      iv) Bags and Sequence
      v) Association classes. **(10 Marks)**

3 a. What is the use of state diagram? Draw the state diagram for telephone line system. **(10 Marks)**
   b. What do you mean by event? Explain the signal event, change event and time event. **(10 Marks)**

4 a. Write short notes on the following :
      i) Actor
      ii) Use case
      iii) Scenario
      iv) Sequence Diagram. **(08 Marks)**
   b. Draw sequence diagram for online flight ticket booking system. **(12 Marks)**

5 a. Briefly describe the software development stages. **(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. What do you mean by Domain State Model? Explain the steps performed in constructing a domain state model. **(10 Marks)**
   b. What is Application class model? Explain the steps to construct the application class models. **(10 Marks)**

7 a. What is software control strategy? Explain the different types of software control strategy. **(10 Marks)**
   b. Write short notes on following :
      i) Recursive downward   ii) Design Optimization **(10 Marks)**

8 a. How design patterns solve design problem? How to select a design pattern? Describe the design pattern's three part scheme that underlies every pattern. **(10 Marks)**
   b. Explain the different pattern categories in detail. **(10 Marks)**

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