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06CS71

Seventh Semester B.E. Degree Examination, June/July 2014
Object Oriented Modeling and Design

Time: 3 hrs. Max. Marks:100

Note: ***Answer FIVE full questions, selecting atleast TWO questions from each part.***

PART – A

1 a. What is an object oriented methodology? Explain the various stages of object oriented methodology. **(10 Marks)**

b. What is generalization? Write the class model for geometric figures and explain the concept of generalization and inheritance. **(10 Marks)**

2 a. List the advantages and disadvantages of multiple inheritance over the generalization. Along with necessary class diagrams, describe different kinds of multiple inheritance. **(12 Marks)**

b. What is a package? What purpose it serve? Explain the various tips for devising packages. **(08 Marks)**

3 a. With the help of necessary state diagrams, explain the following :
i) Aggregation concurrency
ii) Synchronization of concurrent activities. **(10 Marks)**

b. Describe the various guidelines followed while constructing a sequence model? Give sequence diagram for
i) A stock quote
ii) A stock purchase that fails. **(10 Marks)**

4 a. Explain in depth all the stages of software development process. **(08 Marks)**

b. What is domain state model? Describe various steps performed while constructing a domain state model. **(12 Marks)**

PART – B

5 a. What is an application state model? Describe the various steps followed while constructing an application state model. **(10 Marks)**

b. Explain the various issues to be considered while allocating concurrent subsystem to a hardware unit. Either a general purpose processor or a specialized functional unit. **(10 Marks)**

6 a. Explain three tasks of design optimization. **(10 Marks)**

b. Explain three steps used to improve the organization of a class design. **(10 Marks)**

7 a. What is a pattern? Briefly explain the pattern description templates. **(08 Marks)**

b. With neat diagram, explain the dynamics of client-dispatcher-server model for design pattern with necessary implementation steps. **(12 Marks)**

8 a. Explain the structure and implementation steps of command processor pattern with a neat diagram. **(12 Marks)**

b. What are idioms? Explain the necessary steps for implementing the counted pointer idioms. **(08 Marks)**

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