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10CS71

**Seventh Semester B.E. Degree Examination, July/August 2021**  
**Object Oriented Modeling and Design**

Time: 3 hrs.

Max. Marks:100

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

- 1 a. Define Object-Orientation. Explain four aspects of Object-Orientation with examples. (10 Marks)
- b. Explain Generalization with UML diagrams. Also explain uses of generalization. (10 Marks)
- 2 a. Categorize the following relationships into generalization, aggregation or association. Assume there may be n-ary association in the list. Explain your answers.
  - i) A country has a capital city
  - ii) Modems and keyboards are input/output devices
  - iii) A route connects two cities. (06 Marks)
- b. Explain different types of multiple inheritance with examples. (08 Marks)
- c. Explain the following:
  - i) do-activity
  - ii) entry-activity. (06 Marks)
- 3 a. What are nested states? Discuss aggregation concurrency with an example. (08 Marks)
- b. Explain include and extend relationships with examples. (06 Marks)
- c. Explain types of sequence models with examples. (06 Marks)
- 4 a. What is software development process? Explain different stages of software development process. (10 Marks)
- b. Explain the steps performed in constructing a domain state model. (10 Marks)
- 5 a. Explain the steps required to construct application class model. (08 Marks)
- b. Explain the qualities of 'good class' libraries. (06 Marks)
- c. What is subsystem? Explain layered architecture. (06 Marks)
- 6 a. Discuss the steps performed in designing algorithms. (08 Marks)
- b. Differentiate between forward and reverse engineering. (06 Marks)
- c. Discuss the different possibilities in fine tuning of classes. (06 Marks)
- 7 a. Explain the model-view-controller with a diagram. (10 Marks)
- b. Explain the client-dispatcher-server communication patterns along with its structure and dynamics. (10 Marks)
- 8 a. Explain the structure of command processor pattern. (10 Marks)
- b. Explain the view handler management pattern. (10 Marks)

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