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10CS71

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024
Object Oriented Modeling and Design

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART – A

- 1 a. What is OO system development methodology? Explain the five stages in OO methodology. (05 Marks)
b. Explain three kinds of model which separates a system into distinct views. (10 Marks)
c. Define and give UML notation for
(i) Object with values and classes with attributes
(ii) Qualified association. (05 Marks)
- 2 a. Explain :
i) Aggregation Vs Association ii) Aggregation Vs composition. (05 Marks)
b. Prepare a metadata of a CAR model that supports only the following UML concepts : Class, attribute, association, association end, multiplicity, class name and attribute name. Use only these constructs to build the metadata. (05 Marks)
c. What is an event? Explain different types of events with an example. (10 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. Explain software development life cycle by considering OO approach. (08 Marks)
b. For what kind of Questionaries a good system concept must answer? Justify with example. (08 Marks)
c. List the steps required to construct a domain class model. (04 Marks)

PART – B

- 5 a. List and explain the steps required for constructing application class model. (07 Marks)
b. How to organize a decomposition of a system into subsystem? Explain in brief. (06 Marks)
c. Explain how to choose a software control strategy in brief. (07 Marks)
- 6 a. List and explain the steps involved in the design of algorithms. (08 Marks)
b. Write briefly on : i) Fine tuning class ii) Design optimization. (06 Marks)
c. Differentiate between forward engineering and reverse engineering. (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. With an example of multi-document editors explain view handler. (10 Marks)
b. Explain how counted pointer idiom makes memory management of dynamically-allocated shared objects on C++ easier. (10 Marks)

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.