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)**

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