USN

Seventh Semester B.E. Degree Examination, June/July 2023

Object Oriented Modeling and Design

Time: 3 hrs.   Max. Marks:100

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

PART – A

1 a. What is object oriented development? Explain briefly the stages involved in object oriented methodology. **(10 Marks)**
   b. Discuss the purpose of three models. **(06 Marks)**
   c. Prepare a class diagram from the object diagram shown in Fig.Q1(c). Explain multiplicity decision. **(04 Marks)**
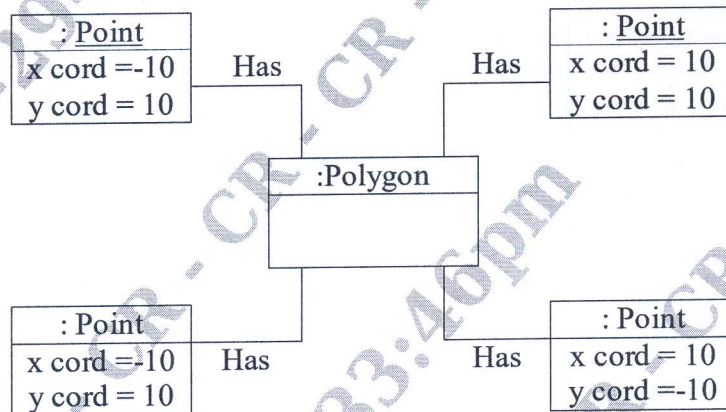

Fig.Q1(c)

2 a. Explain the following using suitable examples:
     (i)   Enumerations
     (ii) Scope
     (iii) Multiplicity for attributes. **(08 Marks)**
   b. What is an event? Discuss the various kinds of events using UML notations. **(08 Marks)**
   c. Design and describe a guarded transition diagram for traffic lights at an intersection. **(04 Marks)**

3 a. Prepare a use case diagram for computer email system with minimum two actors. Explain the relevance of each actor with corresponding use case. **(08 Marks)**
   b. Explain with suitable examples the following :
     (i) Include relationship
     (ii) Extend relationship **(08 Marks)**
   c. What are transient object? Exhibit transient object with a sequence diagram. **(04 Marks)**

4 a. With neat diagram, explain the process overview. **(06 Marks)**
   b. Explain the steps performed in constructing a domain state model with an example. **(08 Marks)**
   c. Explain the class model for an ATM system. **(06 Marks)**

PART – B

5 a. For an ATM example
   i) Analyze the difference type use cases by designing a use case diagram.
   ii) Explain process transaction scenario. **(12 Marks)**
   b. What is system design? Explain steps involved in it. **(08 Marks)**

6 a. List and explain the steps involved in design of algorithms. **(08 Marks)**
   b. Write a brief note on Realizing algorithm. **(08 Marks)**
   c. Write a note on wrapping. **(04 Marks)**

7 a. What is pattern? Explain the properties of pattern for Software Architecture. **(10 Marks)**
   b. Describes the three categories of Patterns. **(10 Marks)**

8   Write short notes on
   a. Structure part of command processor. **(05 Marks)**
   b. Dynamic scenario of view handler **(05 Marks)**
   c. Benefits of view handler **(05 Marks)**
   d. Idioms and style. **(05 Marks)**

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