USN ⎕⎕⎕⎕⎕⎕⎕⎕⎕⎕ 10CS71

Seventh Semester B.E. Degree Examination, Dec.2014/Jan.2015
Object Oriented Modeling & Design

Time: 3 hrs.

Max. Marks:100

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

PART – A

1. a. Describe the important characteristics of object orientation. **(08 Marks)**
    b. Write short notes on : i) Association classes ii) Generalization iii) Qualified association. **(12 Marks)**

2. a. With suitable UML diagram explain aggregation and composition. **(08 Marks)**
    b. Draw class diagram for the following:
       i) Programmer uses computer language on projects.
       ii) Worker is a butcher or baker or candlestick maker. **(04 Marks)**
    c. Draw and explain the general UML syntax for state diagram. **(08 Marks)**

3. a. What is submachine? Explain with the state diagram of a vending machine. **(08 Marks)**
    b. Draw a sequence diagram for a stock purchase using an online stock broker system. **(04 Marks)**
    c. With suitable examples, expalin different use case relationships. **(08 Marks)**

4. a. Explain the following software development life-cycle models:
       i) Water fall development
       ii) Iterative development. **(07 Marks)**
    b. List and explain any four criteria to be considered in keeping the right classes. **(08 Marks)**
    c. Draw domain state model for account with respect to ATM example. **(05 Marks)**

PART – B

5. a. Draw the use-case diagram for ATM and explain each use-case. **(06 Marks)**
    b. Bring out initial and final event for each use-case in ATM example. **(04 Marks)**
    c. Explain the various software control strategies that can be applied in the system design. **(10 Marks)**

6. a. List and explain the steps involved in the design of algorithms. **(12 Marks)**
    b. Compare forward engineering and reverse engineering. **(08 Marks)**

7. a. What is a pattern? Explain with model-view-controller example. **(08 Marks)**
    b. Explain the structure and dynamics of forwarder-receiver pattern. **(12 Marks)**

8. a. Explain the behaviour of the view handler for the scenario "view creation". **(08 Marks)**
    b. Explain the structure of the command processor pattern. **(08 Marks)**
    c. Briefly explain the counted pointer problem. **(04 Marks)**

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