16/17MCA51

Fifth Semester MCA Degree Examination, June/July 2019
Object Oriented Modeling and Design Patterns

Time: 3 hrs.

Max. Marks: 80

Note: *Answer FIVE full questions, choosing one full question from each module.*

Module-1

1   a. What are the various stages of Object Oriented Methodology used in software development? **(08 Marks)**
    b. Describe the Object Oriented themes. **(05 Marks)**
    c. Write short notes on the various modeling techniques. **(03 Marks)**

OR

2   a. Describe the following terms with suitable examples.
       i) Multiplicity   ii) Enumeration   iii) Visibility   iv) Ordering. **(08 Marks)**
    b. Explain the links and associations with an example. **(04 Marks)**
    c. Discuss the terms of aggregation and composition with examples. **(04 Marks)**

Module-2

3   a. What do you mean by event? Explain the several kinds of events with examples. **(08 Marks)**
    b. Discuss the significance of state diagram and draw the state diagram for telephone line system. **(08 Marks)**

OR

4   a. Write a guidelines for sequence model and draw the sequence diagram for cash withdrawal process in ATM system. **(08 Marks)**
    b. Draw the use case diagram for library management system and describe the guidelines of use case diagram. **(08 Marks)**

Module-3

5   a. Elaborate and explain the questions to be answered for a good system concept. **(07 Marks)**
    b. Write in detail about the software development stages. **(09 Marks)**

OR

6   a. Discus the steps to construct a domain class model, with an example of ATM. **(08 Marks)**
    b. Describe the various steps to construct an application interaction model. **(08 Marks)**

Module-4

7   a. What is software control strategy? Explain the different types of software control strategy. **(07 Marks)**
    b. Draw the diagram of architecture of ATM system. **(05 Marks)**
    c. What are the types of subsystems in breaking a system into subsystems? **(04 Marks)**

OR

8   a. Write the various steps to design algorithms. **(08 Marks)**
    b. Describe in detail about the design optimization. **(08 Marks)**

Module-5

9   a. What is a pattern? Write the categories of pattern in detail. **(08 Marks)**
    b. Describe the pattern description template in detail. **(08 Marks)**

OR

10 a. Explain the Client Dispatcher Server design pattern in detail. **(11 Marks)**
    b. Briefly write about the structure and dynamics of Forwarder Receiver design pattern in detail. **(05 Marks)**

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