USN | | | | | | | | | | 16MCA51

Fifth Semester MCA Degree Examination, Dec.2018/Jan.2019
Object Oriented Modeling and Design Pattern

Time: 3 hrs.   Max. Marks: 80

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

Module-1

1 a. Outline the various Object Oriented Themes.   (06 Marks)
   b. Describe the following terms:
      i)   Enumeration
      ii)   Aggregation
      iii) Composition
      iv)   Abstract class
      v)   Reification
      Give example for each.   (10 Marks)

OR

2 a. State the purposes of building a model.   (04 Marks)
   b. Briefly explain the class model, state model and interaction model. (04 Marks)
   c. Explain with examples:
      i)   Value and Attribute
      ii)   Operation and Method
      iii) Link and Association
      iv)   Qualified Association.   (08 Marks)

Module-2

3 a. What is an event? With example describe the different types of events in state modeling. (08 Marks)
   b. Describe sequence diagram with active objects, passive objects and transient objects. (08 Marks)

OR

4 a. What are the guidelines to be followed while drawing use case diagram? Draw the use case model for vending machine. (08 Marks)
   b. Discuss the use of branching and concurrency in activity diagram. (08 Marks)

Module-3

5 a. Explain the procedure to be followed to construct a domain class model. (10 Marks)
   b. Write and explain the steps performed in constructing a domain state model. (06 Marks)

OR

6 a. Describe the steps for constructing application interaction model. (10 Marks)
   b. Explain the steps for constructing application state model. (06 Marks)

Module-4

7 a. With the help of architecture of ATM system describe how to break a system into subsystems in system design. **(12 Marks)**
   b. Discuss about making a reuse plan in system design. **(04 Marks)**

OR

8 a. Briefly explain the design optimization with reference to class design. **(08 Marks)**
   b. Explain the steps to be performed in designing algorithm for class design. **(08 Marks)**

Module-5

9 a. Define pattern. Explain the pattern description template. **(08 Marks)**
   b. Briefly explain Forwarder-Receiver pattern. **(08 Marks)**

OR

10 a. Explain the structure of client – dispatcher server pattern. **(08 Marks)**
   b. Describe whole-part design pattern. **(08 Marks)**

* * * * *