

CBCS SCHEME

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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)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

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)

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