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17CS551

Fifth Semester B.E. Degree Examination, July/August 2022 Object Oriented Modeling and Design

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. What is object orientation? Explain the different stages of OO methodology. (08 Marks)
b. Briefly explain three kinds of models to describe OO modeling and design. (06 Marks)
c. Explain object oriented themes. (06 Marks)

OR

- 2 a. Explain the following terms with examples :
i) Links and Association
ii) Multiplicity
iii) Association End Names. (06 Marks)
b. What is multiple inheritances? Explain the kinds of multiple inheritances. (06 Marks)
c. What is Aggregation and Association? Give their respective UML notation with an example. (08 Marks)

Module-2

- 3 a. Briefly explain the Actors and use cases in use case models. (06 Marks)
b. Explain the guidelines for constructing use case models. (06 Marks)
c. What is sequence diagram? Draw and explain the sequence diagram for a session with an online stock broker. (08 Marks)

OR

- 4 a. What is statechart diagram? Explain the steps involved in developing statechart diagram. (10 Marks)
b. Explain all the necessary steps for developing orderitem state chart. (10 Marks)

Module-3

- 5 a. Explain the different stages of software Development process. (10 Marks)
b. Explain waterfall development and iterative development life cycles. (10 Marks)

OR

- 6 a. Describe the steps in constructing a domain state model. (06 Marks)
b. Explain an overview of domain analysis. (06 Marks)
c. Describe the system concept for ATM. (08 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. Explain fundamental important design principles to OO design. (06 Marks)
b. Explain the responsibilities of class objects with look up item availability are case. (06 Marks)
c. What is Stereotype? With diagram explain the standard stereotypes found in design models. (08 Marks)

OR

- 8 a. Illustrate four types of standard design classes. (06 Marks)
b. Explain the process of design with communication diagrams. (08 Marks)
c. Discuss the implementation issues for three-layer design. (06 Marks)

Module-5

- 9 a. What is Design pattern? Explain how to describe design pattern. (10 Marks)
b. Explain how to select to how to use a design pattern. (10 Marks)

OR

- 10 a. List any five design problems and explain how design pattern solve them. (10 Marks)
b. Write a short notes on :
i) Creational pattern ii) Structural pattern. (10 Marks)

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