

CBCS SCHEME



15IS72

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024 Software Architecture and Design Pattern

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Describe the General template of Design pattern. (08 Marks)
b. Explain object oriented key concepts. (08 Marks)

OR

- 2 a. Explain the following :
i) Aggregation ii) Delegation iii) Inheritance iv) Abstract class. (08 Marks)
b. Analyse various steps to use a design pattern. (08 Marks)

Module-2

- 3 a. Sketch the sequence diagram for adding a book into library system. (08 Marks)
b. Explain guidelines to write Use Case. (08 Marks)

OR

- 4 a. Design class diagram for Boom class in a library system. (08 Marks)
b. Write Use Case for place hold and remove hold. (08 Marks)

Module-3

- 5 a. Explain structure and participants of composite design pattern. (08 Marks)
b. Describe Application and consequences of proxy design pattern. (08 Marks)

OR

- 6 a. Explain consequence and implementation of Decorator design pattern. (08 Marks)
b. Write UML diagram to represent the structure and explain the participants of Flyweight Design pattern. (08 Marks)

Module-4

- 7 a. Discuss MVC architectural pattern. (08 Marks)
b. Explain sequence diagram for drawing a line along with steps. (08 Marks)

OR

- 8 a. Discuss the scheme of implementing undo operation along with issues. (08 Marks)
b. Explain the implementation details of Model class along with necessary prototype. (08 Marks)

Module-5

- 9 a. Explain Basic architecture of client/server systems. (04 Marks)
b. List and briefly explain the steps to setting up a remote object. (12 Marks)

OR

- 10 a. Design state transition diagram for Add book and issue book. (07 Marks)
b. Write a short note on:
i) Selection statement ii) Loop iii) Arrays (09 Marks)

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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.

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