USN | | | | | | | | | |

17IS72

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

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 OO development? Explain key concepts of OO design. **(10 Marks)**
   b. Explain how to select a design pattern. **(05 Marks)**
   c. Explain how to use a design pattern. **(05 Marks)**

OR

2 a. Explain how design pattern solve design problems. **(10 Marks)**
   b. What is design pattern? Explain essential elements of design paradigm. **(05 Marks)**
   c. Explain how to describe a design pattern. **(05 Marks)**

Module-2

3 a. Describe the guidelines to remember when writing use case. **(05 Marks)**
   b. Explain conceptual, software and implementation classes. **(05 Marks)**
   c. Design the use case diagram of Library system and explain any two use case. **(10 Marks)**

OR

4 a. Construct and explain sequence diagram for returning books in library system. **(05 Marks)**
   b. Explain Farade pattern with neat diagram. **(05 Marks)**
   c. Explain the activities involved in analysis phase. **(10 Marks)**

Module-3

5 a. Explain decorator pattern in detail. **(10 Marks)**
   b. What are the issues to consider when implementing composite pattern. **(10 Marks)**

OR

6 a. Explain in detail proxy pattern. **(10 Marks)**
   b. Explain in detail Bridge pattern. **(10 Marks)**

Module-4

7 a. Describe the process of designing the system in detail taking simple drawing program as example. **(10 Marks)**
   b. Describe implementation of view class with example. **(05 Marks)**
   c. Define controller. Explain steps involved in defining controller. **(05 Marks)**

OR

8 a. With neat diagram, explain MVC architecture and attenuation view of MVC architecture.
(10 Marks)
   b. Explain the issues need to be highlighted, when implementing the undo operation. (05 Marks)
   c. What are the benefits of design of subsystem? (05 Marks)

Module-5

9 a. Explain the process of implementing a Remote method invocation. (10 Marks)
   b. How to develop user acquirements? Explain steps involved in it. (10 Marks)

OR

10 a. What is distributed system? Explain the basic architecture of client server system. (10 Marks)
    b. Draw and explain state transition diagram for adding a book in library system. (05 Marks)
    c. Explain how to implement object oriented system on the web. (05 Marks)

* * * * *