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Question Paper Code : 91402

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019

Fifth/Sixth Semester

Computer Science and Engineering

CS 6502 – OBJECT ORIENTED ANALYSIS AND DESIGN

(Common to Information Technology)

(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What are the three perspectives to apply UML ?
2. What are the primary goals in the design of UML ?
3. How strategy is used for design patterns ?
4. Define modular design.
5. What are the tasks performed in generalization ?
6. List out the components of a POS system.
7. List any two features of object based languages.
8. What is the significance of UML ?
9. What are the steps for mapping designs to Code ?
10. List out the issues in OO testing.



PART – B

(5×13=65 Marks)

11. a) With an example, clearly discuss about the package, components and deployment diagrams. (5+4+4)
(OR)
- b) Explain in detail about the interaction diagrams and also notations. (13)
12. a) i) Compare cohesion and coupling with suitable example. (5)
ii) State the role and patterns while developing system design. (8)
(OR)
- b) i) Differentiate Bridge and Adapter. (5)
ii) How will you design the behavioral pattern ? With an example, explain clearly. (8)
13. a) Discuss the difference between elaboration and inception. Explain how inception are used in POS system. (13)
(OR)
- b) Explain the guidelines for finding conceptual classes with neat diagram. (13)
14. a) What are System Sequence Diagrams ? What is the relationship between SSDs and Use cases ? Explain with an example.
(OR)
- b) Draw a neat sketch of the logical layered architecture of NextGen application and explain the components in detail.
15. a) Give a brief note on issues in Object Oriented Testing.
(OR)
- b) How will you generate source code from design using UML ? Illustrate.

PART – C

(1×15=15 Marks)

16. a) Consider an elevator that has the basic functions such as moving up and down open and close doors and pick up passengers. The elevator is supposed to be used in a building having floors numbered from 1 to n. There are call buttons in the elevator corresponding to each floor. For every floor except floors 1 and n, there are two floor call buttons for the passengers to call



elevator for going up and down. There is only one down call button at floor n and one up call button in floor 1. Then the car stops at a floor, the doors are opened and the elevator light indicating the current direction the elevator is going is illuminated so that the passengers can get to know the current moving direction of the elevator. When the elevator is moving a music audio is played inside the elevator.

Draw class diagram, activity diagram and component diagram for designing this system.

(OR)

b) Library Management System (LMS) :

Problem statement :

Library management software is used to monitor and controlling the transactions in a library. This case study on the Library Management System gives us the complete information and daily transaction done in a library. We need to record and retrieve the details of books in the library which mainly focus on basic operation like adding a new book, new member, searching books, facility to borrow books and returns.

Perform the following functions :

- i) Class diagram. **(3)**
 - ii) Use-case diagram. **(3)**
 - iii) Sequence diagram. **(3)**
 - iv) Collaboration diagram. **(3)**
 - v) Activity diagram. **(3)**
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