Reg. No.

B.E./ B.TECH. DEGREE EXAMINATIONS, MAY 2024
Eighth Semester
CS18014 - OBJECT ORIENTED ANALYSIS AND DESIGN
(Computer Science and Engineering)
(Regulation 2018 / 2018 A)

TIME: 3 HOURS   **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Students will be able to build projects using Object Oriented concepts.	2
CO 2	Students will be able to examine UML diagrams.	4
CO 3	Students will be able to interpret appropriate design patterns.	3
CO 4	Students will be able to extract code from the design.	2
CO 5	Students will be able to classify various OO testing techniques.	4

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

		CO	RBT LEVEL
1.	Give the difference between OOD and Algorithm based design.	1	2
2.	Why Waterfall models are considered as failure models?	1	2
3.	Examine the difference between aggregation and composition.	2	3
4.	Construct the operation contract for any system operation of your choice.	2	3
5.	How will you apply GRASP for object design?	3	3
6.	How will you select an object to assign the responsibility of creating another object?	3	3
7.	Are the activity diagram and state diagram the same? Why?	2	2
8.	List the purpose of the deployment diagram.	2	2
9.	How will you solve the issues in Testing Object-Oriented Software.	5	3

10. Inspect the way to perform GUI testing. 5 4

PART- B (5 x 14 = 70 Marks)

		Marks	CO	RBT LEVEL

11. (a) Build the Development Case of UP artifacts of the NextGen POS System and explain in detail how you applied the Iterative and Unified Process with its phases and disciplines. **(14)** 1 2

(OR)

(b) Explain with an example, how the use case modeling is used to describe functional requirements. Identify the actors, scenario and use cases for the example. **(14)** 1 2

12. (a) Create a domain model for the following ATM System Use Case. Describe the strategies used to identify conceptual classes. Describe the steps to create a domain model used for representing conceptual classes.
A session is started when a customer inserts an ATM card into the card reader slot of the machine. The ATM pulls the card into the machine and reads it. (If the reader cannot read the card due to improper insertion or a damaged stripe, the card is ejected, an error screen is displayed, and the session is aborted.) The customer is asked to enter his/her PIN, and is then allowed to perform one or more transactions, choosing from a menu of possible types of transaction in each case. After each transaction, the customer is asked whether he/she would like to perform another. When the customer is through performing transactions, the card is ejected from the machine and the session ends. If a transaction is aborted due to too many invalid PIN entries, the session is also aborted, with the card being retained in the machine. The customer may abort the session by pressing the Cancel key when entering a PIN or choosing a transaction type. **(14)** 2 3

(OR)

(b) Explain the Object Oriented design model for the Next Gen POS System using UML Sequence and Communication Diagrams with its various notation. **(14)** 2 3

13. (a) **(i)** Compare Cohesion and Coupling with a suitable example. **(7)** 3 3
(ii) Analyze which GRASP pattern is responsible for handling an input system event and explain it. **(7)** 3 3

(OR)

(b) Examine the requirement of GoF Patterns like the adaptor and publish-subscribe pattern in the NextGen POS system with neat diagram. **(14)** 3 3

14. (a) Explain the domain model of the NextGen POS application. **(14)** 2 2

(OR)

(b) Outline the components of Logical Layered Architecture Refinement of NextGen POS application and explain in detail with a neat diagram.   **(14)**   2   2

15. (a) Perform Object Oriented testing with the class as a unit with an example.   **(14)**   5   3

(OR)

(b) Explain the UML support for integration testing with a suitable example.   **(14)**   5   3

PART- C (1 x 10 = 10 Marks)
(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Interpret the conversion of UML design to code with a suitable example.	(10)	4	5

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