Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U5804

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Fifth Semester

Information technology

21UIT504- OBJECT ORIENTED ANALYSIS AND DESIGN

(Regulation 2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	What is dynamic binding in object-oriented systems?	CO1 U
2.	Define refactoring in software development.	CO1 U
3.	Differentiate cohesion and coupling.	CO1 U
4.	What is Object Modeling Technique (OMT)?	CO1 U
5.	Where do we use silk test?	CO1 U
6	In the context of the online payment system, determine where dynamic binding can be effectively utilized to process payments based on the user's selected payment method. Describe how dynamic binding would work in this scenario.	CO2App
7	Draw use-case Diagram for payroll system.	CO2App
8	Sketch a state chart diagram for an object that changes states based on user actions in a given scenario.	CO2App
9	Apply the Unified Approach to integrate multiple methodologies in solving a design problem.	CO2App
10	Outline a simple integration testing strategy for combining two related classes.	CO1 U

PART – B (5 x 16= 80 Marks)

11.	(a)	Write a detailed problem statement for “Clean City”.	CO2 App	(16)
		Or		
	(b)	Write a detailed problem statement for “ERP for an educational institution”.	CO2 App	(16)

12. (a) The Pizza Ordering System allows the user of a web browser to order pizza for home delivery. To place an order, a shopper searches to find items to purchase, adds items one at a time to a shopping cart, and possibly searches again for more items. When all items have been chosen, the shopper provides a delivery address. If not paying with cash, the shopper also provides credit card information. The system has an option for shoppers to register with the pizza shop. They can then save their name and address information, so that they do not have to enter this information every time that they place an order. Develop a use case diagram, for a use case for placing an order, Place Order. The use case should show a relationship to two previously specified use cases, Identify Customer, which allows a user to register and log in, and Pay by Credit, which models credit card payments. CO2 App (16)

Or

(b) The system verifies that the student id number is valid and prompts the student to select the current semester or a future semester. The student enters the desired semester. The system prompts the student to select the desired activity: CO2 App (16)

1) Create a schedule.
2) Review a schedule.
3) Change a schedule:

a. Delete a course
b. Add a course.

The student indicates that the work is complete. The system will print the student schedule and notify the student that registration is complete. The system sends billing information for the student to the billing system for processing.

Draw and explain the Class Diagram for the following scenario.

13. (a) Draw the sequence and collaboration diagram for an online shopping application. Illustrate with a system. CO2 App (16)

Or

(b) Design an E-commerce Order Processing System. This system manages customer orders from the point of adding items to the cart through to the delivery of the order. Create an activity diagram and a state chart diagram to understand the system's behavior. CO2 App (16)

14.	(a)	Explain booch methodology with real time applications.	CO1 U	(16)
		Or		
	(b)	Explain frameworks with suitable applications.	CO1 U	(16)
15.	(a)	Draw the component and Deployment diagram for "Hospital management system".	CO2- App	(16)
		Or		
	(b)	Draw the Component and Deployment diagram for Attendance management system.	CO2- App	(16)