Reg. No.												

Question Paper Code	12884

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Fifth Semester

Information Technology

20ITPW502 - OBJECT ORIENTED ANALYSIS AND DESIGN WITH LABORATORY

Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks	K-Level	CO
1.	What are the three perspectives to apply UML?	2	K1	CO1
2.	Define the concept of generalization with an example.	2	K1	CO1
3.	What are the tasks performed in elaboration?	2	K1	CO2
4.	Define conceptual class with an example.	2	K1	CO2
5.	What is GRASP?	2	K1	CO4
6.	When can we use patterns?	2	K1	CO4
7.	What is software quality assurance?	2	K1	CO5
8.	Define test case. Give an example.	2	K1	CO5
9.	Illustrate the impact object orientation in testing.	2	K1	CO6
10.	Define black box testing.	2	K1	CO6

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11.	a)	Demonstrate the purpose of use case model? Identify the actors, scenario and use cases for a library management system.	13	K2	CO1
		OR			
	b)	Discuss the various relationships used in use case with suitable example	13	K2	CO1
12.	a)	Draw and explain the class diagram for banking application.	13	K2	CO2
		OR			
	b)	Explain about aggregation and composition with examples.	13	K2	CO2
13.	a)	Describe low coupling, high cohesion, indirection and polymorphism with suitable examples.	13	K2	CO4
		OR			
	b)	Explain in detail about Gang of Four (GoF) pattern summary and relationships.	13	K2	CO4

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12884**

14. a) Define and Describe the following:
  (i) Guideline for developing a user satisfaction test.
  (ii) White box testing
  (iii) Black box testing
  (iv) Debugging

  13   K2   CO5

OR

  b) Apply and Evaluate the Unit, Integration, and system testing for currency converter application.

  13   K3   CO5

15. a) Summarize in detail about Rambaugh's OMT model.

  13   K2   CO6

OR

  b) What is a test plan? Explain in detail the structure of a test plan.

  13   K2   CO6

PART - C (1 × 15 = 15 Marks)

16. a) Depict the business transaction of ATM such as, change PIN, balance enquiry, withdrawal, get mini statement and fund transfer using a system sequence diagram.

  15   K3   CO3

OR

  b) Consider an elevator that has the basic functions such as moving up and down open and close doors and pickup 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 the 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 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 the component and deployment diagram for designing this system.

  15   K3   CO3