B.E./B.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023
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 is an object? Give an example.	*2,K1,CO1*
2.	Give the primary goals in the design of UML.	*2,K2,CO1*
3.	Differentiate Class diagram and Interaction diagram.	*2,K2,CO2*
4.	Compare qualified association and reflexive association.	*2,K2,CO2*
5.	Mention the purpose of Activity diagram and specify its elements.	*2,K1,CO3*
6.	List the basic elements of a Deployment diagram.	*2,K1,CO3*
7.	List the benefits of Low coupling.	*2,K1,CO4*
8.	List any two different between Adapter and Bridge pattern.	*2,K1,CO4*
9.	What are the basic activities are performed in using debugging tool?	*2,K1,CO5*
10.	List the guidelines for developing quality assurance test cases.	*2,K1,CO5*

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

11.	a)	What is a POS system? Explain all the POS components in details.	*13,K2,CO1*

OR

	b)	Write a problem statement for Library Management System. Perform the Object Oriented System Development and give the Use Case model for the same (use include, extend and generalization) and design the UML Use Case diagram for the same.	*13,K2,CO1*

12.	a)	Explain Domain Model and illustrate the same with Point-of –Sale system.	*13,K2,CO2*

OR

	b)	(i) Describe the strategies used to identify the conceptual classes.	*7,K2,CO2*
		(ii) Mention the steps to create a domain model used for representing the conceptual classes.	*6,K2,CO2*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12439**

13. a) (i) Design and explain the activity diagram for an Online Purchase System. *7,K3,CO3*

   (ii) Represent the activity diagram for the following Scenario, Booking a ticket on Indian railways e-ticket system (IRCTC). *6,K3,CO3*

   OR

   b) Discuss about UML component and deployment diagram with an example. *13,K3,CO3*

14. a) What is GRASP? Explain in detail about controller and Low coupling patterns? *13,K1,CO4*

   OR

   b) Recall in detail about GOF Design pattern and describe it. *13,K1,CO4*

15. a) Define SQA. What are the various activities involved in SQA discussed in detail. *13,K1,CO5*

   OR

   b) Compare and Contrast the object oriented methodology of Booch, Rumbaugh and Jacobson. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Evaluate the Unit, Integration, and system testing for currency converter application. *15,K3,CO6*

   OR

   b) A University conducts examinations and the results are announced. Prepare a report for the following. *15,K3,CO6*
   • Print the marks in the register number order semester wise for each department
   • Print the Arrear list semester wise.
   • Prepare a Rank list for each department.
   • Prepare the final aggregate mark list for final year students.
   Identify the problem statement and Design and Explain the classes for each sequence.
   Design the Use case, Class, and Sequence diagrams for designing this system.