Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026

First Semester

Master of Computer Applications

PMCT2402 – OBJECT ORIENTED SOFTWARE ENGINEERING

Regulations - 2024

Duration: 3 Hrs. ***Maximum: 100 Marks***

PART – A(ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	Infer the activities involved in the software development process.	L2	1	2
2.	Name the phases of unified process.	L1	1	2
3.	State the importance of Object Modeling Technique.	L1	2	2
4.	Relate sequence diagram with collaboration diagram.	L2	2	2
5.	Recall the importance of design principles in software development.	L1	3	2
6.	Identify the main contributions of the GoF design patterns in object-oriented software development.	L2	3	2
7.	How does static verification differ from dynamic verification?	L2	4	2
8.	What is regression testing?	L1	4	2
9.	Summarize the need for object-oriented software estimation.	L2	5	2
10.	List any four common object-oriented Metrics.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No			*Questions*	*BLT*	*CO*	*Marks*
11.	a	i	Describe the concept of the iterative development process with a suitable example.	L2	1	8
		ii	Interpret the task regions in the spiral model with neat diagram.	L2	1	8
			Or			
	b	i	Determine the strengths and weakness of incremental model.	L2	1	8
		ii	Compile the steps involved in agile software development process model.	L2	1	8
12.	a	i	Discuss the steps involved in the requirements elicitation process and discuss its importance in the software development process.	L2	2	8
		ii	Elucidate the key components of a Software Requirements Specification (SRS) document and show its importance in the software development life cycle.	L2	2	8

		Or			
	b	Elaborate any three commonly used UML tools and their key features and Illustrate how UML tools assist in software design and development.	L2	2	16
13.	a	Apply GRASP principles to designing an online food delivery system and assign responsibilities for order processing, payment handling and delivery tracking. Identify and explain the design patterns that are used in connection with GRASP to achieve a robust design.	L3	3	16
		Or			
	b	Design a student management system with static object modeling techniques for developing a comprehensive class diagram that captures the key entities, attributes and associations and explain how the model ensures clarity and maintainability.	L3	3	16
14.	a	Make use of functional testing principles to design test cases for a railway ticket booking system and identify the key functional modules and write test scenarios for each.	L3	4	16
		Or			
	b	Examine the challenges involved in maintaining object-oriented software and choose any real-time system to describe how applying principles such as encapsulation, modularity and inheritance can make the software easier to maintain.	L3	4	16
15.	a i	Exhibit the Lorenz and Kidd object-oriented estimation technique with its key features and show how it differs from traditional estimation methods.	L4	5	8
	ii	Demonstrate the Use Case Point method for software estimation and specify the key steps involved in calculating the effort using this technique.	L2	5	8
		Or			
	b	Explain why metrics are important in software engineering for measuring the size and structure of software and narrate the common size metrics such as Lines of Code and Function Points and structural metrics such as Cyclomatic Complexity and Coupling with their advantages and disadvantages.	L4	5	16

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