



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E. - Information Science and Engineering

Semester End Examination; July / Aug. - 2022

Object Oriented System Development

Time: 3 hrs

Max. Marks: 100

Course Outcomes

The Students will be able to:

CO1: Describe the object oriented modeling concepts and class model.

CO2: Apply state model and interaction model with UML notations to solve problems.

CO3: Analyze to build domain and application model.

CO4: Design the solutions for real world problems.

CO5: Apply design patterns to solve real world problems.

Note: I) PART - A is compulsory. **Two** marks for each question.

II) PART - B: Answer any **Two** sub questions (from a, b, c) for a Maximum of **18** marks from each unit.

Q. No.	Questions	Marks	BLs	COs	POs
I : PART - A		10			
I a.	Illustrate the relationship between class model, state model and Interaction model.	2	L2	CO1	PO1
b.	Write state diagram for an induction motor control.	2	L3	CO2	PO3
c.	List out the steps performed in constructing a domain state level.	2	L1	CO3	PO1
d.	Describe frameworks.	2	L1	CO4	PO1
e.	Illustrate the difference between command processor pattern and view handler pattern.	2	L2	CO5	PO1
II : PART - B		90			
UNIT - I		18			
1 a.	Explain the different themes used in object-oriented.	9	L2	CO1	PO1
b.	Define the following terms with example and UML notation:				
	i) Association End Names	9	L1	CO1	PO1
	ii) Multiplicity				
	iii) Qualified Associations				
c.	Write a class model for managing credit card accounts.	9	L2	CO1	PO1
UNIT - II		18			
2 a.	Sketch the use case diagram for vending machine and give the guidelines needed to be followed while drawing use case model.	9	L3	CO2	PO3
b.	Explain activity diagram with example.	9	L2	CO2	PO1
c.	Draw the state diagram for a telephone line with appropriate UML notation.	9	L3	CO2	PO3

UNIT - III**18**

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| 3 a. Describe the questions that need to be answered for a system conception of an ATM. | 9 | L2 CO3 PO1 |
| b. Explain the any three design steps to construct the domain class model. | 9 | L2 CO3 PO3 |
| c. Explain steps required to construct an application class model. | 9 | L2 CO3 PO1 |

UNIT - IV**18**

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| 4 a. Explain the batch transformation and continuous transformation architectural styles suited for the system design. | 9 | L2 CO4 PO1 |
| b. Explain the procedure-driven control and event-driven control in handling boundary conditions. | 9 | L2 CO4 PO1 |
| c. List the various decisions to be made during system design. Describe any two of them. | 9 | L2 CO4 PO1 |

UNIT - V**18**

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| 5 a. Explain the steps to implement a Client-Dispatch-Server design pattern. | 9 | L2 CO5 PO1 |
| b. Describe the benefits of the view handler pattern and liability of the view handler pattern. | 9 | L2 CO5 PO1 |
| c. Define patterns. Explain its categories. | 9 | L2 CO5 PO1 |

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