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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 ii) Multiplicity iii) Qualified Associations	9	L1	CO1	PO1
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

Contd... 2

	UNIT - III	**18**			
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**			
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**			
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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