

Total No. of Question: 4

Total No. of Printed Pages: 1

PRN No.	
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PAPER CODE	U325-234D [E]
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(AY:2024-25) May 2025 (ENDSEM) EXAM

TY (SEMESTER - II)

COURSE NAME: Professional Elective -III
SOFTWARE DESIGN ARCHITECTURE

Branch: COMPUTER
ENGINEERING

COURSE CODE: CSUA32204D

T.Y PATTERN 2020R1

Time: [1Hr 30 Min]

[Max. Marks: 40]

Instructions to candidates:

- 1) Figures to the right indicate full marks. Use of scientific calculator is allowed
- 2) Use suitable data wherever required
- 3) All questions are compulsory. Solve any two sub question each from Questions 1 , 2 , 3 and 4

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Explain Jackson Structured Design with suitable example.	[5]	1	UNDERSTANDING
	b) Outline and demonstrate steps in Booch method of Object-Oriented Design.	[5]	1	UNDERSTANDING
	c) Illustrate usecase diagrams for any simple software system.	[5]	1	UNDERSTANDING
Q2	a) Demonstrate the proxy pattern with the help of suitable java code	[5]	2	UNDERSTANDING
	b) Illustrate the iterator pattern with the help of simple sequence diagram.	[5]	2	UNDERSTANDING
	c) Classify design patterns with one example of each class.	[5]	2	UNDERSTANDING
Q3	a) Implement model and view in java program using Observer/Observable class/interface in MVC architecture.	[5]	3	APPLY
	b) Identify and handle difficulty in accessing objects in different java virtual machines.	[5]	3	APPLY
	c) Develop the design of the view subsystem in the MVC architecture.	[5]	3	APPLY
Q4	a) Identify and justify different roles of software architects in evaluating Large Scale Distributed System.	[5]	4	APPLY
	b) Apply Architecture Tradeoff Analysis Method for evaluating software architectures of Data Center System.	[5]	4	APPLY
	c) Organize and overview of allocation views for architecture documentation.	[5]	4	APPLY

UNIVERSITY OF CALICUT

SCHOOL OF DISTANCE EDUCATION

B.A. POLITICAL SCIENCE

SEMESTER II

QUESTION PAPER

DATE: _____

TIME: _____

TOTAL MARKS: 100

DURATION: 3 HOURS

INSTRUCTIONS:

1. Answer any five questions.
2. All questions are compulsory.
3. Use suitable data wherever required.
4. Diagrams, if required, should be drawn clearly.

Q. No.	Question Description	Time	Mark	CO mapped	BT Level
Q-1	a) Explain the four fundamental design principles with suitable examples. b) Define and demonstrate steps in Model-Driven Design. c) Explain the various diagrams for any single software system.	15	15	1	UNDERSTANDING
Q-2	a) Demonstrate the proxy pattern with the help of suitable java code. b) Discuss the observer pattern with the help of suitable sequence diagram. c) Clearly design patterns with one example of each class.	15	15	2	ANALYSIS
Q-3	a) Inheritance model and write its two patterns using Observer/Observer-Client interface in MVC architecture. b) Identify and handle elements in message objects in different Java virtual machines. c) Design the design of the class subsystem in the MVC architecture.	15	15	3	ANALYSIS
Q-4	a) Identify and justify various roles of software architects in evolving large scale distributed system. b) Apply architecture template analysis method in the evolving software architectures of Internet System. c) Generate and review of abstract-level for software documentation.	15	15	4	ANALYSIS