PRN:		Course Code:	II2802

Final Year **B. Tech** End Semester Examination Summer 2024

Software Conceptual Design

Day and Date: 11 June 2024, Tuesday Max Marks: **100**

Time: 10.30am to 1.30PM Duration: **03** hrs

Instructions: All questions are compulsory.

		Marks	Bloom's Level	CO
Q.1	**Attempt the following**			
a)	Explain the importance of Software Conceptual Design in the software development lifecycle.	08	L2	CO1
b)	Discuss the role of stakeholders in the conceptual design phase. How does their input influence the design process?	08	L4	CO1
	OR			
b)	Compare and contrast high-level design and low-level design. Provide examples of deliverables for each stage.	08	L4	CO1
Q.2	**Attempt the following**			
a)	Describe the main activities involved in creating a conceptual design for a software system.	08	L2	CO1
b)	What are the key principles of software architecture that should be considered during conceptual design?	08	L4	CO1
	OR			
b)	Illustrate the concept of modularity in software design. How does modularity affect the maintainability and scalability of a software system?	08	L3	CO1
Q.3	**Attempt any two from the following**			
a)	Discuss various software design methodologies and their impact on the conceptual design phase.	08	L4	CO2
b)	Explain the use of Unified Modeling Language (UML) in conceptual design. Provide examples of different UML diagrams used.	08	L2	CO2
c)	How do design patterns assist in the conceptual design process? Give examples of common design patterns and their applications.	08	L3	CO2
Q.4	**Attempt any two from the following**			
a)	Define the term "software requirements specification" (SRS). How does SRS impact the conceptual design phase?	08	L2	CO3
b)	Explain the difference between functional and non-functional requirements in the context of software conceptual design.	08	L2	CO3
c)	Describe the process of transforming requirements into a conceptual design. What tools and techniques are commonly used?	08	L3	CO3
Q.5	**Attempt any Two of the following**			
a)	What is the significance of prototyping in the conceptual design	09	L2	CO4

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		phase? Discuss different types of prototypes.			
	b)	Explain how risk management is incorporated into the software conceptual design process.	09	L2	CO4
	c)	Discuss the role of user experience (UX) design in the conceptual design of software systems. How does UX design contribute to the overall success of a software product?	09	L4	CO4
Q.6		**Attempt any Two of the following**			
	a)	Describe the concept of a design review and its importance in the software development process.	09	L2	CO4
	b)	What are the challenges faced during the software conceptual design phase and how can they be mitigated?	09	L4	CO4
	c)	Explain the relationship between conceptual design and project management. How does effective project management facilitate better conceptual design outcomes?	09	L4	CO4

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