Code No:R203142A **R20** SET - 1

III B. Tech I Semester Regular/Supplementary Examinations, December -2023
SOFTWARE ENGINEERING
CSE(AIML),CSE(AI),CSE(DS),CSE(AIDS),IOTCSIBCT,CSE(IOT),AIDS,AIML
Time: 3 hours Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
*****

UNIT-I

1.	a)	What is the fundamental nature of software, and how does it differ from hardware?	[7M]
	b)	Explain the concept of a software process and its importance in software development.	[7M]
		(OR)	
2.	a)	How does the nature of web applications differ from traditional software applications?	[7M]
	b)	How can understanding and dispelling software myths improve the development process?	[7M]

UNIT-II

3.	a)	What are the core principles that guide activities within an Agile framework, and how do they promote flexibility and adaptability?	[7M]
	b)	Explain the process of eliciting requirements in an Agile environment. How does it involve stakeholders throughout the development cycle?	[7M]
		(OR)	
4.	a)	Discuss the importance of requirements engineering in Agile development. How is it different from traditional requirements engineering?	[7M]
	b)	What steps are involved in establishing the groundwork for an Agile project, and why is it crucial for success?	[7M]

UNIT-III

5.	a)	What is the importance of thorough requirements analysis in the software development life cycle?	[7M]
	b)	Explain the role of scenarios in software engineering and how they contribute to system understanding.	[7M]
		(OR)	
6.	a)	How do you distinguish between functional and non-functional requirements?	[7M]
	b)	Provide an example of how scenario-based modeling can be used to capture user interactions in a software system.	[7M]

UNIT-IV

7.	a)	Discuss common architectural styles in software engineering. How do they impact system design?	[7M]
	b)	Describe class-based components in software design. How are they utilized in component-level design?	[7M]
		(OR)	
8.	a)	What is the importance of assessing alternative architectural designs before finalizing a system's architecture?	[7M]

|''|''|||''|'''|||'|

b) Explain the concept of architectural mapping using data flow and its role in system design. [7M]

UNIT-V

9. a) What are the key principles or "Golden Rules" in software engineering, and how do they contribute to the development process? [7M]

b) Explore the art of debugging in software development. What are effective debugging techniques, and how can developers enhance their debugging skills? [7M]

(OR)

10. a) Detail the importance of system testing in the software development life cycle. What are the key objectives and challenges? [7M]

b) Explain the importance of user interface analysis in software development. How does it impact user experience? [7M]

*****

|''|''|||''|'''|||'|

Code No:R203142A **R20** SET - 2

III B. Tech I Semester Regular/Supplementary Examinations, December -2023
SOFTWARE ENGINEERING
CSE(AIML),CSE(AI),CSE(DS),CSE(AIDS),IOTCSIBCT,CSE(IOT),AIDS,AIML

Time: 3 hours Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
*****

UNIT-I

1.	a)	Describe a generic process model for software development.	[7M]
	b)	Explain the importance of process assessment in software engineering.	[7M]
		(OR)	
2.	a)	Compare and contrast prescriptive and specialized process models in software engineering.	[7M]
	b)	Provide examples of prescriptive process models and their applications.	[7M]

UNIT-II

3.	a)	What role does a tool set play in supporting the Agile process, and how does it contribute to project success?	[7M]
	b)	Discuss the challenges and strategies involved in negotiating requirements in an Agile project. How does this process contribute to project success?	[7M]
		(OR)	
4.	a)	How does software engineering knowledge impact the effectiveness of Agile development teams?	[7M]
	b)	Describe the significance of developing use cases in Agile software development. How do they contribute to building a comprehensive requirements model?	[7M]

UNIT-III

5.	a)	What are the primary components of a UML (Unified Modeling Language) diagram?	[7M]
	b)	How does data modeling contribute to the development of a robust database schema?	[7M]
		(OR)	
6.	a)	What is class-based modeling, and how does it enhance the understanding of the system's structure?	[7M]
	b)	Compare and contrast top-down and bottom-up requirements modeling strategies.	[7M]

UNIT-IV

7.	a)	What is the significance of design within the context of software engineering?	[7M]
	b)	How can componente-level design be applied to optimize the performance of web applications?	[7M]
		(OR)	
8.	a)	Describe the key steps involved in the design process in software engineering.	[7M]
	b)	What is component-based development, and how does it differ from other design approaches?	[7M]

|''|''|||''|''|||'|

UNIT-V

9.	a)	Outline the steps involved in interface analysis and design. How does this process contribute to a successful software interface?	[7M]
	b)	Explain the concept of validation testing. How does it differ from other types of testing, and why is it crucial?	[7M]

(OR)

10.	a)	What are the unique challenges in designing interfaces for web applications compared to traditional software? Provide examples.	[7M]
	b)	Discuss specific test strategies for web applications. What considerations are important in testing web-based software?	[7M]

*****

|''|''|||''|'''|||'|

Code No: R203142A **R20** SET - 3

III B. Tech I Semester Regular/Supplementary Examinations, December -2023
SOFTWARE ENGINEERING
CSE(AIML),CSE(AI),CSE(DS),CSE(AIDS),IOTCSIBCT,CSE(IOT),AIDS,AIML
Time: 3 hours Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
*****

UNIT-I

1.	a)	Discuss the need for specialized process models in certain domains.	[7M]
	b)	Explain the Unified Process in software engineering.	[7M]
		(OR)	
2.	a)	Discuss the role of personal and team process models in software development.	[7M]
	b)	Describe the role of technology in supporting software development processes.	[7M]

UNIT-II

3.	a)	Explain the key principles of Extreme Programming (XP) and how they contribute to agile software development.	[7M]
	b)	How can Agile teams effectively build and maintain the requirements model throughout the software development life cycle?	[7M]
		(OR)	
4.	a)	Compare and contrast different agile process models, such as Scrum, Kanban, and Lean.	[7M]
	b)	What methods can be employed to validate requirements in Agile development, and why is validation crucial for project quality?	[7M]

UNIT-III

5.	a)	How does UML facilitate communication between different stakeholders in a software project?	[7M]
	b)	Can you describe a scenario where use cases are more appropriate than traditional requirements documents?	[7M]
		(OR)	
6.	a)	Explain the key concepts in data modeling and their relevance to software design.	[7M]
	b)	Discuss the significance of use case modeling in software requirements specification.	[7M]

UNIT-IV

7.	a)	Explain the fundamental design concepts that guide the development of software systems.	[7M]
	b)	Discuss the challenges and considerations involved in designing traditional components.	[7M]
		(OR)	
8.	a)	Differentiate between architectural design and detailed design. How are they related?	[7M]
	b)	Explain the role of components in software systems and how they contribute to the overall design.	[7M]

|''|''|||''|'''|||'|

UNIT-V

9. a) What challenges are unique to testing object-oriented software, and what strategies can be employed to address them? [7M]

   b) Describe the typical tasks performed by Software Quality Assurance. What are the goals, and how are metrics used to measure SQA effectiveness? [7M]

(OR)

10. a) Outline effective test strategies for conventional software. How do they ensure comprehensive coverage? [7M]

    b) Enumerate and elaborate on the key elements of Software Quality Assurance. How do they ensure a high-quality software product? [7M]

*****

Code No:R203142A **R20** SET - 4

III B. Tech I Semester Regular/Supplementary Examinations, December -2023
SOFTWARE ENGINEERING
CSE(AIML),CSE(AI),CSE(DS),CSE(AIDS),IOTCSIBCT,CSE(IOT),AIDS,AIML
Time: 3 hours Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
*****

UNIT-I

1.	a)	What is the fundamental nature of software, and how does it differ from hardware?	[7M]
	b)	Explain the concept of a software process and its importance in software development.	[7M]
		(OR)	
2.	a)	How does the nature of web applications differ from traditional software applications?	[7M]
	b)	How can understanding and dispelling software myths improve the development process?	[7M]

UNIT-II

3.	a)	What are the core principles that guide activities within an Agile framework and how do they promote flexibility and adaptability?	[7M]
	b)	Explain the process of eliciting flexibility and adoptability?	[7M]
		(OR)	
4.	a)	Discuss the importance of requirements engineering in Agile development how is it different from traditional requirements engineering?	[7M]
	b)	What steps are involved in establishing the groundwork for an Agile project, and why is it crucial for success?	[7M]

UNIT-III

5.	a)	What is the importance of through requirements analysis in the software development life cycle?	[7M]
	b)	Explain the role of scenarios in software engineering and how they contribute to system understanding.	[7M]
		(OR)	
6.	a)	How do you distinguish between functional and non-functional requirements?	[7M]
	b)	Provide an example of how scenario-based modeling can be used to capture user interactions in a software system.	[7M]

UNIT-IV

7.	a)	Discuss common architectural styles in software engineering. How do they impact system design?	[7M]
	b)	Describe class-based components in software design. How are they utilized in component-level design?	[7M]
		(OR)	

|''|''|||''|''|||'|

8. a) What is the importance of assessing alternative architectural designs before finalizing a system's architecture? [7M]

b) Explain the concept of architectural mapping using data flow and its role in system design. [7M]

UNIT-V

9. a) What are the key principles or "Golden Rules" in software engineering, and how do they contribute to the development process? [7M]

b) Explore the art of debugging in software development. What are effective debugging techniques, and how can developers enhance their debugging skills? [7M]

(OR)

10. a) Detail the importance of system testing in the software development life cycle. What are the key objectives and challenges? [7M]

b) Explain the importance of user interface analysis in software development. How does it impact user experience? [7M]

*****