PVP 20

Code: 20CS3501

III B.Tech - I Semester – Regular / Supplementary Examinations
NOVEMBER 2024

SOFTWARE ENGINEERING
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Discuss the impact of software myths in software development on project success and team dynamics.	L2	CO1	7 M
	b)	Explain the key principles and practices of the Agile process model in software development.	L3	CO2	7 M
OR					
2	a)	Explain about unified process models.	L2	CO1	7 M
	b)	Illustrate the changing nature of the software in detail.	L3	CO2	7 M
UNIT-II					
3	a)	Discuss some of the problems that occur when requirements must be elicited from three or four different customers.	L2	CO1	7 M

	b)	Why is it that many software developers don't pay enough attention to requirements engineering? Are there ever circumstances where you can skip it?	L3	CO2	7 M
OR					
4	a)	Describe the process of negotiating requirements in software development. Why is it important for stakeholders to be actively involved in this process.	L2	CO2	5 M
	b)	Demonstrate the concept of Scenario-Based Modeling in the context of requirements analysis. How does this approach help in understanding and defining system requirements more effectively.	L3	CO2	9 M
UNIT-III					
5	a)	Discuss the key design concepts in Design Engineering and their significance in the software development process. Provide examples to illustrate how these design concepts can be applied in real-world software projects to enhance maintainability, scalability and performance.	L3	CO4	7 M
	b)	Explain the importance of software architecture in the architectural design phase of software development. Provide examples of how different architectural patterns are applied in real-world software projects.	L2	CO4	7 M

		OR			
6	a)	Discuss the relationship between agility and software architecture in modern software development. How can agile practices be integrated with architectural design to ensure both flexibility and stability in software projects.	L2	CO4	7 M
	b)	Interpret the principles of data-centered design in the context of design engineering. Discuss how end-users involving in the design process impacts the effectiveness and usability of engineering solutions. Provide examples of data-centered design techniques.	L3	CO2	7 M
		UNIT-IV			
7	a)	Discuss the different types of validation testing used in software development, including alpha testing, beta testing.	L2	CO4	7 M
	b)	Analyze the concept of white-box testing in software development. Discuss the principles and objectives of white-box testing.	L4	CO4	7 M
		OR			
8	a)	Using your own words, describe the difference between verification and validation. Do both make use of test-case design methods and testing strategies?	L3	CO2	7 M

	b)	Discuss the role of debugging in software testing and its importance in the software development lifecycle.	L2	CO4	7 M
UNIT-V					
9	a)	Compare and contrast reactive and proactive risk management strategies in the context of project management and design engineering.	L4	CO3	7 M
	b)	Discuss the processes of risk mitigation, monitoring, and management within the framework of project management and design engineering.	L2	CO3	7 M
OR					
10	a)	Describe and describe the key elements of Software Quality Assurance (SQA) in the context of software development. Discuss the roles and importance of each element.	L2	CO3	7 M
	b)	Explain how ISO 9000 quality standards useful in Software Development.	L4	CO3	7 M