MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, April 2025
Agile Methodologies
(B.Tech-AIDS)

Roll No										

Time: 3 hours   **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks

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				BCLL	**CO(s)**	**Marks**
			SECTION-I			
1	A		Compare and contrast Agile and Lean software development methodologies. Analyze how each approach addresses waste reduction and value delivery in software development projects.	L4	CO-I	[7M]
	B		Critically assess the role of the Scrum Master in a Scrum team. How does the Scrum Master ensure that the team adheres to Scrum principles and practices? Evaluate the challenges Scrum Masters may face.	L5	CO-I	[7M]
			OR			
2	A		Develop a plan to introduce Agile principles and Scrum into a non-software development industry (e.g., manufacturing or healthcare). What adjustments would be necessary to adapt Agile methodologies for this new context?	L6	CO-I	[7M]
	B		List and describe the twelve practices of Extreme Programming (XP). How do these practices collectively contribute to successful Agile software development?	L1	CO-I	[7M]
			SECTION-II			
3	A		Develop a backlog prioritization framework for a product owner in an Agile team. Include criteria such as business value, risk, and dependencies in your model.	L6	CO-II	[7M]
	B		Explain the concept of "emergent design" in Agile Architecture. How does it influence the architectural decisions made throughout an Agile project?	L2	CO-II	[7M]
			OR			
4	A		How would you use the MoSCoW prioritization technique to manage a product backlog in an Agile environment? Illustrate your approach with examples.	L3	CO-II	[7M]
	B		Evaluate the effectiveness of different Agile estimation techniques such as Planning Poker, T-shirt sizing, and affinity estimation. In which scenarios would each technique be most appropriate?	L5	CO-II	[7M]
			SECTION-III			
5	A		Devise a comprehensive framework for Agile risk management, incorporating Lean principles, to manage	L6	CO-III	[7M]

		uncertainties in software projects.			
	B	Analyze the relationship between Agile project tracking metrics and continuous improvement in Lean Software Development.	L4	CO-III	[7M]

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6	A	How can Lean Software Development practices be applied to reduce risks in an Agile project?	L3	CO-III	[7M]
	B	Critically assess the impact of Agile project tracking methods on team collaboration and stakeholder communication.	L5	CO-III	[7M]

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SECTION-IV

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7	A	Given a scenario where a team is using CI with Jenkins, explain the process of setting up a basic CI pipeline. What steps are involved from code commit to deployment?	L3	CO-IV	[7M]
	B	Design a CI pipeline that integrates with Agile project management tools like Jira. Outline the steps and tools required, and describe how this setup ensures continuous feedback and project transparency.	L6	CO-IV	[7M]

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8	A	Critically evaluate the use of Continuous Integration in a large enterprise project versus a small startup. How does CI adoption differ, and what are the associated benefits and challenges for each?	L5	CO-IV	[7M]
	B	Analyze the impact of Continuous Integration on Agile development productivity. Discuss how CI enhances or challenges Agile principles like adaptability and collaboration.	L4	CO-IV	[7M]

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SECTION-V

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9	A	Apply the concept of Agile Testing to a scenario where the project has rapidly changing requirements. How will the Agile Testing approach ensure adaptability and quality?	L3	CO-V	[7M]
	B	Propose a strategy for scaling Agile Testing across multiple teams in a large organization. Include how communication and collaboration will be maintained across teams.	L6	CO-V	[7M]

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10	A	Compare and contrast Agile Testing in small projects with Agile Testing in large-scale projects. What additional considerations must be made when testing at scale?	L4	CO-V	[7M]
	B	Critically evaluate the use of Agile Testing in large distributed teams. What are the key success factors, and how would you mitigate the risks involved?	L5	CO-V	[7M]

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