

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code: 3164202

Date: 22-05-2025

Subject Name: Agile Software Development & Devops

Time: 10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Distinguish between agile and traditional process models.	03
	(b) Describe the twelve main agile principles.	04
	(c) What are the different types of agile methodologies?	07
Q.2	(a) Compare RAD model with Prototype Model.	03
	(b) What is kanban and when it is needed? Discuss Lead time and Cycle time in kanban.	04
	(c) What are the Characteristics of Adaptive Software Development processes? Also discuss strength and weakness of this process.	07
	OR	
	(c) Discuss Extreme Programming (XP) with its core principles.	07
Q.3	(a) Explain stages of Institutional Knowledge Evolution Cycle.	03
	(b) Examine the differences between the sprint and product backlogs.	04
	(c) List different agile prioritization techniques. Explain any two with proper example.	07
	OR	
Q.3	(a) Why user story is important in an agile model. How to write a user story in Jira.	03
	(b) Explain working of Agile Information Systems with any one software development example.	04
	(c) State and explain Agile manifesto and its principles.	07
Q.4	(a) List various Challenges of Migrating to Agile Methodologies.	03
	(b) Discuss agile approach in quality assurance.	04
	(c) Explain performance and security testing in agile.	07
	OR	
Q.4	(a) Explain various agile metrics for quality assurance and testing.	03
	(b) Discuss user interface testing in agile.	04
	(c) Explain DevOps principle and practices.	07
Q.5	(a) Discuss major DevOps challenges.	03
	(b) What are the agile testing Quadrants.	04
	(c) Explain 7'C in DevOps lifecycle.	07
	OR	
Q.5	(a) Explain advantage and disadvantage of DevOps.	03
	(b) Enlist Open source Tools in DevOps. Explain any one in detail.	04
	(c) Explain requirement elicitation with different techniques.	07
