

**Birla Institute of Technology & Science, Pilani**  
**Work Integrated Learning Programmes Division**  
**Second Semester 2023-2024**

**Comprehensive Examination**  
**(EC-3 Regular)**

Course No. : SE ZG544  
Course Title : Agile Software Processes  
Nature of Exam : Open Book  
Weightage : 40%  
Duration : 2 ½ Hours  
Date of Exam : 18/05/2024 (AN)

No. of Pages	= 3
No. of Questions	= 7

**Note to Students:**

1. Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
2. All parts of a question should be answered consecutively. Each answer should start from a fresh page.
3. Assumptions made if any, should be stated clearly at the beginning of your answer.

- Q.1 A two-week iteration is being worked on by an Agile team. As a team member, you have been told to concentrate on "first things first." Arrange the following activities into the four quadrants listed below. Which quadrant should you concentrate on? [6]

Q1. Urgent and Important	Q2. Not Urgent but Important
Q3. Urgent but Not Important	Q4. Not Urgent and Not Important

1. Design	8. Preparing a presentation after it has been postponed till the last minute.
2. Fixing bugs that prevent progress.	9. Personal arrangements/errands
3. Iteration planning	10. Production problems
4. Learning new technologies	11. Helping other team members with urgent tasks
5. Working on management assignments that arrive late and have tight deadlines.	12. Mingling
6. Refactoring	13. Testing
7. Tracking follow-up and control	

- Q.2 Choose three agile techniques that have an impact on process quality and three others that have an impact on product quality. Describe briefly how each of these has an impact on process and product quality. [6]
- Q.3 When doing a retrospective in an agile software development environment, agile retrospective methods and principles should be used and promoted. Explain how the Agile practices: Whole team, time box, measures, abstraction, diversity and Agile games may be used in a retrospective. [6]

Q.4 [2+4]

Q. 4.1 The following are some of Scrum's characteristics: Discipline, three major roles and quality. How do you back these claims?

Q. 4.2 Scrum has several strengths: Prioritized delivery, non-prescriptive practices performed during a sprint, Demonstrated success across the software industry, Status transparency, Team accountability, Continuous delivery. How do you back these claims?

Q.5 The product backlog has been prioritized and estimated at 200 points. The team's sprint velocity has been determined to be 15 to 20 points per sprint. The team runs sprints every two weeks. The first sprint will conclude on June 21,2024. The deadline for the release has been set after 10 sprints.

Suppose, though, that in the first sprint, the team accomplished 11 story points rather than the 15 to 20 it had estimated. The team updated the release plan to reflect this actual velocity, then the team ran five more sprints, each time updating the release plan. By the end of sprint 6, the team had an observed velocity range of 8 to 14 points, with an average of 11. [3+3]

Q. 5.1 How many story points do you think you'll be able to finish by the deadline using low and high velocity?

A. After Sprint 1, B.After Sprint 6.

Q.6 The agile methodology is used to deliver most projects in the IT industry and elsewhere. Fill in the Agile values from Agile Manifesto in the table below. Relevance/Benefits to the IT and non-IT worlds, as well as the tools/practices used by the Agile team (local or remote) to put these values into action. [6]

Agile Values	Relevance	Tools/Agile Practices

Q.7 Develop an estimate for the schedule required to develop course materials for the following two modules.

Module-1(Epic): (Introduction, Course Objectives, and Agile Overview)

Module-2 (Epic): (Agile Fundamentals)

Work is divided into two-week sprints, and we have a velocity of completing 20 story points of work in each two-week sprint. The following breakdown of Module-1 and Module-2 stories are identified and estimated in story points. [4]

Title	Estimate		Estimate
<b>MODULE-1: Introduction, Course Objectives, and Agile Overview</b>	<b>8</b>	<b>MODULE-2: Agile Fundamentals</b>	<b>17</b>
Introduction and Course Objectives	2	Agile History, Values, and Principles	11
Introduction			
Course Objectives	1	Agile Manifesto Values	3
Introduction	1	Agile Manifesto Principles	8
Agile Overview	6	Agile Benefits and Obstacles to Becoming Agile	6
What Is Agile?	3	Agile Benefits	3

Agile Perception versus Reality	3	Obstacles to Becoming Agile	3
---------------------------------	---	-----------------------------	---

Q. 7.1 Determine the Initial Schedule (Epic level) and updated schedule (after breakdown) required to prepare the course contents.

\*\*\*\*\*