

Roll No.

Total No. of Pages : 02

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B.Tech. (Computer Science & Engg.)(Sem.-7)

AGILE SOFTWARE DEVELOPMENT

Subject Code : BTCS710-18

M.Code : 90501

Date of Examination : 29-11-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) State two benefits of using Agile over traditional models.
- b) State two advantages of adding explicit policies to Kanban stages.
- c) Discuss two tools for Extreme Programming.
- d) What is Dependency Inversion?
- e) What is a Sprint in Scrum methodology?
- f) Differentiate between a Product Backlog and a Sprint Backlog.
- g) What is Pair Programming in XP?
- h) Define risk-based testing with a brief example.
- i) What is code refactoring, and why is it important in Agile?
- j) What is the purpose of writing user acceptance tests?

SECTION - B

2. What is Agile Manifesto? Explain the core values and principles of Agile software development.
3. Elaborate on the Interface Segregation Principle and its relevance to Agile software design.
4. What are user stories in Scrum? Discuss their characteristics and contents, and explain how they are used to capture requirements effectively? Provide an example of a well-written user story.
5. List and briefly explain any six practices of Extreme Programming.
6. What is Test-Driven Development? Explain how acceptance tests and story verification are used in TDD?

SECTION - C

7. What does it mean to limit work in progress in Kanban? Discuss the structure and purpose of a Kanban board. How do adding policies, cards, and optimization practices on the board help in improving workflow management?
8. Describe the roles in Scrum—Product Owner, Scrum Master, and Development Team. Discuss their responsibilities and how they collaborate to deliver value? What are the key events in Scrum?
9. Discuss the Single Responsibility Principle. How does it help in reducing complexity and improving maintainability? Provide a suitable example.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.