

Reg.No.:



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 60016

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025

Eight Semester

Information Technology

U19ITV52 – AGILE METHODOLOGIES

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

| | | | |
|--------------------------|--------------------|----------------|-----------------|
| Knowledge Levels (KL) | K1 – Remembering | K3 – Applying | K5 - Evaluating |
| | K2 – Understanding | K4 – Analyzing | K6 - Creating |

PART – A

(10 x 2 = 20 Marks)

| Q. No. | Questions | Marks | KL | CO |
|--------|---|-------|----|-----|
| 1. | Outline the concept of fractured perspective in agile model. | 2 | K2 | CO1 |
| 2. | Illustrate the importance of ongoing customer feedback in Agile projects with a suitable example. | 2 | K2 | CO1 |
| 3. | Interpret the need of sprint backlog in scrum model. | 2 | K2 | CO2 |
| 4. | Scrum meetings are important for Agile project success. Justify your answer. | 2 | K2 | CO2 |
| 5. | Illustrate the role of user story in agile methodology. | 2 | K2 | CO3 |
| 6. | Infer the significance of the slope of the work line in a Burn-Down Chart? | 2 | K2 | CO3 |
| 7. | Distinguish between library and framework. | 2 | K2 | CO4 |
| 8. | Does code smells increase the complexity of their projects. Justify your answer. | 2 | K2 | CO4 |
| 9. | Interpret how Lean reduce defects without slowing delivery? | 2 | K2 | CO5 |
| 10. | A team is missing sprint goals repeatedly. Illustrate how can an Agile Coach assist in identifying and resolving the problem? | 2 | K2 | CO5 |

PART – B

(5 x 13 = 65 Marks)

| Q.No. | Questions | Marks | KL | CO |
|--------|---|-------|----|-----|
| 11. a) | A software development company, transitioned from a traditional waterfall approach to Agile to better handle changing client requirements. They noticed that their teams were initially resistant to the Agile model practices. Analyze how the Agile Manifesto help the company to implement the Agile model in the software development. | 13 | K2 | CO1 |
| | (OR) | | | |
| b) | A software development team for a startup is struggling with frequent changes in customer requirements and tight deadlines. The team follows a rigid plan, which often leads to missed deadlines and low customer satisfaction. Analyse the 12 principles of the Agile Manifesto and illustrate how the team can improve their development process to better handle changing requirements and deliver value quickly with relevant principles. | 13 | K2 | CO1 |
| 12. a) | A software development company named GoodApps, recently adopted the Scrum framework to improve their project delivery. During the first few sprints, the Scrum Master noticed that the Daily Stand-ups were turning into long status meetings, and the team wasn't effectively collaborating. Examine the key roles in Scrum and their responsibilities. Also, Analyze why the Daily Stand-up meetings might be ineffective at GoodApps. | 13 | K3 | CO2 |
| | (OR) | | | |
| b) | A Scrum team has developers, testers, and UX designers. During sprint planning, the testers complain that they often receive completed features only near the end of the sprint, leaving no time for adequate testing. Analyze how the team can reorganize its sprint workflow to promote better collaboration and continuous integration. | 13 | K3 | CO2 |
| 13. a) | In a newly formed Scrum team, the Product Owner prepares all user stories alone. During sprint planning, developers struggle to understand them and often discover missing details mid-sprint. Identify the roles of the Product Owner, Developers, and Scrum Master in creating clear, collaborative user stories. | 13 | K3 | CO3 |
| | (OR) | | | |

| | | | | | | |
|-----|----|-----|--|----|----|-----|
| | b) | i. | A Scrum team selects user stories for a new login feature but starts the sprint without breaking them into technical tasks. Mid-sprint, the team realizes that they missed testing and documentation tasks, which delays progress. Analyze the importance of breaking user stories into smaller tasks before sprint execution. | 7 | K3 | CO3 |
| | | ii. | The team has a digital task board, but it's often outdated. Developers forget to move tasks from "In Progress" to "Done," and the Product Owner cannot track real progress during the sprint. Outline the improvements to ensure the task board accurately reflects sprint progress. | 6 | K2 | CO3 |
| 14. | a) | i. | Illustrate the effect of code smells and anti patterns in the XP methodology. | 6 | K2 | CO4 |
| | | ii. | A software team using XP decides not to create a detailed architecture at the beginning of the project. Instead, they evolve the system design as new stories are implemented. Explain how the principle of Incremental Design supports this approach. | 7 | K2 | CO4 |
| | | | (OR) | | | |
| | b) | | A software company using XP must integrate new features into an existing system with poor design. Summarize how XP practices like Refactoring, TDD, and Pair Programming can help improve the existing code's design while introducing new functionality safely. | 13 | K2 | CO4 |
| 15. | a) | | An XP-Agile team is frequently reworking user stories because requirements are unclear. The project manager suggests adopting Lean methods to improve clarity and flow. Analyze how the Lean values can help the team reduce rework and better understand customer needs. | 13 | K3 | CO5 |
| | | | (OR) | | | |
| | b) | | A sports analytics company is implementing Agile. The coach wants to build a sustainable culture where the team works hard, stays motivated, focuses on basics, and collaborates effectively. Identify and explain how these five principles together contribute to high-performing, value-driven teams. | 13 | K3 | CO5 |

PART – C

(1 x 15 = 15 Marks)

| Q.No. | Questions | Marks | KL | CO |
|--------|--|-------|----|-----|
| 16. a) | A software development team is struggling to understand where delays occur in their process. They decide to implement a Kanban board to visualize the workflow. Assess how visualizing the workflow through a Kanban board helps identify bottlenecks and improve process transparency. Justify your answer with an example of how tasks move across columns such as <i>To Do</i> , <i>In Progress</i> , and <i>Done</i> . | 15 | K3 | CO5 |
| (OR) | | | | |
| b) | Two teams handle similar projects—Team A uses spreadsheets for task tracking, while Team B uses a Kanban board to visualize their workflow. Compare the outcomes in terms of communication, bottleneck identification, and process transparency. Examine why visualizing the workflow is essential for effective project management. | 15 | K3 | CO5 |