

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: 60028**

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. 2026

Fourth Semester

Information Technology

U23IT405 – AGILE SOFTWARE ENGINEERING

(Regulation 2023)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

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

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Sketch the key phases of the Incremental Model.	2	K1	CO1
2.	Depict the Software Architecture in the context of software design.	2	K2	CO1
3.	Provide Scrum Team's list of activities that are performed in a day and mention the role of scrum master.	2	K1	CO2
4.	Differentiate between an agile model with a traditional software model.	2	K2	CO2
5.	State any two XP principles.	2	K1	CO3
6.	A shopping cart portal is designed & developed. The customer frequently changes the requirements. How these are addressed in XP?	2	K2	CO3
7.	When does the "bottleneck" happen in Kanban. How it could be avoided?	2	K1	CO4
8.	Why should the team members visualize workflow in Kanban?	2	K2	CO4
9.	Differentiate between validation and verification with an example.	2	K1	CO5
10.	How stress testing is done, provide an example?	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11.	a) A “library managements system” software is to be developed. Users are: (i) student (ii) faculty (iii) resegeauer scholars. Identify a suitable software development model and illustrate it with a diagram. The process includes book pending/borrowis. Describe the various phases and elaborate it.	13	K1	CO1
	(OR)			
	b) Summarize different software design concepts with examples. How do they contribute to high-quality software development?	13	K2	CO1
12.	a) Illustrate the 12 Agile principles and their significance in software development.	13	K1	CO2
	(OR)			
	b) Outline the role of User Stories, Conditions of Satisfaction, and Story Points in Scrum. Provide a detailed case study.	13	K1	CO2
13.	a) Discuss the various XP principles with real-world examples.	13	K1	CO3
	(OR)			
	b) Describe the importance of delivering software as fast as possible in XP. How does XP achieves this?	13	K3	CO3
14.	a) Write the core principles of Kanban and their significance in software development.	13	K2	CO4
	(OR)			
	b) Analyze the challenges and solutions in transitioning from Scrum to Kanban in a software development team.	13	K3	CO4
15.	a) Interpret various black-box testing techniques including equivalence partitioning, boundary value analysis and cause-effect graphing.	13	K2	CO5
	(OR)			
	b) Illustrate the SCM process in a diagram and detail the process. Discuss its impact on software maintenance and development.	13	K1	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	A project manager for a software development team struggling with delays in delivering features. After analyzing the workflow, notice that multiple tasks are stuck in the "In Progress" stage, causing bottlenecks. The team is unsure how to prioritize work effectively.		K3	CO4
	i. How to apply Work-in-Progress (WIP) limits and visualize workflow to improve efficiency?	8		
	ii. Discuss specific steps and the expected impact on the development process.	7		
(OR)				
b)	A large e-commerce company wants to optimize its customer support system. Currently, tickets pile up at random stages, leading to poor response times. The leadership team wants a structured, adaptive approach but is hesitant to introduce drastic changes.			
	i. As a consultant, propose an experimental evolution approach using Kanban to improve the customer support workflow.	7	K3	CO4
	ii. How to implement small, iterative process improvements, measure their effectiveness, and ensure the team adapts without disruption? Provide a strategic plan with justifications.	8		