Reg. No.															

Question Paper Code	13563

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Fourth Semester

Computer Science and Engineering (IoT)

20CIPC401 - AGILE SOFTWARE ENGINEERING

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	*K – Level*	*CO*
1.	What is one of the key challenges of traditional software development methods that Agile development aims to address? (a) Excessive use of documentation (b) Rapid product delivery (c) Lack of requirements gathering (d) High development costs	*1*	*K1*	*CO1*
2.	Select the correct option that justifies the scenario: By delivering software early and often, the team can get feedback from customers and improve rapidly. (a) Where small, incremental changes are made to the coding over time. (b) Agile ensures that the final product meets analyzer needs and expectations. (c) Where small, incremental changes are made to the product over time. (d) Agile values working software over extensive documentation.	*1*	*K1*	*CO1*
3.	Assertion: The Product Owner is responsible for maximizing the value of the product and the work of the Development Team. Reasoning: The Product Owner represents the stakeholders and ensures that the Scrum Team works on the right priorities. (a) Both assertion and reasoning are true, and the reasoning is a correct explanation of the assertion. (b) Both assertion and reasoning are true, but the reasoning is not a correct explanation of the assertion. (c) Assertion is true, but the reasoning is false. (d) Assertion is false, but the reasoning is true.	*1*	*K1*	*CO2*
4.	Consider the Crystal methodology. Which of the following statements is true regarding team size? (a) Larger teams are preferred for better productivity. (b) Smaller teams are preferred for better communication and coordination. (c) Team size does not impact the success of a project. (d) The Crystal methodology does not provide any guidance on team size.	*1*	*K1*	*CO2*
5.	Justify the statement: Knowledge sharing is important in a business because it facilitates the creation of new knowledge. (a) Agile software development project divides a whole problem into two solutions and delivers them iteratively (b) Agile software development project divides a whole problem into three solutions and delivers them iteratively (c) Selecting the wrong Incremental methodology (d) Which can be used as a means of gaining an advantage over competition	*1*	*K1*	*CO3*
6.	What type of sharing does the effectiveness of social media is determined by the ease, degree, and impact that knowledge sharing has on the performance of the business? (a) design sharing (b) programs sharing (c) knowledge sharing (d) analysis sharing	*1*	*K1*	*CO3*

7.	Developers and stakeholders work on a dispersed Agile team in several time zones. Despite the fact that several time zones exist, how may continuous requirement generation be facilitated? (a) Avoid communication until all team members are online (b) Use asynchronous communication methods and tools (c) Schedule meetings at a fixed time, ignoring time zone differences (d) Limit communication to once a week	*1*	*K1*	*CO4*
8.	What technique can be used to prioritize requirements based on business value and customer feedback? (a) Requirements Sorting (b) MoSCoW Method (c) Alphabetical Order (d) Random Selection	*1*	*K1*	*CO4*
9.	The product-centric way of working embraces what approach to product development and focuses on value alignment with customers to drive innovation and product development? (a) integration approach (b) bottom-up approach (c) top-down approach (d) incremental approach	*1*	*K1*	*CO5*
10.	Which Agile practice ensures continuous delivery at scale? (a) DevOps (b) Stand-up meetings (c) Pair programming (d) Code refactoring	*1*	*K1*	*CO6*

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11.	List out the advantage of representing software using an Agile rather than a traditional Software Engineering.	*2*	*K1*	*CO1*
12.	Outline the real life examples of agile model.	*2*	*K2*	*CO1*
13.	How Extreme Programming used in a Nutshell?	*2*	*K1*	*CO2*
14.	Classify the importance of Agile Testing Quadrants.	*2*	*K2*	*CO2*
15.	Define Agile Decision making.	*2*	*K1*	*CO3*
16.	Relate the features of the Story card template.	*2*	*K2*	*CO3*
17.	What are the types of approaches used for modeling and generating requirements artifacts in Agile environments?	*2*	*K1*	*CO4*
18.	Compare the two common tools used for enhancing team collaboration in Agile software development.	*2*	*K2*	*CO4*
19.	Recall the importance of write and correct the failed tests before writing new code in TDD.	*2*	*K1*	*CO5*
20.	Classify 4 P's of Agile approach.	*2*	*K2*	*CO5*
21.	How does the Program Increment (PI) planning events that contribute to scaling Agile?	*2*	*K1*	*CO6*
22.	Relate Agile at the team level and Agile at scale.	*2*	*K2*	*CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Illustrate the concept of Agile Software Development for implementing any mobile application.	*11*	*K2*	*CO1*
		OR			
	b)	Explain the various agile management theories and how this theory used for Food Delivery application?	*11*	*K2*	*CO1*
24.	a)	Describe the stages of "red, green, refactor" cycle with a suitable example.	*11*	*K2*	*CO2*
		OR			
	b)	Explain the comparison of Adaptive and Feature driven development.	*11*	*K2*	*CO2*

25.	a)	Interpret the concept of knowledge management role in the leading business world of software investment.	*11*	*K2*	*CO3*
		OR			
	b)	Describe the challenges of migrating to Agile Methodologies and agile Knowledge sharing.	*11*	*K2*	*CO3*
26.	a)	Summarize the process of Agile Requirements Prioritization in detail.	*11*	*K2*	*CO4*
		OR			
	b)	Explain the different types of agile requirements modeling and concurrency in agile requirements generation.	*11*	*K2*	*CO4*
27.	a)	How would you design and implement a software model using the Feature Driven Development (FDD) approach, and what strategies would you apply to ensure scalability, maintainability, and alignment with client requirements throughout the development process?	*11*	*K3*	*CO5*
		OR			
	b)	Assume that you are member of an agile testing team. In TDD, the red phase shows that the code does not function properly. The red phase is always the starting point of the red, green, refactor cycle. Explain the impact of green phase while doing TDD.	*11*	*K3*	*CO5*
28.	a)	Explain the challenges faced when scaling Agile to an enterprise level and suggest solutions.	*11*	*K2*	*CO6*
		OR			
	b)	Outline the role of Agile Release Train (ART) and Program Increment (PI) Planning in SAFe with neat real life example.	*11*	*K2*	*CO6*