M. Voc DEGREE III SEMESTER REGULAR EXAMINATION IN SOFTWARE APPLICATION DEVELOPMENT
NOVEMBER 2024

23-493-0302 AGILE PROCESS MANAGEMENT
(2023 Scheme)

Time: 3 Hours   Maximum Marks: 50

Course Outcomes

CO1	Understand various software product lifecycle, its implementation and different tools used for project management.
CO2	Understand the Agile software development framework.
CO3	Understand the principles and practices required for release, iteration planning, Customer tests, small and regular releases.
CO4	Apply Scrum-based project management.
CO5	Analyze the Kanban project management framework.

BL- Bloom's Taxonomy Levels
(L1-Remember, L2- Understand, L3- Apply, L4- Analyse, L5-Evaluate, L6- Create)

PART A
(Answer ALL questions)

Qn. No.	Questions	Marks	BL	CO	PO
1	Explain any two LSD principles?	2	L1	CO1	PO3
2	Discuss iterative and incremental development approach?	2	L3	CO3	PO2
3	Compare *Burn Up* and *Burn Down* charts in Scrum?	2	L2	CO4	PO2
4	Discuss Backlog grooming?	2	L3	CO2	PO3
5	Explain the importance of WIP limits in Kanban method?	2	L1	CO5	PO2

(5 x 2 = 10 Marks)

PART B
(Answer ANY FOUR questions)

	Questions	Marks	BL	CO	PO
6	Explain life cycle of a Product and Project with example?	5	L2	CO4	PO2
7	List out the procedures in a Daily Standup meeting and its do's and don'ts?	5	L4	CO4	PO2
8	Demonstrate the value of working software over comprehensive documentation'?	5	L3	CO3	PO2
9	Summarize the *Extreme Programming* principles?	5	L2	CO2	PO4
10	Distinguish Scrum events *Review* and *Retrospective*. Explain the role of development team in this?	5	L4	CO3	PO2

P.T.O

11	Discuss the role of agility in modern software application development and its challenges?	5	L3	CO4	PO2

<div align="right">(4 x 5 = 20 Marks)</div>

PART C
(Answer *ANY TWO* questions)

12	Illustrate a sample Kanban board and explain the workflow of ticketing system for resolving customer complaints? Discuss the insights generated with Lead time, Cycle time and CFD?	10	L6	CO4	PO2
13	Matt the Product Owner with the development team is in the process of creating a detailed Product Backlog for a chat application in mobile platform? How does the Scrum Master facilitate this activity? Create the following: a) DoD for Backlog items. b) User Stories with Tasks. c) Acceptance Criteria & Story Points. d) Sprints to complete the project. **Note:** Consider development team has a velocity 5	10	L6	CO5	PO2
14	Explain the core values of Agile Manifesto.	10	L2	CO4	PO2

<div align="right">(2 x 10 = 20 Marks)</div>

[L1 & L2 – 20%, L3 & L4 – 40%, L5 & L6 – 40%]

20-492-0302 SOFTWARE PRODUCT DESIGN & AGILE PROCESS MANAGEMENT
(2020 Scheme)

Time: 3 Hours

Maximum Marks: 50

Course Outcomes

CO1	Understand various software product lifecycle, its implementation and different tools used for project management.
CO2	Understand the Agile software development framework.
CO3	Understand the principles and practices required for release, iteration planning, Customer tests, small and regular releases.
CO4	Apply Scrum-based project management.
CO5	Analyze the Kanban project management framework.

BL- Bloom's Taxonomy Levels
(LI-Remember, L2- Understand, L3- Apply, L4- Analyse, L5-Evaluate, L6- Create)
PO- Programme Outcome

PART A
(Answer ALL questions)

Q No.	Questions	Marks	BL	CO	PO
1	Enumerate different stages of Product life cycle.	2	L1	CO1	PO3
2	Explain pair programming and collective code ownership.	2	L3	CO3	PO2
3	Compare Sprint Review and Sprint Retrospective.	2	L2	CO4	PO2
4	What is Cumulative flow diagram in Kanban?	2	L3	CO2	PO3
5	Explain the guiding principles of Lean Software Development methodology?	2	L1	CO5	PO2

(5 x 2 = 10 Marks)

PART B
(Answer ANY FOUR questions)

6	Explain Definition of Done and Acceptance Criteria with example?	5	L1	CO4	PO2
7	Illustrate Sprint planning meeting process and its desired outcome?	5	L4	CO4	PO2

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8	Demonstrate the applicability of extreme programming methodology for developing high quality software?	5	L3	CO3	PO2
9	Summarize the 4 values of agile software development?	5	L2	CO2	PO4
10	Distinguish agile 'Planning Onion' framework with traditional method and how this helps agile teams better achieve the goals for the product?	5	L4	CO3	PO2
11	Illustrate the phrase 'servant leadership' the role played by a Scrum Master in agile?	5	L3	CO4	PO2

(4 x 5 = 20 Marks)

PART C
(Answer *ANY TWO* questions)

12	ABC Inc. wants to initiate an agile scrum project for developing a mobile fitness application on a hybrid platform. Major features are user registration, login, a dashboard with statistics, an activity tracker, training videos, and a diet plan. Integration with smartwatches and social media components is considered for the future. Most of the engineers identified for this project have scrum methodology experience with an approximate velocity of 12 story points. Design the following items: a. Team Structure b. Release Plan c. Product backlog with user stories d. Acceptance Criteria and Story Points e. Total estimate and sprints	10	L6	CO4	PO2
13	Sketch a Kanban workflow model for a food delivery system. Illustrate how Kanban metrics help in optimizing the process flow?	10	L6	CO5	PO2
14	Substantiate the agile manifesto statement "We are uncovering better ways of developing software by doing it and helping others to do it".	10	L5	CO4	PO2

(2 x 10 = 20 Marks)

[L1 & L2 – 20%, L3 & L4 – 40%, L5 & L6 – 40%]

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M.Voc DEGREE III SEMESTER REGULAR EXAMINATION IN MOBILE PHONE APPLICATION DEVELOPMENT -NOVEMBER 2022

20-492-0302 SOFTWARE PRODUCT DESIGN & AGILE PROCESS MANAGEMENT
(2020 Scheme)

Time: 3 Hours

Maximum Marks: 50

Course Outcomes

CO1	Understand various software product lifecycle, its implementation and different tools used for project management.
CO2	Understand the Agile software development framework.
CO3	Understand the principles and practices required for release, iteration planning, Customer tests, small and regular releases.
CO4	Apply Scrum-based project management.
CO5	Analyze the Kanban project management framework.

BL- Bloom's Taxonomy Levels
(LI-Remember, L2- Understand, L3- Apply, L4- Analyse, L5-Evaluate, L6- Create)
PO- Programme Outcome

PART A
(Answer ALL questions)

Qn. No.	Questions	Marks	BL	CO	PO
1	What is meant by test driven development method?	2	L1	CO1	PO3
2	Discuss the need of product backlog grooming.	2	L3	CO3	PO2
3	Explain the accountability of product owner in agile.	2	L2	CO4	PO2
4	Discuss the advantages of lean software development.	2	L3	CO2	PO3
5	What are the benefits of Kanban process?	2	L1	CO5	PO2

(5 x 2 = 10 Marks)

PART B
(Answer ANY FOUR questions)

6	What is scrum? Explain its benefits.	5	L1	CO4	PO2
7	How the scrum master serves the product owner and the development team to create high-value products?	5	L4	CO4	PO2
8	Discuss the differences between product backlog and sprint backlog.	5	L3	CO3	PO2

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9	Explain the key principles of lean software development.	5	L2	CO2	PO4
10	Discuss the difference between sprint review and sprint retrospective. Discuss how these help in grooming the scrum team.	5	L4	CO3	PO2
11	Discuss the criteria for evaluating whether the user stories created for an application are fit for their intended use.	5	L3	CO4	PO2

(4 x 5 = 20 Marks)

PART C
(Answer *ANY TWO* questions)

12	There is a requirement to build an android application for a health care system with features such as registration of hospitals, registration of patients, management of doctors, appointment fixing with doctors. Each hospital required to generate the doctor wise list of patients those who have taken appoints on a particular day. Design the following:
	    a) user stories and tasks
	    b) Story points
	    c) Sprint schedule based on story
	    d) Test cases
		10	L6	CO4	PO2

13	Create a Kanban board for a student management application. Specify any assumptions or constraints you have used while designing the system.	10	L6	CO5	PO2
14	"The highest priority is to satisfy the customer through early and continuous delivery of valuable software". Discuss the scrum practice in detail to convince the above statement.	10	L5	CO4	PO2

(2 x 10 = 20 Marks)

[L1 & L2 – 20%, L3 & L4 – 40%, L5 & L6 – 40%]

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M. VOC. DEGREE IN MOBILE PHONE APPLICATION DEVELOPMENT
SEMESTER III EXAMINATION, JANUARY 2022

20-492-0302 SOFTWARE PRODUCT DESIGN & AGILE PROCESS MANAGEMENT
(Scheme 2020)

Time: 3 Hours

Maximum Marks: 50

PART A
(Answer *ALL* questions)   (5x2 = 10 Marks)

1. Explain the role of 'Class owner'.
2. How is the Agile value "Responding to change over following a plan" addressed in Scrum.
3. Industry surveys show that in the traditional approach, users do not use nearly 60% of the features delivered. What do you think are the probable causes?
4. What is the purpose of Sprint Review.
5. Distinguish between Product Backlog and Sprint Backlog.

(5x2 = 10 Marks)

PART B
(Answer *ANY FOUR* questions)

6. When discussing system development Fred Brooks says, "plan to throw one away – you will anyway". What disadvantages of the waterfall model is he referring to? Outline an alternative software development model that deals with these disadvantages.

7. "In scrum multi-level planning is used ". Elaborate the given statement.

8. Compare functional oriented development method with test driven development method.

9. Create a sprint burnt down chart for an e - commerce application.

10. How pair programming is implemented in agile development.

11. Describe different tools and techniques for adopting Continuous Process Improvement. What are the different types of wastes identified in a project?

(4x5 = 20 Marks)

(Answer *ANY TWO* questions)

12. There is a software project to build an android app for a telecom vendor. Features required include post-paid member login, downloading of statement and payment options for a post-paid member. For prepaid member, there will be recharge and balance enquiry options. Design the following:
    a) user stories and tasks
    b) Story points
    c) Sprint schedule based on story
    d) Test cases

13. Create a Kanban Board for a social media application.

14. Raghu knows the four values of Agile Manifesto by heart. However, he was confused when a customer spoke with him highlighting Agile characteristics of short software development cycles or iterations. He could not recollect anything about short iterations in Agile Manifesto. What did he miss to learn about? Explain it.

(2x10 = 20 Marks)