Darshan UNIVERSITY
योग: कर्मसु कौशलम्

Darshan Institute of Engineering & Technology
B.Tech. | Sem-5 | Winter-2024

Course Code	**:** 2301CS405	**Date** : 19-10-2024
Course Name	**:** Software Engineering	**Duration** : 150 Minutes
		Total Marks : 70

Instructions:
1. Attempt all the questions.
2. Figures to the right indicates maximum marks.
3. Make suitable assumptions wherever necessary.

Q.1	**(A)**	Explain Software Engineering as a Layered Technology.	**4**
	(B)	Compare Prototype and RAD Model.	**3**

OR

Compare Waterfall Model and Incremental Process Model.

	(C)	Explain Software Myths.	**7**

OR

Explain Rapid Application Development Model (RAD) Process Model with Advantages and Disadvantages.

Q.2	**(A)**	Differentiate between Sprint Backlog and Product Backlog in Scrum.	**4**
	(B)	Explain T-Shirt Sizes estimation technique.	**3**

OR

Explain Scrum Roles and Responsibilities of Development Team.

	(C)	Explain Scrum framework.	**7**

OR

Explain different Sprint Phases.

Q.3	**(A)**	Analyze the functional requirements of a Hotel Management System, identifying key actors and use cases. Then, draw a use case diagram that represents the interactions between these actors and the system, highlighting features such as room booking, check-in/check-out, billing, housekeeping, and maintenance.	**4**
	(B)	Analyze the 'Issue Book' activity in a Library Management System. Create an activity diagram that represents the process flow, including steps such as the user requesting a book, checking the book's availability, approval from the librarian, updating the inventory, and recording the transaction. Ensure to include decision points and different actions performed by the user and librarian.	**3**

OR

Analyze the Library Management System and Draw State Diagram of Book object.

	(C)	Explain different types of Coupling and Cohesion.	**7**

OR

Describe Golden Rules of User Interface Design.

Q.4	**(A)**	Explain different approach for Code Review.	**4**
	(B)	Explain Regression testing. When to do regression testing?	**3**

OR

Explain Equivalence Partitioning.

	(C)	Explain Unit Testing.	**7**

OR

Explain White Box Testing with an Example.

Q.5	**(A)**	What is Risk Management? Explain RMMM plan.	**4**
	(B)	Explain Types of Software Maintenance.	**3**

OR

Define DevOps and its key principles.

	(C)	Explain COCOMO model for project estimation.	**7**

OR

Explain Computer-Aided Software Engineering (CASE) tools.

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