Seat No: ..... **Enrollment No: .....**

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech/Int. B.Tech, Summer 2024 - 25 Examination

Semester: IV, V, VIII, IX **Date: 07-04-2025**
Subject Code: 303105253- 203105303 **Time: 2:00PM TO 4:30 PM**
Subject Name: Software Engineering/Fundamental of Software Engineering **Total Marks: 60**

Instructions:

1. This question paper comprises of two sections. Write answer of both the sections in separate answer books.
2. From Section A, **Q.1** is compulsory, From Section B, **Q.1** is compulsory.
3. Figures to the right indicate full marks
4. Draw neat and clean drawings & Make suitable assumptions wherever necessary.
5. Start new question on new page.
6. BT- Blooms Taxonomy Levels – Remember-1, Understand -2, Apply-3, Analyse-4, Evaluate-5, Create-6

SECTION - A

Q.1	Answer the following questions.	**Marks**	**CO**	**BT**
	A. a) What are the key advantages of using a Prototype Model? b) Explain how software engineering improves software quality. c) Compare software engineering and traditional programming with an example.	06	CO1	BT3
	B. a) Define Requirement Negotiation b) Define Functional Requirements. c) Define Non-Functional Requirements.	06	CO1	BT2
Q.2	A. What are the different white box testing criteria used in software testing?	04	CO2	BT5
	B. How does effective team management contribute to project success?	05	CO2	BT3
	OR			
	B. Discuss the use of formal methods in the verification and validation of real-time software. How can these methods improve the reliability and safety of real-time systems?	05	CO6	BT1
Q.3	A. Describe different software metrics used to measure code quality and complexity.	04	CO6	BT5
	B. Define project feasibility. Why it is important? List what should be included in feasibility report.	05	CO2	BT2
	OR			
	B. Explain different approaches to software quality assurance (SQA).	05	CO3	BT4

SECTION - B

Q.1	Answer the following questions.	**Marks**	**CO**	**BT**
	A. Define Following a) Components b) Connectors c) Constraint.	06	CO3	BT4

	B. a) What is pair programming? b) How does it improve software quality? c) Define Observer.	06	CO4	BT5
Q.2	A. Explain Class Diagram with example.	04	CO3	BT4
	B. Explain the concept of data-centered architecture.	05	CO6	BT3
	OR			
	B. Describe the role of CASE tools in supporting software configuration management.	05	CO5	BT2
Q.3	A. Explain the concept of safety engineering and its importance.	04	CO6	BT2
	B. Explain the concept of "black-box testing" Discuss the advantages and disadvantages of approach.	05	CO6	BT2
	OR			
	B. Describe the importance of software processes in software development.	05	CO1	BT2