

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- VI EXAMINATION – SUMMER 2026

Subject Code:3161605

Date:08-06-2026

Subject Name: Software Engineering

Time: 10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1*	(a) Justify: The software doesn't "wear out". List the Software Development life cycle steps.	03
	(b) Explain Software Engineering as a Layered Technology.	04
	(c) What is Software Model? Describe the software model that allows the software to be finished in 60 to 90 days.	07
Q.2	(a) Define the following Metrics Terminology 1. Measure 2. Metrics 3. Indicators	03
	(b) Explain Constructive Cost Estimation Model for cost estimation with all necessary formulas with their appropriate units.	04
	(c) Enumerate the various Agile Process Models and Explain any one with suitable example.	07
	OR	
	(c) What is Function Point Analysis? List the Measurement Parameter of Function Point Analysis also explain objectives of Function Point Analysis.	07
Q.3	(a) Explain the risk strategy which will works as a "Fire Fighting" approach for software.	03
	(b) Prepare DFD for Food Ordering System.	04
	(c) Enlist the steps of Requirement Engineering? Explain each in details.	07
	OR	
Q.3	(a) What is Boundary Value Analysis? How does Boundary Value Analysis differ from Equivalence Partitioning?	03
	(b) Develop a complete Use Case System for Library Management System.	04
	(c) What is Feasibility Study? Explain CMM level in details.	07
Q.4	(a) Differentiate: Alpha Testing and Beta Testing.	03
	(b) Enlist different style of architecture for software? Explain any one with example.	04
	(c) What is Cyclomatic Complexity? Define steps to find cyclomatic complexity using flow graph.	07

OR

Q.4	(a) What is Testing? Explain the testing technique which is recommend for testing the internal system logic of software.	03
	(b) Compare: Coupling and Cohesion. Enumerate the various types of Cohesion in descending order.	04
	(c) Define Quality for software. List and explain SQA activities.	07
Q.5	(a) Explain CASE tools in Software Engineering.	03
	(b) Explain the following term in brief 1) Re-Engineering 2) Reverse Engineering	04
	(c) What do you mean by software configuration? Explain software configuration management.	07
OR		
Q.5	(a) Explain the following non-functional requirements. 1. Reliability 2. Portability 3. Security	03
	(b) Explain software version control and change control.	04
	(c) Explain 7 C's of DevOps with its Lifecycle.	07
