

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER– VII EXAMINATION – SUMMER 2026

Subject Code:3173213

Date:03-06-2026

Subject Name: Software Engineering

Time: 02:30 PM TO 05:00 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) Define the software product and process.	03
	(b) Draw and explain the RAD software process model.	04
	(c) With suitable illustration explain SPIRAL model evolutionary software development.	07
Q.2	(a) Explain the W5HH principle.	03
	(b) Explain the need for software measures and describe various metrics.	04
	(c) Explain in detail the COCOMO model.	07
	OR	
	(c) Explain task network. Construct a schematic task network for concept development project.	07
Q.3	(a) What is requirement engineering?	03
	(b) Explain about the cardinality and modality with suitable example.	04
	(c) Discuss in detail about the design process in software development process.	07
	OR	
Q.3	(a) What is meant by feasibility study?	03
	(b) Differentiate functional and nonfunctional requirements.	04
	(c) Describe decomposition levels of abstraction and modularity concepts in software design.	07
Q.4	(a) List any four categories of CASE tools.	03
	(b) Write short notes on user interface design process?	04
	(c) Explain Risk Management. Explain RMMM plan.	07
	OR	
Q.4	(a) Compare data flow oriented design and data structured oriented design.	03
	(b) Describe the golden rules for interface design.	04
	(c) Discuss software failures and faults? What are test coverage criteria? Discuss testing issues.	07
Q.5	(a) Distinguish between alpha and beta testing?	03
	(b) Write a short note on: reverse engineering.	04
	(c) What is DevOps? Explain its importance and benefits in details.	07
	OR	
Q.5	(a) What is the need for cyclomatic complexity?	03
	(b) Write a short note on: aspect oriented software development.	04
	(c) Explain 7 C's of DevOps lifecycle for business agility.	07
