

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
M.SC INTEGRATED - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 1370502

Date: 15-11-2025

Subject Name: Software Quality Assurance

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. Use of simple calculators and non-programmable scientific calculators are permitted.**

	Marks
Q.1 (a) List any three software quality factors.	03
(b) Explain the difference between software quality assurance and software testing.	04
(c) Discuss the various models and factors used to measure software quality.	07
Q.2 (a) Define pre-project SQA components.	03
(b) Explain the main components of the Software Quality Assurance system.	04
(c) Explain how contract review, development plan, and quality plan together ensure software quality.	07
OR	
(c) Explain the structure of an SQA system and describe how management ensures compliance through planning and review	07
Q.3 (a) Write any three differences between black-box and white-box testing.	03
(b) Write a short note on software testing strategies.	04
(c) Discuss the different types of reviews used in software quality assurance and their significance.	07
OR	
(a) What is the purpose of test case design?	03
(b) Describe the advantages and disadvantages of black-box testing.	04
(c) Explain in detail the testing strategies, including unit testing, integration testing, system testing, and acceptance testing.	07
Q.4 (a) What is automated testing?	03
(b) Explain the software testing process with its major steps.	04
(c) Explain the Software Testing Life Cycle with all its phases and objectives.	07
OR	
(a) Define test case.	03

- (b) Describe the test case design techniques with suitable examples. 04
 - (c) Explain what automated testing is. Write its process, advantages, and list some common tools used for automated testing. 07
- Q.5**
- (a) What is the importance of staff training and certification in SQA? 03
 - (b) Explain software quality metrics and their types. 04
 - (c) Discuss the cost of quality in software engineering with its four components. 07

OR

- (a) What are software quality infrastructure components 03
- (b) Discuss the relationship between quality assurance and quality metrics. 04
- (c) Describe the need for documentation control and how it supports software quality assurance. 07
