

# GUJARAT TECHNOLOGICAL UNIVERSITY

## MCA INTEGRATED – SEMESTER VI- EXAMINATION –WINTER-2025

**Subject Code: 2668602**

**Date: 15/11/2025**

**Subject Name: Software Testing**

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

- Q.1** (a) What is software quality? Explain the different factors that influence it. **07**  
(b) Explain the different phases of the software testing process. **07**

- Q.2** (a) What are the main components of a Software Quality Assurance system? Describe each one in detail. **07**  
(b) Explain what software is and provide an in-depth discussion on different software testing strategies **07**

**OR**

- (b) What is Black-box testing? How do you use Equivalence Partitioning and Boundary Value Analysis in it? **07**
- Q.3** (a) What are the pre-project software quality components? Explain how they assist in SQA activities. **07**  
(b) What is White-box testing? Describe its main techniques and benefits. **07**

**OR**

- Q.3** (a) What are the major Software Quality Assurance activities? Explain any five of them in detail **07**  
(b) What is contract review? Discuss its role in Software Quality **07**
- Q.4** (a) What is the training and certification process? Explain the steps involved. **07**  
(b) What is the extended classic model of cost of quality? Explain it in detail. **07**

**OR**

- Q.4** (a) Discuss the stages involved in the Software Testing Life Cycle. **07**  
(b) What are the advantages and disadvantages of automated testing? **07**
- Q.5** (a) What is the process of defining a software quality metric? Provide a detailed explanation. **07**  
(b) Name any five types of CASE tools and discuss the components of CASE tools with detailed explanations. **07**

**OR**

- Q.5** (a) Explain the importance of documentation control within a Software Quality Assurance framework. **07**  
(b) Define testing. List and explain any five guidelines for creating effective test cases **07**