GUJARAT TECHNOLOGICAL UNIVERSITY

MCA INTEGRATED – SEMESTER VII- EXAMINATION –WINTER-2024

Subject Code: 4470631 **Date: 28/11/2024**
Subject Name: Software Testing
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.**

Q.1	**(a)** What are the different approaches to software testing, including manual and automated? What are the pros and cons of each?	**07**
	(b) Explain the role of testing in different phases of the Software Development Life Cycle.	**07**
Q.2	**(a)** What is a Requirement Traceability Matrix (RTM), and how is it used in software testing? What are its benefits and challenges?	**07**
	(b) Describe the stages of the Software Testing Life Cycle (STLC) and explain how each stage contributes to the overall quality of the software.	**07**

OR

	(b) Differentiate between Verification and Validation in software testing, with examples and their role in software quality assurance	**07**
Q.3	**(a)** Discuss various validation activities in software testing, such as unit testing, integration testing, functional testing, system testing, acceptance testing, and regression testing.	**07**
	(b) Differentiate between Smoke Testing and Sanity Testing, providing examples of when each is used.	**07**

OR

Q.3	**(a)** Explain Big Bang Testing and Sandwich Testing approaches, highlighting their use cases and effectiveness.	**07**
	(b) Explain the differences between Dynamic Testing and Static Testing with examples.	**07**
Q.4	**(a)** Describe the role of software testing in the Waterfall model, focusing on its sequential nature and defect detection.	**07**
	(b) Describe the purpose of building test data, test cases, and test scenarios, and outline the essential activities involved in testing.	**07**

OR

Q.4	**(a)** Explain the process of procuring COTS (Commercial Off-The-Shelf) testing tools and the considerations involved.	**07**

(b) Describe how testing tools impact overall software quality and the efficiency of the testing team. **07**

Q.5 **(a)** Give any five Test Cases for ATM Machine. **07**

(b) Outline the role of a Test Manager and how they oversee the overall testing process and team performance. **07**

OR

Q.5 **(a)** Differentiate between Smoke Testing and Sanity Testing, providing examples of when each is used. **07**

(b) Describe the role of a Quality Assurance (QA) Engineer in the software testing process and their responsibilities. **07**

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