Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER - VII EXAMINATION –WINTER-2021

Subject Code: 4470631   **Date: 02/12/2021**
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.

Q.1	**(a)**	Do as directed for the followings.	**07**
		1. Which testing is also known as the functional testing?	
		2. What is Mantis?	
		3. Camouflage effect is the effect where, due to the existence of certain defects, few more defects are introduced. (True or False)	
		4. All defects result in failure. (True/False)	
		5. Define requirement testing and sanity testing.	
		6. Differentiate alpha testing and beta testing.	
		7. What is the full form of RTM. For what it is used?	
	(b)	Differentiate bug, error and failure. What are the different states of a bug? Give an overview on bug classification.	**07**
Q.2	**(a)**	What are the approaches of testing? Discuss TQM in cost perspective.	**07**
	(b)	Describe in detail about Software Testing Life Cycle.	**07**
		OR	
	(b)	What is the difference between verification and validation? Draw the V & V diagram. Discuss different activities conducted during verification and validation and correlate them with SDLC phases.	**07**
Q.3	**(a)**	What is the need to conduct white box testing? What are the various white box testing's conducted? Write about Basis path testing and Mutation testing with examples.	**07**
	(b)	What are the drawbacks of dynamic testing that are overcome through static testing? Write about inspection process and the variants of it.	**07**
		OR	
Q.3	**(a)**	Why black box testing is called so? Name different black box testing types. Discuss BVA and Decision-Table based testing with suitable examples.	**07**
	(b)	How integration testing is different than unit testing? Discuss different types of integration techniques. Illustrate with examples.	**07**
Q.4	**(a)**	What is system testing? List out different system testing types. Write about any three of your choice.	**07**
	(b)	Write short notes on Critical Path first, Proposal Testing and Smoke Testing.	**07**
		OR	
Q.4	**(a)**	Define regression testing. When to conduct regression testing? Discuss different regression testing types.	**07**
	(b)	Write about orthogonal defect classification and defect causal analysis.	**07**
Q.5	**(a)**	Define test metrics. What are the metric types used? Write about efficiency, productivity, residual defect density, MTBF and MTTR metrics.	**07**
	(b)	What is the difference between test scenarios and test cases? Discuss test case template and the techniques to generate test data.	**07**
		OR	

Q.5 **(a)** What is the importance of test planning? Briefly discuss test policy, test plan and quality **07** plan. Discuss their templates.

(b) Discuss different roles and responsibilities in testing life cycle and software quality **07** profession.

****