

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA INTEGRATED– SEMESTER VII- EXAMINATION –SUMMER-2022****Subject Code: 4470631****Date: 08/06/2022****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.

- Q.1** (a) 1. _____ is used for complete traceability of a software application. **07**
2. Define error and bug with example.
3. Path testing is a structural testing method. (True/False)
4. Big bang testing is a _____ type of testing.
5. Define Cyclomatic complexity.
6. Testing done without planning and documentation is called _____ testing.
7. Unit testing is done by whom and why?
- (b) Explain in detail how testing is carried out during SDLC? **07**
- Q.2** (a) Define verification and validation. Describe their activities. Draw the diagram. **07**
(b) Define black box testing. What are the various types of black box testing? Explain Boundary value analysis and Equivalence class testing with examples. **07**
- OR**
- (b) Define integration testing. Write about Decomposition based integration testing and Call graph based integration testing in detail. **07**
- Q.3** (a) Write about the following types of tests. **07**
1. Critical path first
2. Smoke testing
3. COTS testing
- (b) Explain the process of scenario and test cases preparation. Illustrate with an example. **07**
- OR**
- Q.3** (a) What is regression testing? What is its importance? Explain the types of regression testing techniques. **07**
(b) Define test metrics. Write about any two test matrices of your choice. Give proper examples. **07**
- Q.4** (a) What is test planning? What are the components to be included in the test planning? Write about test strategy and test planning. **07**
(b) Describe in detail how the cost of quality can help in improving or maintaining the quality of product. **07**
- OR**
- Q.4** (a) What is the importance of test reports? List out various reports to be generated in testing. Briefly write about them. **07**
(b) Write about orthogonal defect classification in detail. **07**
- Q.5** (a) What are the guidelines for selecting a testing tool? Differentiate static and dynamic testing tools. **07**
(b) Write about the responsibilities of tester, quality assurance engineer and test manager. **07**
- OR**
- Q.5** (a) Explain test management tools. Write about any two test management tools of your choice. **07**
(b) Explain software testing with respect to the TDD and SCRUM models. **07**
