

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER VII- EXAMINATION –WINTER-2023

Subject Code:4470631**Date: 14/12/2023****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) Explain the following terms: **07**
1. Define Terms: MTTF.
 2. Define Scrum.
 3. Define Bug.
 4. Write a full form of UAT.
 5. Unit testing is done by whom and why?
 6. Define Cyclomatic complexity.
 7. List out any five responsibilities of tester.
- (b) Explain software development life cycle(SDLC) in details. **07**
- Q.2** (a) Why Verification and Validation is important in testing? List various validation and verification activities. What comes first Verification or Validation? **07**
- (b) List out different functional testing. Explain any three in detail. **07**
- OR**
- (b) List out different validation activities. Explain any four in detail. **07**
- Q.3** (a) Answer Following **07**
1. Describe in detail how cost of quality can help in improving or maintaining quality of product.
 2. Explain principles of software testing.
- (b) What is regression testing? What is its importance? Explain the types of regression testing techniques. **07**
- OR**
- Q.3** (a) Answer Following **07**
1. Critical path first 2. Smoke testing 3. COTS testing
- (b) Define integration testing. Write about Decomposition based integration testing and Call graph based integration testing in detail. **07**
- Q.4** (a) List different Black-Box testing. Explain Class Testing with example. **07**
- (b) Which tools are used to build test data? Explain any two tools in details. **07**
- OR**
- Q.4** (a) What is the need of White-Box Testing? Describe Basis Path Testing and Cyclomatic Complexity with examples. **07**
- (b) Describe similarity and dissimilarity of product and process metrics. **07**
- Q.5** (a) Explain the roles of Quality assurance engineer and Tester with example. **07**
- (b) Explain how cost of quality can help in improving or maintaining quality of product in details. **07**
- OR**
- Q.5** (a) Write short note on test management tools: TFS and Jira. **07**
- (b) describe Orthogonal Defect Classification. **07**