

T4CS

Paper / Subject Code: 82903 / Software Testing & Quality Assurance

(2 ½ Hours)

[Total Marks: 75]

- N.B.
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Q.1 Attempt All (Each of 5Marks)

(15M)

(a) Multiple Choice Questions

1. Which Testing is performed first?
 - a) Black box testing
 - b) White box testing
 - c) Dynamic testing
 - d) Static testing
2. Boundary value testing
 - a) Is the same as equivalence partitioning tests
 - b) Tests combinations of input circumstances
 - c) Test boundary conditions on, below and above the edges of input and output equivalence classes
 - d) Is used in white box testing strategy
3. Which of the following is / are not a Iterative Model?
 - a) RAD
 - b) Incremental
 - c) V model
 - d) Spiral Model
4. The difference between testing and debugging is -
 - a) In testing, the objective is to establish whether the system is running as per specifications, whereas in debugging the objective is to locate and correct the errors in a system
 - b) Both are the same except that debugging is unstructured, whereas testing is structured
 - c) Debugging phase produces testing phase
 - d) None of these
5. In Which of the following situation defects will arise?
 - a) No knowledge of system
 - b) System is used in wrong way
 - c) Incorrect setup of testing environment
 - d) All the above

- (b) Fill in the blanks.
(Test Planning, Measure quality, Test Stub, Fix defect, Test specification, Test Driver, Requirements, Code, Test Closure)

1. Testing helps us to _____ of product by finding defects in product
2. Test cases are designed during _____
3. _____ calls the function and passes it test data.
4. Acceptance test cases are based on _____
5. _____ is not a Software Development Life Cycle Phase?

- (c) Short Answers.

1. What is error?
2. Define SQA.
3. What is inspection?
4. Define defect.
5. Define cost of quality.

Q. 2 Attempt the following (Any THREE)(Each of 5Marks) (15M)

- (a) Write in brief about QA, QC, QM.
- (b) Discuss roles & responsibilities in review.
- (c) Write note on Black box testing.
- (d) Differentiate between Inspection & Walkthrough
- (e) Write note basis path testing
- (f) Discuss types of Software Quality factors.

Q. 3 Attempt the following (Any THREE) (Each of 5Marks) (15M)

- (a) Write a note on Alpha and Beta Testing in Validation Testing.
- (b) Define Software Metric. Give its purpose. Explain its types.
- (c) Explain the steps of Defect Management Process.
- (d) Discuss "Strategic Approach To Software Testing".
- (e) What is the format of Defect Report? Explain.
- (f) Explain Top-down Integration testing.

Q. 4 Attempt the following (Any THREE) (Each of 5Marks) (15)

- (a) Write a note on SQA Plan.
- (b) Explain Pareto Diagram with example.
- (c) List types of Quality Costs. Explain in detail.
- (d) Define Six-Sigma. Explain its basic steps.
- (e) How to measure quality cost?
- (f) Discuss Formal Technical Review in detail.

Q. 5 Attempt the following (Any THREE) (Each of 5Marks)

(15)

- (a) Explain different phases of SDLC.
- (b) What is System Testing? Explain its any two types.
- (c) Explain the following:-
 - i. ISO
 - ii. ISO 9000
 - iii. ISO 9000 series
- (d) Differentiate between Verification and Validation.
- (e) What are the measures of Reliability and Availability? Explain.