

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

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(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.

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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.

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