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Sixth Semester B.E. Degree Examination, Feb./Mar. 2022 Software Testing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define the following :
 - i) Error
 - ii) Faults
 - iii) Failure
 - iv) Test. (04 Marks)
- b. Briefly explain the different types of test metrics. (08 Marks)
- c. With a neat diagram, explain the SATM (Simple Automatic Teller Machine) System. (08 Marks)

OR

- 2 a. Explain the following :
 - i) Testability (04 Marks)
 - ii) Verification (08 Marks)
- b. Write a structured programming version of a triangle program implementation. (08 Marks)
- c. With a neat diagram, explain levels of testing. (08 Marks)

Module-2

- 3 a. Explain the following:
 - i) Equivalence partitioning (04 Marks)
 - ii) Boundary value analysis.
- b. With a neat figure, explain about
 - i) Robustness testing (08 Marks)
 - ii) Worst case testing. (08 Marks)
- c. Explain fault based adequacy criteria. (08 Marks)

OR

- 4 a. Explain Random testing with an example. (04 Marks)
- b. Explain the basic decision table terms. Draw the decision table for triangular problem. (08 Marks)
- c. What is mutation analysis? Explain mutation analysis terminology. (08 Marks)

Module-3

- 5 a. Write a short note on dataflow converge with complex structure. (04 Marks)
- b. Describe the following with an example :
 - i) Statement testing (08 Marks)
 - ii) Branch testing. (08 Marks)
- c. With the help of commission problem, derive du paths for variables locks, stocks, barrels, sales and commission. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.



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OR

- 6 a. Write a note on slice based testing. (04 Marks)
b. Discuss: (08 Marks)
 i) Scaffolding (08 Marks)
 ii) Caphere and Replay. (08 Marks)
c. Explain McCabe's basis path testing method with an example. (08 Marks)

Module-4

- 7 a. Write a quality goal of a software system. (04 Marks)
b. Explain the following principles: (08 Marks)
 i) Sensitivity
 ii) Redundancy
 iii) Partition
 iv) Visibility. (08 Marks)
c. List and explain dependability properties with examples. (08 Marks)

OR

- 8 a. Write the steps to organizing the documents. (04 Marks)
b. Explain the following : (08 Marks)
 i) Risk planning
 ii) Monitoring the process. (08 Marks)
c. How to improve the quality process? (08 Marks)

Module-5

- 9 a. Explain acceptance testing. (04 Marks)
b. Explain different integration testing strategies. (08 Marks)
c. Explain path based integration testing. (08 Marks)

OR

- 10 a. Explain call graph based integration. (04 Marks)
b. What is Regression testing? What are the different regression testing strategies? Explain. (08 Marks)
c. Explain the upper level SATM Finite state machine. (08 Marks)
