CBCS SCHEME

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17IS63

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.*

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.

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
   ii) Verification **(04 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
   ii) Boundary value analysis. **(04 Marks)**

b. With a neat figure, explain about
   i) Robustness testing
   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
   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)**

OR

6 a. Write a note on slice based testing. **(04 Marks)**

b. Discuss:
   i) Scaffolding
   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:
   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 :
   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)**

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