

CBCS SCHEME

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15CS552

Fifth Semester B.E. Degree Examination, Jan./Feb. 2023 Introduction to Software Testing

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Define the following:
- (i) Error
 - (ii) Fault
 - (iii) Failure
 - (iv) Test
 - (v) Reliability
 - (vi) Usability
 - (vii) Correctness
 - (viii) Performance
- b. What is Software Testing? Why it is so important in SDLC? (08 Marks)

OR

- 2 a. Explain error and fault taxonomies. (04 Marks)
- b. Explain testing and debugging cycle with a diagram. (08 Marks)
- c. Briefly explain software quality. (04 Marks)

Module-2

- 3 a. Explain the boundary value analysis and mention its limitations. Derive BVA test cases for triangle problem. (08 Marks)
- b. Differentiate between Robustness testing and Worst case testing. (08 Marks)

OR

- 4 a. Briefly explain variants of equivalence class testing. Derive equivalence class test cases for next date problem. (08 Marks)
- b. Write a short note on structural testing. (08 Marks)

Module-3

- 5 a. What is DD-path? Explain basis path testing with suitable example. (08 Marks)
- b. Explain metric based testing. (08 Marks)

OR

- 6 a. What is data flow testing? List and define various terms in define/use testing. (08 Marks)
- b. Write a short notes on slice based testing in data flow testing. (08 Marks)

Module-4

- 7 a. Explain the basic principles of process frame work. (08 Marks)
- b. Explain the following:
- (i) Dependability properties
 - (ii) Organizational factors
- (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.

OR

- 8 a. Explain the following principles:
- (i) Sensitivity
 - (ii) Redundancy
 - (iii) Partition
 - (iv) Visibility
- b. Define Scaffolding. Explain generic versus specific scaffolding.

(08 Marks)

(08 Marks)

Module-5

- 9 a. Explain integration testing strategies
- b. Explain the following:
- (i) Acceptance testing
 - (ii) System testing

(08 Marks)

(08 Marks)

OR

- 10 a. Explain the upper level SATM finite state machine with diagram.
- b. What is Regression testing? What are the different regression testing strategies and methods?

(08 Marks)

(08 Marks)
