

CBCS SCHEME

16/17MCA43



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Fourth Semester MCA Degree Examination, July/August 2021 Software Testing and Practices

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions.

- 1 a. Define software testing, software quality and its attributes. (08 Marks)
b. Discuss the various types of metrics used in software testing and their relationship. (08 Marks)
- 2 a. Describe the six basic principles of software testing. (08 Marks)
b. Explain the various types of metrics used in software testing and their relationship. (08 Marks)
- 3 a. What are the levels of testing found in waterfall model? (08 Marks)
b. State and explain the data flow diagram for the triangle problem. (08 Marks)
- 4 a. Explain the implementation of NEXTDate function. (08 Marks)
b. Compare the functional and structural testing with respect to Venn diagram. (08 Marks)
- 5 a. Briefly discuss the triangle problem with respect to boundary value analysis. (08 Marks)
b. Write the equivalence class test cases for the NEXTDate function. (08 Marks)
- 6 a. Describe the usage of decision table to devise the test cases. (08 Marks)
b. Illustrate the special value testing as well as random testing and generate test cases for commission program. (08 Marks)
- 7 a. Define DD-path, draw DD-graph for triangle problem. (08 Marks)
b. Describe the test coverage metrics and basic path testing with an example. (08 Marks)
- 8 a. Distinguish between top-down integration and bottom-up integration. (08 Marks)
b. Explain the traditional view of testing levels of alternative life cycle models. (08 Marks)
- 9 a. Explain the mutation analysis and variations on mutation testing. (08 Marks)
b. Briefly describe the terms of i) Oracle ii) Scaffolding iii) Spell checks on oracle. (08 Marks)
- 10 a. Write the features of test design specification documents. (08 Marks)
b. Describe risk planning and test design specification. (08 Marks)

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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.