



CBCS SCHEME

16/17MCA43

Fourth Semester MCA Degree Examination, Dec.2019/Jan.2020 Software Testing and Practices

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 term software testing. Write in detail about testing and debugging processes. (08 Marks)
- b. What is static testing? What are the methodologies/techniques/processes you use in static testing? (08 Marks)

OR

- 2 a. What are the six principles that characterize various approaches and techniques for analysis and testing. (08 Marks)
- b. What do you mean by testing adequacy criteria and comparing criteria? Explain about test specifications. (08 Marks)

Module-2

- 3 a. Write a short note on testing life cycle with a suitable diagram. Distinguish between functional testing and structural testing. (08 Marks)
- b. With a neat diagram, explain about levels of testing. Write a short note on test case. (08 Marks)

OR

- 4 a. Explain in detail about the triangle problem and commission problem. (08 Marks)
- b. Illustrate on error and fault taxonomies. (08 Marks)

Module-3

- 5 a. What do you mean by boundary value analysis? Explain robust worst case boundary value testing with neat diagram. (08 Marks)
- b. What are the different forms of equivalence class testing? Explain each of them with suitable Pictorial representation. (08 Marks)

OR

- 6 a. Explain decision table based testing with an example. Generate decision table for triangle problem. (08 Marks)
- b. Illustrate special value testing as well as random testing and generate test cases for commission program. (08 Marks)

Module-4

- 7 a. What do you mean by test coverage metrics? Explain all types of metrics based testing with suitable example. (08 Marks)
- b. Describe the McCabe's basis path method with an example. How do you maintained minimal essential complexity? Explain with suitable example. (08 Marks)

1 of 2

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

- 8 a. Discuss about the traditional view of testing levels with neat diagram. Explain about any one alternative life cycle model with suitable diagram. (10 Marks)
- b. Distinguish between integration testing and system testing. (06 Marks)

Module-5

- 9 a. What is meant by fault based testing? Mention few assumptions in fault based testing. Explain about fault based adequacy criteria. (08 Marks)
- b. Define test oracles. How do you implement self checks as oracles? Illustrate how capture and replay methodology will help in testing? (08 Marks)

OR

- 10 a. Describe any five major activities in a planning and monitoring the process. How do you generate test and analysis reports? (08 Marks)
- b. List and explain about all the major categories of documents. Describe standard organization of a plan and standard organization of documents. (08 Marks)

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