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)

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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