USN |__|__|__|__|__|__|__|__|__|__| 16MCA43

Fourth Semester MCA Degree Examination, June/July 2018
Software Testing and Practices

Time: 3 hrs.   Max. Marks: 80

Note: *Answer FIVE full questions, choosing one full question from each module.*

Module-1

1 a. Explain error, faults and failures in the process of programming and testing with a diagram.
   (10 Marks)
   b. Describe Quality attributes of software testing.
   (06 Marks)

OR

2 a. Explain the basic principles of Analysis and testing and describe adequacy criteria and comparison criteria.
   (10 Marks)
   b. Discuss the various test generation strategies in brief.
   (06 Marks)

Module-2

3 a. Describe the implementation of NEXTDate function.
   (10 Marks)
   b. Explain the levels of testing found in waterfall model.
   (06 Marks)

OR

4 a. Describe the specified, implemented and tested behavior with the help of Venn diagram and discuss each of them.
   (10 Marks)
   b. Write the algorithm for triangle problem.
   (06 Marks)

Module-3

5 a. Illustrate with appropriate diagrams, the mechanism to generate test cases in BVA for a function of two variables in
      (i)   Robustness Testing
      (ii) Worst – Case Testing
      (iii) Robust Worst Case Testing.
   (10 Marks)
   b. Write the test cases for NEXTDate function using boundary value analysis.
   (06 Marks)

OR

6 a. Write test cases for a commission problem using equivalence class Testing.
   (10 Marks)
   b. Illustrate the usage of decision table method to devise test cases for a triangle problem.
   (06 Marks)

Module-4

7 a. Draw a program graph and DD path graph for a triangle problem.
   (10 Marks)
   b. Explain McCabe's basis path method with an example.
   (06 Marks)

OR

8 a. Discuss the types of test coverage metrics in detail.
   (10 Marks)
   b. Explain traditional view of testing levels and alternative life cycle models
   (06 Marks)

Module-5

9 a. Explain Scaffolding. Compare between generic versus specific scaffolding.
   (07 Marks)
   b. Explain any five major activities in a planning and monitoring the process.
   (09 Marks)

OR

10 a. Describe test oracles and self checks as oracles.
   (10 Marks)
   b. Illustrate mutation analysis with its variants.
   (06 Marks)

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