CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐

18MCA351

Third Semester MCA Degree Examination, Feb./Mar. 2022
Software Testing

Time: 3 hrs.

Max. Marks: 100

Note: *Answer any 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. What is software quality? Explain the attributes of software quality in brief. **(10 Marks)**

OR

2 a. List and explain the six principles of software testing. **(10 Marks)**
   b. What is static testing? Explain in brief. **(10 Marks)**

Module-2

3 a. Write the pseudocode for structured implementation of triangle problem and draw data flow diagram. **(10 Marks)**
   b. Describe the testing life cycle with a suitable diagram. **(10 Marks)**

OR

4 a. Describe the specified, implemented and tested behaviors with the help of Venn diagram.
   (10 Marks)
   b. Illustrate an error and fault taxonomies. **(10 Marks)**

Module-3

5 a. What is boundary value Analysis? Illustrate with appropriate diagram the mechanism to generate test cases in Boundary Value Analysis for a function of 2 variables in
      i)   Robustness Testing
      ii) Robust worst case testing
      iii) Worst-case Testing. **(10 Marks)**
   b. What are the different forms of equivalence class testing? Explain any 2 of them with a suitable graphical representation. **(10 Marks)**

OR

6 a. Explain decision table based testing with an example. Generate the decision table for triangle problem. **(10 Marks)**
   b. Write the boundary value analysis test cases for
      i) Triangle problem
      ii) Next date problem. **(10 Marks)**

Module-4

7 a. What is basis path testing? Explain McCabe's basis path method with an example.
   (10 Marks)
   b. Discuss test coverage metrics in brief. **(10 Marks)**

OR

8 a. List the alternate life cycle models. Explain any one of them with a suitable diagram.
       (10 Marks)
   b. Explain slice based testing. List out the USE relationships. (05 Marks)
   c. Distinguish between integration testing and system testing. (05 Marks)

Module-5

9 a. Write short notes on the following:
       i)   Fault based testing
       ii) Mutation analysis. (10 Marks)
   b. Describe test oracles and self-checks as oracles. (10 Marks)

OR

10 a. Explain the role of risk management in quality process. (10 Marks)
    b. List and explain about all major categories of documents. (10 Marks)

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