CBCS SCHEME

18MCA351

Third Semester MCA Degree Examination, Jan./Feb. 2021
Software Testing

Time: 3 hrs.　　　　　　　　　　　　　　　　　　　　　　　Max. Marks: 100

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

Module-1

1　a. What is software quality? Explain the same with respect to quality attributes. **(10 Marks)**
　b. Explain error, faults and failures in the process of programming and testing with a diagram. **(10 Marks)**

OR

2　a. Discuss the different types of test matrices. **(10 Marks)**
　b. Explain the different steps of testing and debugging. **(10 Marks)**

Module-2

3　a. Explain a typical testing life cycle with illustration. **(10 Marks)**
　b. Describe about SATM screens with the problem statement. **(10 Marks)**

OR

4　a. State and explain the data flow diagram for the triangle problem. **(05 Marks)**
　b. Explain programe behavior and tested behavior with Venn diagram. **(10 Marks)**
　c. Discuss the fault taxonomy and give two examples to each fault type. **(05 Marks)**

Module-3

5　a. Explain Boundary value analysis and illustrate with appropriate diagrams, the mechanism to generate test cases in BVA for a function of 2 variables in
　　　i) Robustness testing
　　　ii) Worst case testing
　　　iii) Robust worst case testing. **(10 Marks)**
　b. Write Equivalence class for the NextDate function. **(10 Marks)**

OR

6　a. What is Equivalence class testing? What are the different forms of Equivalence class tests? Explain each of them with suitable pictorial representation. **(10 Marks)**
　b. Write the test cases for NextDate function using BVA. **(05 Marks)**
　c. Define the decision table and illustrate the usage of decision table method to device test classes for a triangle problem. **(05 Marks)**

Module-4

7　a. Define DD path and write the DD path for triangle program. **(10 Marks)**
　b. Discuss water fall spin-offs and specification based lifecycle models in detail. **(10 Marks)**

OR

8 a. Explain matric based testing and slice based testing with example. (10 Marks)
   b. Write the guidelines for data flow testing. (10 Marks)

Module-5

9 a. Explain about mutation analysis and fault based adequacy criteria. (10 Marks)
   b. Describe about analysis and test plan. (10 Marks)

OR

10 a. What is scaffolding and what is the purpose of it? Differentiate between generic verses specific scaffolding. (10 Marks)
   b. Explain test oracles and self check as oracles with necessary diagram. (10 Marks)

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