

# CBCS SCHEME

18MCA351

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## Third Semester MCA Degree Examination, Dec.2019/Jan.2020 Software Testing

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Briefly explain errors, faults and failures with neat diagram. (10 Marks)  
b. With a neat diagram, explain testing and debugging. (10 Marks)

OR

- 2 a. Discuss the various types of defect management. (10 Marks)  
b. Discuss the various test generation strategies in brief. (10 Marks)

### Module-2

- 3 a. Define the following :  
i) Error ii) Fault iii) Failure iv) Incident v) Test vi) Test case. (08 Marks)  
b. With a neat diagram, explain the SATM (Simple Automated Teller Machine System). (12 Marks)

OR

- 4 a. Write a program to implement triangle problem. (10 Marks)  
b. Explain briefly the two testing approaches used to identify test cases. (10 Marks)

### Module-3

- 5 a. Explain BVA test case for two variables functions and limitations of BVA. (10 Marks)  
b. What are different forms of equivalence class testing? Explain each of them with suitable pictorial representation. (10 Marks)

OR

- 6 a. Write test cases for next date function using equivalence class approach. (10 Marks)  
b. Write test cases for the triangle problem using decision table approach. (10 Marks)

### Module-4

- 7 a. Draw a program graph and DD path graph for a triangle problem. (12 Marks)  
b. Explain McCabe's basis path method with an example. (08 Marks)

OR

- 8 a. Explain Rapps – Weyukar dataflow coverage metrics with a neat diagram. (12 Marks)  
b. Describe top down and bottom up integration strategies. (08 Marks)

### Module-5

- 9 a. Explain mutation analysis and fault based adequacy criteria. (12 Marks)  
b. Differentiate between generic and specific scaffolding. (08 Marks)

OR

- 10 a. What is the role of risk management in the quality process? (10 Marks)  
b. Explain documenting analysis and report. (10 Marks)

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13 FEB 2020

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.