

# CBCS SCHEME

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18MCA351

Third Semester MCA Degree Examination, Aug./Sept.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. Describe quality attributes of software testing. (10 Marks)  
b. How is software testing different from hardware testing? (10 Marks)

OR

- 2 a. Explain adequacy criteria and its use. (10 Marks)  
b. Discuss defect lifecycle with the help of a diagram. (10 Marks)

### Module-2

- 3 a. Write the algorithm for triangle problem. (10 Marks)  
b. Compare levels of testing and the steps in water fall model. Illustrate with a diagram. (10 Marks)

OR

- 4 a. Write pseudocode for commission problems. (12 Marks)  
b. Describe the specified, implemented and tested behavior of an application using Venn diagram. (08 Marks)

### Module-3

- 5 a. Implement next date problem using decision table approach. (10 Marks)  
b. Explain with appropriate diagrams the generation of test cases using equivalence class technique for a function of two variables. (10 Marks)

OR

- 6 a. Write test cases for commission problem using boundary value approach. (10 Marks)  
b. Write test cases for triangle problem using equivalence class approach. (10 Marks)

### Module-4

- 7 a. What are metric based testing and slice based testing? (10 Marks)  
b. What is alternative lifecycle model and how is it different from the traditional model? (10 Marks)

OR

- 8 a. What is DD – path in code based testing? Illustrate with an example. (10 Marks)  
b. Find out DU – path for variable ‘locks’ in commission problem. (10 Marks)

### Module-5

- 9 a. Explain :  
i) Self – checks as test oracle  
ii) Capture and replay (10 Marks)  
b. Explain scaffolding and discuss its types. (10 Marks)

OR

- 10 a. Discuss mutation analysis and its variants. (10 Marks)  
b. Write short notes on :  
i) Risk planning  
ii) SATM. (10 Marks)

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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.