

# CBCS SCHEME

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18IS62

## Sixth Semester B.E. Degree Examination, Dec.2023/Jan.2024 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. Define the following : i) Error ii) Fault iii) Failure iv) Incident v) Test care. (05 Marks)  
b. List and explain important error and fault taxonomic. (05 Marks)  
c. Explain Testing and Debugging Life Cycle, with a neat diagram. (10 Marks)

OR

- 2 a. Write a pseudo code for structured programming version of triangle programme. (10 Marks)  
b. Explain different types of Software test metrics in detail. (10 Marks)

### Module-2

- 3 a. Explain Boundary value analysis, with any one suitable example. (10 Marks)  
b. Explain the following Equivalence testing types :  
i) Weak Normal ii) Strong Normal iii) Weak Robust iv) Strong Robust. (10 Marks)

OR

- 4 a. Explain the Decision Table – Based Testing with any one suitable example. (10 Marks)  
b. Explain Fault Based Adequacy Criteria. (05 Marks)  
c. Explain Mutation Analysis Terminologies. (05 Marks)

### Module-3

- 5 a. Write a triangle program. Draw the program graph and find the DD paths, DD path graph. (10 Marks)  
b. Explain Mc Cabe's basis path testing method with an example. (10 Marks)

OR

- 6 a. Define Scaffolding. Explain Generic versus Specific Scaffolding. (10 Marks)  
b. Define Test Oracle. Explain with a neat diagram the concept of test harness. (10 Marks)

### Module-4

- 7 a. Explain the following principles : i) Sensitivity ii) Redundancy  
iii) Partition iv) Visibility v) Feedback. (10 Marks)  
b. List and explain dependability properties with examples. (10 Marks)

OR

- 8 a. Explain the following :  
i) Risk Planning ii) Monitoring the process. (10 Marks)  
b. Write a short note on :  
i) Organizing documents ii) Test design specification document. (10 Marks)

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.

**Module-5**

- 9 a. What is System Acceptance and Regressing Testing? Explain briefly. (10 Marks)  
b. Write context diagram and Level 1 dataflow diagram of SATM system. (10 Marks)

OR

- 10 a. What is Call – Graph based integration testing? Explain the strategies under call based integration testing. (10 Marks)  
b. Explain the path based integration testing. (10 Marks)

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