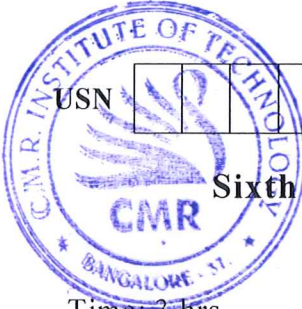


# CBCS SCHEME



15IS63

## Sixth Semester B.E. Degree Examination, June/July 2019 Software Testing

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. What is software testing? Why it is so important in SDLC life cycle. (03 Marks)
- b. Explain the portrays of software testing life cycle. (05 marks)
- c. List six types of faults and explain each with example. (08 Marks)

OR

- 2 a. Identify problem statement for a triangle with flowchart for traditional implementation. (08 Marks)
- b. Describe the GUI application currency converter and embedded device Satrun wind shield wiper with diagram. (08 Marks)

### Module-2

- 3 a. Explain the boundary value analysis and BVA robust in detail with function of two variables and show how to prepare test input sets. (08 Marks)
- b. What is mutation? Explain variation on mutation in detail. (08 Marks)

OR

- 4 a. Explain different types of equivalence class testing in detail. (08 marks)
- b. What is fault based testing? Define below with respect to fault based-testing :  
i) Original Program      ii) Program Location  
iii) Alternate Expression      iv) Alternate Program. (08 Marks)

### Module-3

- 5 a. What is program graph? Draw program graph for triangle pseudocode. (08 marks)
- b. Explain test execution technique test oracle in detail with neat diagram. (08 Marks)

OR

- 6 a. Illustrate structural testing with diagram. How to identify DD paths in the program graph? Explain with example. (08 Marks)
- b. What is scaffolding? Explain application specific scaffolding capture and replay test execution techniques. (08 Marks)

### Module-4

- 7 a. Explain any four basic principles in detail. (08 marks)
- b. Explain the dependability properties. (04 marks)
- c. Explain improving the process. (04 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.

OR

- 8 a. Write a short note on :
- i) Quality process
  - ii) Planning and monitoring process
  - iii) Quality goals
  - iv) Risk planning. (08 Marks)
- b. Explain clean room process model and software reliability engineered testing (SRET) approach. (08 Marks)

Module-5

- 9 a. With a neat diagram, explain alternate life cycle – specification based model in detail. (08 Marks)
- b. In brief explain :
- i) Unit testing
  - ii) System testing
  - iii) Acceptance testing
  - iv) Usability testing. (08 Marks)

OR

- 10 a. Explain the call graph-based integration with the help of :
- i) Pair-wise integration
  - ii) Neighborhood integration. (08 Marks)
- b. What is regression testing? Explain code-based regression test selection and control-flow and data flow regression test selection. (08 Marks)

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