CBCS SCHEME

USN | | | | | | | | | | |

17CS552

Fifth Semester B.E. Degree Examination, Aug./Sept. 2020
Introduction to 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 Error, fault, failure, Incident, Test and Test case. Explain testing life cycle with a neat diagram. **(10 Marks)**

b. Explain Functional Testing and Structural Testing. **(10 Marks)**

OR

2 a. With a neat diagram, explain testing and debugging cycle. **(10 Marks)**

b. Explain the classification of test metrics used in software testing. **(10 Marks)**

Module-2

3 a. Write a Pseudocode for structured programming version of a triangle program. **(10 Marks)**

b. With a neat diagram, explain currency converter. **(06 Marks)**

c. Explain Saturn Windshield Wiper Controller. **(04 Marks)**

OR

4 a. Explain the following Equivalence class testing with respect to
i) Weak Normal
ii) Strong Normal
iii) Weak Robust
iv) Strong Robust. **(10 Marks)**

b. What are Decision Table? Explain the portions of a decision table. Write the decision table for the triangle program. **(10 Marks)**

Module-3

5 a. Explain fault-Based testing terminologies. **(10 Marks)**

b. Explain with respect to structural testing
i) Statement testing
ii) Branch testing. **(10 Marks)**

OR

6 a. Explain McCabe's Basis path method for a strongly connected graph. Write the Path/Edge traversal. **(10 Marks)**

b. Explain Definition-use Testing. **(10 Marks)**

Module-4

7 a. Explain the following with respect to test execution
i) Scaffolding
ii) Test Oracles. **(10 Marks)**

b. Explain the six basic principles of process framework. **(10 Marks)**

OR

8 a. Explain the following :
   i) The quality process
   ii) Dependability properties. **(10 Marks)**

   b. List and explain risks in process and quality management. **(10 Marks)**

Module-5

9 a. Explain different integration testing strategies. **(10 Marks)**

   b. Explain :
   i) Acceptance Testing
   ii) System Testing. **(10 Marks)**

OR

10 a. Explain the upper-level SATM finite state machine. **(10 Marks)**

   b. Explain the path – Based Integration testing. **(10 Marks)**

* * * * *