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15CS552

## Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Introduction to 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. Explain in detail about Software Quality with respect to Quality Attributes and Reliability. (08 Marks)  
b. Explain the difference between Requirement Behavior and correctness in Software Testing. (08 Marks)

OR

- 2 a. Explain about Errors and Fault Taxonomies in Software Testing. (08 Marks)  
b. Explain the levels of abstractions and Testing in Waterfall model in levels of testing. (08 Marks)

### Module-2

- 3 a. Explain about the Triangle problems statements with respect to simple version and improved version. Draw the flowchart for the traditional triangle program implementations. (08 Marks)  
b. Explain about the SATM system and draw the block diagram of SATM terminal and SATM screens. (08 Marks)

OR

- 4 a. Explain the following with test cases for a function of two variables with suitable examples in a Boundary Value Testing.  
i) Robustness Testing  
ii) Worst Case Testing. (08 Marks)  
b. Explain the following with test cases in a Decision Table with suitable examples  
i) Triangle problem  
ii) NextDate functions. (08 Marks)

### Module-3

- 5 a. Explain the following :  
i) Assumptions in Fault – Based Testing  
ii) Mutation Analysis. (08 Marks)  
b. Explain about Fault Based Adequacy criteria with suitable examples on sample set. (08 Marks)

OR

- 6 a. Explain the following with suitable examples each :  
i) Statement Testing  
ii) Branch Testing  
iii) Condition Testing (08 Marks)  
b. Explain about McCabe's Basis path method in Basis Path Testing. (08 Marks)

**Module-4**

- 7 a. Explain the following in details :  
i) Scaffolding  
ii) Test oracles  
iii) Capture and Replay (08 Marks)
- b. Explain in detail about Dependability properties within a Test and analysis of software process. (08 Marks)

**OR**

- 8 a. Explain about Risk Management in the Quality plan in a Monitoring the process. (08 Marks)
- b. Explain the improving the process with respect to :  
i) Structural Testing  
ii) Functional Testing  
iii) System Testing. (08 Marks)

**Module-5**

- 9 a. Explain about Integration Faults with examples in a Integration and component based Software Testing. (08 Marks)
- b. Explain about Regression Testing and its selection Techniques. (08 Marks)

**OR**

- 10 a. Explain the difference between Top Down Integration and Bottom up Integration in a Decomposition Based Integrations. (08 Marks)
- b. Explain about path Based Integration with respect to New and Extended concepts in a Integration Testing. (08 Marks)

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