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10CS842

Eighth Semester B.E. Degree Examination, Jan./Feb. 2021
Software Testing

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer FIVE full questions, selecting atleast TWO questions from each part.
2. Missing data, if any, may be suitably assumed.

PART – A

- 1 a. Explain the basic definitions of error, fault, failure, incident, test and test cases with a flow diagram of a testing life cycle with suitable examples. (10 Marks)
- b. Explain in detail of the following software testing problems with respect to
i) The triangle problem ii) The next date functions. With suitable examples. (10 Marks)
- 2 a. Explain the following with suitable example each :
i) Worst case testing ii) Equivalence classes. (10 Marks)
- b. Explain the decision table based testing with respect to triangle problems technique used in software testing. (10 Marks)
- 3 a. Explain in details about McCabe's basis path method using Graph theory with suitable examples. (10 Marks)
- b. Explain the following in details :
i) Define/use testing ii) Slice based testing in a data flow testing. (10 Marks)
- 4 a. Explain the following in details :
i) Traditional view of testing levels with waterfall life cycle
ii) The Simple Automatic Teller Machine (SATM) system with terminal and screens block diagrams. (10 Marks)
- b. Explain about decomposition based integration with suitable examples in a tree structure representation in an integration testing. (10 Marks)

PART – B

- 5 a. Explain the following in details :
i) Structural strategies for thread testing
ii) Functional strategies for thread testing. (10 Marks)
- b. Explain about statics and dynamics taxonomy with respect to interaction testing. (10 Marks)
- 6 a. Explain in details with block diagram of verification trade off dimensions in a degree of freedom. (10 Marks)
- b. Explain in details of the following with respect to test and analysis activities within a software process : i) Quality goals ii) Dependability properties. (10 Marks)
- 7 Explain the following :
a. Assumptions in fault-based testing
b. Mutation analysis
c. Test case specification to test cases
d. Generic Vs specific scaffolding. (20 Marks)
- 8 Explain the following :
a. Test and analysis strategies
b. The quality team
c. Organizing documents
d. Test design specification documents. (20 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.