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10CS842

Eighth Semester B.E. Degree Examination, Dec.2016/Jan.2017
Software Testing

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
atleast TWO questions from each part.**

PART – A

- 1 a. Explain life cycle model of software testing. (06 Marks)
b. Explain the IEEE error and fault taxonomy. (08 Marks)
c. With neat diagram, explain the currency converter system. (06 Marks)
- 2 a. Explain : i) boundary value testing ii) random testing iii) decision table based testing. (10 Marks)
b. What is a test case? Explain the equivalence class test cases for the triangle problem. (10 Marks)
- 3 a. Discuss test coverage metrics and basis path testing with example. (10 Marks)
b. With suitable example, explain use testing and slice based testing. (10 Marks)
- 4 a. What is water fall spin-off? Explain life cycle based model with build sequence. (10 Marks)
b. Briefly explain about :
i) Top-down integration
ii) Bottom-up integration
iii) Call graph-based integration. (10 Marks)

PART – B

- 5 a. Justify strongly the significance of thread based system testing with SATM as example. (10 Marks)
b. Distinguish between progression and regression testing. (04 Marks)
c. Explain interaction testing with client/server as a classical example. (06 Marks)
- 6 a. What are the work products generated by verification and validation process? Explain with suitable diagram. (10 Marks)
b. Explain the importance of dependability properties in process frame work with neat sketch. (10 Marks)
- 7 a. Explain below terminology in association with fault based testing :
i) original program ii) program location iii) alternative expression iv) distinct behavior of an alternate program. (10 Marks)
b. Explain the significance of capture and replay mechanism in software automation testing. (10 Marks)
- 8 Write short notes on the following :
a. System testing
b. Test case template
c. Clean room process model by IBM
d. Software reliability approach by AT & T. (20 Marks)

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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.