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## Eighth Semester B.E. Degree Examination, June/July 2013

### Software Testing

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting at least TWO questions from each part.**

#### PART – A

- 1
  - a. Explain in detail the various measures of software quality attributes. (08 Marks)
  - b. With a suitable example, explain how will you specify program behaviour. (04 Marks)
  - c. Briefly explain the concepts of test metrics. (08 Marks)
- 2
  - a. Explain the concepts of defect management. (04 Marks)
  - b. Explain in detail the several strategies for test generation. (08 Marks)
  - c. With a neat sketch, explain the elements of model checking. (08 Marks)
- 3
  - a. Briefly explain the concepts of unidimensional versus multidimensional partitioning. (06 Marks)
  - b. Name and explain the four steps which are helpful in creating the equivalence class. (06 Marks)
  - c. With a neat sketch, explain in detail the steps involved in the generation of tests using the category-partition method. (08 Marks)
- 4
  - a. Explain the procedures which are used for the generation of tests using cause-effect graphing. (05 Marks)
  - b. With a neat sketch, explain the notation used in cause-effect graphing. (05 Marks)
  - c. Briefly describe the fault model for predicate testing. (05 Marks)
  - d. Explain the usage of predicate testing in practice. (05 Marks)

#### PART – B

- 5
  - a. Explain the concepts of statement testing. (05 Marks)
  - b. Briefly explain the concepts of branch testing. (05 Marks)
  - c. Explain in detail the concepts of path testing with a suitable example. (10 Marks)
- 6
  - a. What do you mean by definition – use pairs? (05 Marks)
  - b. Explain the concepts of data dependence graph with a suitable example. (05 Marks)
  - c. Briefly explain the concepts of data flow analysis. (05 Marks)
  - d. Define data flow testing criteria with respect to DU pairs. (05 Marks)
- 7
  - a. What are the differences between test case and test case specifications? (05 Marks)
  - b. Define the term adequacy criteria with a suitable example. (05 Marks)
  - c. Briefly explain the concepts of scaffolding. (05 Marks)
  - d. Explain the concepts of self-checks as oracles. (05 Marks)
- 8
 

Write short notes on the following concepts:

  - a. Memory leaks
  - b. System testing
  - c. Acceptance testing
  - d. Integration testing

(20 Marks)