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Eighth Semester B.E. Degree Examination, December 2010
Software Testing

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. How do you measure software quality? Discuss correctness versus reliability pertaining to programs. (10 Marks)
b. Discuss the types of metrics used in software testing and their relationship. (10 Marks)
- 2 a. Explain software testing and hardware testing over fault models, test domain and coverage. (04 Marks)
b. Illustrate various test – generation strategies over a short note. (04 Marks)
c. Classify testing techniques for dynamic testing, in detail. (12 Marks)
- 3 a. Consider an application program of your choice and condition. Partition the input domain using unidimensional and multidimensional partitioning. Construct two sets of test – data. Test for the above, using the equivalence classes. (10 Marks)
b. Write short notes on :
i) Boundary – value analysis ; ii) Category – partition method. (10 Marks)
- 4 a. Devise the procedure for generation of test, using cause – effect graphing. (10 Marks)
b. What is predicate testing, its fault model and testing criteria? (10 Marks)

PART – B

- 5 a. List the different elements in control flow. Discuss them with regard to testing, adequacy criterion and coverage. (16 Marks)
b. Explain the procedure call testing. (04 Marks)
- 6 a. Describe definition – use pairs with a suitable example. (06 Marks)
b. What is reaching definition? Illustrate with an algorithm by applying flow equation. (06 Marks)
c. Define the various data flow testing criteria. (08 Marks)
- 7 a. Define the following : i) Test case ; ii) Test case specification ; iii) Test obligation ; iv) Test suite ; v) Test execution ; vi) Test adequacy criterion. (06 Marks)
b. What is scaffolding? Describe generic and a application specific scaffolding. (08 Marks)
c. Briefly explain the test oracles. (06 Marks)
- 8 Write short notes on the following :
a. Integration testing
b. System testing
c. Acceptance testing
d. Regression testing. (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.