

Department of Computer Science
Purdue University, West Lafayette



Fall 2009: CS 49000-020 Software Testing
Final Examination. Part A (Multiple Choice): Solutions

Thursday December 17, 2009. 3:20pm-5:20pm. LWSN B134
Maximum points: 10 (To be scaled down during final course grading.)

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Circle the appropriate answer. You may collect Part B of this examination after returning Part A to the instructor.

Q1 Two test sets have been derived for program P . Test set T_1 is adequate with respect to the condition coverage criteria. Test set T_2 is derived using AETG and satisfies the pairwise coverage criterion. All errors detected by T_1 are guaranteed to be detected by T_2 .

No

Q2 The reliability of a program P is 1 if a test set reveals no errors and covers all paths in P .

No

Q3 For program P , test set T is adequate with respect to the multiple condition coverage criterion. T is also adequate with respect to the MC/DC coverage criterion.

Yes

Q4 Program P has four independent input variables A, B, C, and D. P is to be tested against 4 values of A, 3 for B, 2 for C, and 4 for D. What is the minimum number of test cases needed to test P so that all pairs of values are covered?

(c) 16

Q5 Regression testing is needed to

(a) check if features from a previous version continue to work correctly in the new version.

Q6 The Microsoft sponsored class project assessed the efficiency of three protocols. Which of the following is not one of these three?

(c) TCP/IP

Q7 The Cyberonics sponsored class project integrated their code into two open source tools and used an OS. Which of the following is not one of these three?

(b) gcc++

Q8 A test set that is adequate with respect to any code coverage criterion

(d) might detect some errors.

Q 9 Action-word testing is also known as

(b) keyword testing.

Q 10 The saturation effect best explains

(b) the improvement in software reliability with increase in test effort and variation in the types of test generation techniques used.