

# CIS 350 – Introduction to Software Engineering

## Topic: Software Testing

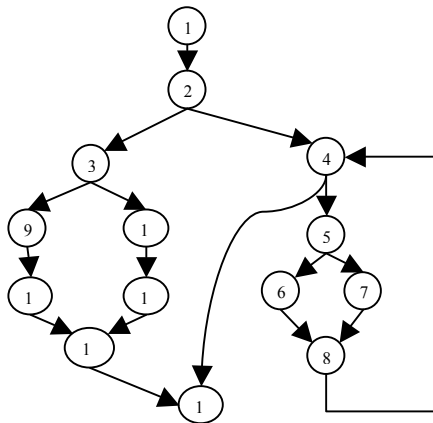
Winter 2013

Due: Friday, April 12, 2013

Student Name: \_\_\_\_\_

1. \_\_\_\_\_ refers to the set of activities that ensure that the software conforms to its specifications.  
a) Verification                      b) Validation
2. \_\_\_\_\_ refers to the set of activities that ensure that the software built meets the customer's needs and expectations.  
a) Verification                      b) Validation
3. Execution-based testing is a \_\_\_\_\_ V&V technique.  
a) static                                b) dynamic
4. Human-based testing is a \_\_\_\_\_ V&V technique.  
a) static                                b) dynamic
5. Testing can be used to demonstrate the absence of errors in a program. *True or False*
6. A successful test is a test that establishes the presence of one or more errors in the software. This is based on which of the following definition of testing?  
a) Testing is the process of demonstrating that errors are not present.  
b) Testing is the process of executing a program with the intent of finding errors.  
c) Testing is the process of establishing confidence that a program does what it is supposed to do.
7. A \_\_\_\_\_ is a dummy module used to replace a module that is subordinate to the module under test.  
a) stub                                b) driver
8. \_\_\_\_\_ integration testing is also called big bang integration.  
a) Incremental                      b) Nonincremental
9. Interfaces of software components are more likely to be tested completely and repeatedly when using \_\_\_\_\_ integration testing techniques.  
a) Incremental                      b) Nonincremental
10. In presence of loops in a program, exhaustive path testing is (theoretically) not feasible. *True or False*
11. Which of the following validation testing techniques is conducted in a controlled environment?  
a) Beta testing                      b) Alpha testing

12. In \_\_\_\_\_ testing, the focus is at the requirements level, i.e., on things that will be immediately apparent to the end users.
- a) Verification                      b) Validation
13. White-box testing techniques cannot find missing functions/features in a program. *True or False*
14. In black-box testing techniques, test cases are designed by examining the internal logic/structure of a program. *True or False*
15. Statement coverage criterion is generally considered insufficient. *True or False*
16. Equivalence partitioning is a functional or black-box testing technique. *True or False*
17. If an input condition for a program specifies a range, we can identify one valid and two invalid equivalence classes when applying the equivalence partitioning testing technique. *True or False*
18. Boundary value analysis (BVA) testing technique complements the equivalence partitioning technique by emphasizing selection of test cases for input data values at \_\_\_\_\_ of equivalence classes.
- a) edges                      b) center                      c) random locations
19. What is the cyclomatic complexity/number of the following program flow graph? Show the formula used to compute it.



20. Match each JUnit annotation in the table below with its purpose.

	<b>JUnit Annotation</b>	<b>Purpose of Annotation</b>
_____	@Test	A. Used to eliminate a test case method from a specific test run.
_____	@Before	B. Used to mark a method that is executed only once before any of the test cases.
_____	@BeforeClass	C. Used to mark a method that is executed only once after all of the test cases have been run.
_____	@After	D. Used to mark a method that is executed before every test case.
_____	@AfterClass	E. Used to mark a method as a test case.
_____	@Ignore	F. Used to mark a method that is executed after every test case.