

Software Testing

1. A Program specs state the following for an input field:
The program shall accept an input value of 4-digit integer equal or greater than 1000.
 - Determine the Equivalence partitioning for this program
 - Determine the test cases for this program.

2. A Program specs state the following for an input field:
The program shall accept an input value of 4-digit integer equal or greater than 2000 and less than or equal 8000.
 - Determine the Equivalence partitioning for this program
 - Determine the test cases for this program.

3. What is the major objective of equivalence partitioning?
4. Draw a figure that shows the white-box testing.
5. Consider the flow graph of a program that includes 16 edges and 9 nodes, determine the Cyclomatic complexity of the program.
6. Draw a figure that shows the incremental integration testing.
7. Discuss the approaches to integration testing.
8. In the context of integration testing, explain the meaning of Stub
9. Explain stress testing failure behaviour.
10. What is a monkey testing.
11. In stress testing, mention the conditions to be respected when software failure happens?

12. Software testing may be done by Developers (D) or Independent Testers (IT). Match the following table:

Test description	Who is the tester ? <u>Write D or IT</u> Developers (D) Or Independent Testers (IT).
black-box testing	
white-box testing	
Will test methods in classes	
will test gently	
will attempt to break the sys	
must learn about the system	
understands the system	
driven by quality constraint	
driven by delivery schedule constraint	
has no source code	
has the source code	
Functionality testing	
Instructors in a class-room act as	
Acceptance testing	
Unit testing	
Integration testing	

13. Software may be tested by developers or independent tester. Mention the difference.

14. Consider an exhaustive testing of a program. If there are 10 Million possible paths and we execute one test per millisecond, determine the time needed to test this program.
15. What is meant by test scenario?
16. What does a test case include?
17. Write down a test case that you have used in your project.
18. Draw a figure that shows the defect testing process.

Mark T (True) or F (False):

1. In black-box testing, you need to know the source code
2. Equivalence partitioning is a black -box testing
3. In white-box testing, you need to know the source code
4. Black-box testing is a functionality testing
5. In black-box testing, test cases are based on the system specification
6. In white -box testing, test planning can begin early in the software process
7. In white -box testing, test cases are based on the system specification
8. In black-box testing, test planning can begin early in the software process
9. Equivalence partitioning is a white -box testing
10. Program behaves in an equivalent way for each member of an Equivalence partition
11. Equivalence partitioning is a way to derive test cases
12. The main objective of Equivalence partitioning is to **reduce** the number of test cases

13. In a path testing, each path through the program is executed **at least once**
14. In a path testing, you do not need to know the code
15. Integration testing should be black-box testing
16. In a Flow Graph, nodes represent program decisions
17. In a Flow Graph, arcs represent the flow of control
18. In a Flow Graph, sequential statements are not ignored
19. In a Flow Graph, assignments statements are ignored
20. In a Flow Graph, procedures calls are not ignored
21. In a Flow Graph, I/O statements are ignored
22. Top down integration testing uses stubs
23. Bottom up integration testing uses stubs
24. A stub represents
25. **Tests cases** for integration testing are derived from the **specification**
26. In Path testing, each path through the program is executed **at least twice**
27. Structural testing is a White-box testing
28. Bugs lurk in corners and congregate at boundaries