
SOFTWARE TESTING

SOFTWARE TESTING QUESTION BANK

1. What is software testing? Why it is so important in SDLC? 5M
2. Define Error, Fault, Failure, Incident, Test and Test cases. 6M
3. Explain functional testing and structural testing with a neat diagram. 8M
4. Explain error and fault taxonomies 7M
5. With a neat diagram explain level of testing 5M
6. Design and develop a program in a c language to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Derive test cases for your program based on decision-table approach. 10M
7. Write a pseudo code and flowchart of the traditional triangle program implementation. 10M
8. Write a pseudo code of the next date function. 10M
9. With a neat diagram, explain the SATM (Simple auto teller machine) system 8M
10. Explain currency converter with a neat diagram. 5M
11. Write a short notes on boundary value analysis [BVA] 8M
12. Explain generalized boundary value analysis 4M
13. What are the limitations of boundary value analysis? 5M
14. Explain Robustness testing, Worst-Case testing and Special value testing with example 10M
15. Explain random testing with an example 4M
16. What are the guidelines for boundary value testing? 3M
17. Define Equivalence classes and list different types of equivalence Classes. 4M
18. Explain Weak and strong normal equivalence class testing 6M
19. Explain Weak and strong Robust equivalence class testing 6M
20. Explain equivalence class test cases with an example 10M
21. Write guideline and observations for equivalence class testing 6M
22. Define a program graph? 2M
23. Draw program graph of the triangle program 5M
24. Define DD-Path? Draw a chain of nodes in a directed graph . 5M
25. Draw and explain program graph of the triangle program. 10M
26. Define DD-Path graph? Draw and explain DD-path graph for the triangle program. 10M
27. Explain test coverage metrics 8M
28. Explain concatenated, nested and knotted loops with a neat diagram 6M
29. Explain Metric-based testing 8 M
30. Explain the following
 - 1) Statement and predicate testing
 - 2) DD-path testing

SOFTWARE TESTING

- 3) Dependent pairs of DD-paths
- 4) Multiple condition coverage
- 5) Loop coverage 10M
- 31. Explain basis path testing 8M
- 32. Explain McCabe's basis path method with an example 10M
- 33. Define the following
 - 1) Defining node
 - 2) Usage node
 - 3) Predicate use and computation use
 - 4) Definition-use path
 - 5) Definition-clear path 10M
- 34. Draw program graph of the commission program and find du-paths for total locks, sales and commission 12M
- 35. Define
 - 1) All-Defs Criterion
 - 2) All-Uses Criterion
 - 3) All-P-Uses/Some C-Uses Criterion
 - 4) All-C-Uses/Some P-Uses Criterion
 - 5) All-Du-path Criterion 10M
- 36. Explain slice-based testing with an example 10M
- 37. Write a style and technique of slice based testing 7M
- 38. What are guidelines and observations of slice based testing 6M
- 39. Explain traditional view of testing levels 5M
- 40. With a neat diagram explain specification-based life cycle models 5M
- 41. Explain the SATM system with a neat diagram 10M
- 42. Explain separating integration and system testing 10M
- 43. Write short notes on structural insights 5M
- 44. Write short notes on behavioral insights 5M
- 45. Explain Decomposition-Based integration with a neat diagram 12M
- 46. Write short notes on
 - 1) Top-Down Integration
 - 2) Bottom-Up Integration
 - 3) Sandwich integration
 - 4) Call graph-based integration
 - 5) Pair wise integration
 - 6) Neighborhood integration 12M
- 47. Explain the comparison of integration testing strategies . 10M
- 48. Write short notes on
 - 1) Bottom-up approach of testing
 - 2) Node and Edge coverage metrics

SOFTWARE TESTING

3) Event based testing	
4) Port-based testing	
5) Data based testing	10M
49. Explain SATM test threads	10M
50. Write system testing guidelines	10M
51. Write a short note on context of interaction	5M
52. Define Taxonomy of interaction?	2M
53. List and explain different types of static interaction	8M
54. Explain interaction, composition and determinism	9M
55. Explain client/server testing	5M
56. Define verification and validation?	02M
57 Differentiate between verification and validation	08M
58. With a neat diagram, explain degree of freedom	10M
59. List and explain basic principles	10M
60. Explain Quality process	10M
61. Explain planning and monitoring	08M
63. Write a short note on analysis and testing	06M
64. Explain organization factors	10M
65. Explain assumptions in fault-based testing	10M
66. Write and explain Fault-based testing terminology	08M
67 What is mutation analysis? Explain mutation analysis terminology	10M
68. Explain Fault-based adequacy criteria	08M
69. Explain test case specifications to test cases	10M
70. Define scaffolding	02M
71. Explain generic versus specific scaffolding	10M
72 Write a short notes on test oracles and self-checks as oracle	08M
73. List and explain different types of checks.	6M
74. With a neat diagram explain clean room process model	10M
75. List and explain the factors that particularize the strategy.	08M
76. With a neat diagram explain the SRET	10M
77. Write short notes on test and analysis plans	7M
78. Define risk planning	2M
79. List and Explain different type's risks.	10M
80. Write a short note on organizing documents	08M
81. Explain the following:	
1) Analysis and test plan	
2) Test design specification documents	
3) Test and analysis report	9M