

## 100 interview questions and answers for Software Testing.

### Basic Software Testing Questions

1. **What is Software Testing?**

**Answer:** Software testing is the process of evaluating a software application to identify any defects or errors to ensure it meets the specified requirements.

2. **Why is Software Testing important?**

**Answer:** It ensures the quality, reliability, and performance of the software and reduces defects before deployment.

3. **What are the different types of software testing?**

**Answer:**

- Manual Testing
- Automation Testing
- Performance Testing
- Security Testing
- Usability Testing

4. **What is the difference between Verification and Validation?**

**Answer:**

- **Verification** checks whether the product meets requirements before development.
- **Validation** ensures the final product meets the intended purpose.

5. **What is the Software Testing Life Cycle (STLC)?**

**Answer:** STLC includes:

- Requirement Analysis
- Test Planning
- Test Case Development
- Test Environment Setup
- Test Execution
- Test Closure

6. **What is the difference between White Box and Black Box Testing?**

**Answer:**

- **White Box Testing:** Testing the internal structure of the code.
- **Black Box Testing:** Testing the functionality without knowing the internal code.

7. **What is Unit Testing?**

**Answer:** Unit Testing tests individual components of the software to verify they

function correctly.

8. **What is Integration Testing?**

**Answer:** Integration Testing verifies the interaction between integrated components to ensure they work together.

9. **What is System Testing?**

**Answer:** System Testing validates the complete system to check compliance with the specified requirements.

10. **What is UAT (User Acceptance Testing)?**

**Answer:** UAT is conducted by end-users to validate whether the application meets business requirements.

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## Manual Testing Questions

11. **What is Smoke Testing?**

**Answer:** Smoke testing checks basic functionality to ensure the software is stable for further testing.

12. **What is Sanity Testing?**

**Answer:** Sanity testing verifies specific functionalities after changes to ensure the bug fixes work correctly.

13. **What is Regression Testing?**

**Answer:** Regression testing ensures that new changes do not break existing functionality.

14. **What is Ad-hoc Testing?**

**Answer:** Ad-hoc testing is informal testing without predefined test cases to find unexpected defects.

15. **What is Exploratory Testing?**

**Answer:** Exploratory testing is unscripted testing where testers explore the application to find defects.

16. **What is the difference between Functional and Non-Functional Testing?**

**Answer:**

- **Functional Testing:** Validates application features against requirements.
- **Non-Functional Testing:** Tests performance, security, and usability aspects.

17. **What is Compatibility Testing?**

**Answer:** Ensuring the software works across different browsers, operating systems,

and devices.

**18. What is End-to-End Testing?**

**Answer:** Testing the complete flow of an application from start to finish.

**19. What is Localization Testing?**

**Answer:** Ensures the application works correctly in different regions and languages.

**20. What is Globalization Testing?**

**Answer:** Validates the software's ability to support multiple languages and regions.

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## Automation Testing Questions

**21. What is Automation Testing?**

**Answer:** Automation testing uses scripts and tools to execute test cases automatically.

**22. What are the advantages of Automation Testing?**

**Answer:** Faster execution, reusability, accuracy, and cost efficiency.

**23. Which tools are commonly used for automation testing?**

**Answer:** Selenium, Appium, TestNG, JUnit, Cucumber, Cypress.

**24. What is Selenium?**

**Answer:** Selenium is an open-source automation tool for web applications.

**25. What is the difference between Selenium WebDriver and Selenium Grid?**

**Answer:**

- **WebDriver:** Used for browser automation.
- **Grid:** Allows parallel execution across multiple machines.

**26. What is TestNG?**

**Answer:** A testing framework that allows annotations, parallel execution, and reports generation.

**27. What are locators in Selenium?**

**Answer:** Locators are used to find elements in Selenium. Examples: ID, Name, XPath, CSS Selector.

**28. What is XPath?**

**Answer:** XPath is a way to locate elements in XML documents.

**29. What is a Data-Driven Framework?**

**Answer:** A framework where test data is stored externally (e.g., Excel, CSV).

**30. What is a Keyword-Driven Framework?**

**Answer:** A framework that uses keywords to define actions.

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## Performance Testing Questions

**31. What is Performance Testing?**

**Answer:** It evaluates the speed, stability, and scalability of a system.

**32. What are the types of Performance Testing?**

**Answer:**

- Load Testing
- Stress Testing
- Soak Testing
- Spike Testing

**33. What tools are used for Performance Testing?**

**Answer:** JMeter, LoadRunner, Gatling.

**34. What is Load Testing?**

**Answer:** Measures the system's performance under expected user load.

**35. What is Stress Testing?**

**Answer:** Determines system stability under extreme conditions.

**36. What is Soak Testing?**

**Answer:** Tests system stability under continuous usage over time.

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## Security Testing Questions

**37. What is Security Testing?**

**Answer:** Ensures an application is protected against threats and vulnerabilities.

**38. What are common Security Testing techniques?**

**Answer:**

- Penetration Testing
- SQL Injection Testing
- Cross-Site Scripting (XSS) Testing

39. **What is SQL Injection?**

**Answer:** A security vulnerability where malicious SQL queries are inserted into inputs.

40. **What is Cross-Site Scripting (XSS)?**

**Answer:** A vulnerability where attackers inject malicious scripts into web pages.

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## Miscellaneous Questions

41. **What is Agile Testing?**

**Answer:** A testing approach used in Agile development.

42. **What is the difference between Agile and Waterfall models?**

**Answer:**

- **Agile:** Iterative development, continuous testing.
- **Waterfall:** Sequential development, testing after development.

43. **What is a Test Plan?**

**Answer:** A document outlining test objectives, scope, and strategy.

44. **What is a Test Case?**

**Answer:** A document specifying test inputs, conditions, and expected results.

45. **What is a Test Scenario?**

**Answer:** A high-level description of what to test.

## Test Documentation and Reporting

46. **What is Test Strategy?**

**Answer:** A high-level document defining the approach, objectives, and scope of testing.

47. **What is the difference between a Test Plan and a Test Strategy?**

**Answer:**

- **Test Plan:** Project-specific document detailing test execution.
  - **Test Strategy:** Organization-level document defining the testing approach.
48. **What is a Test Case?**

**Answer:** A set of conditions and steps to validate a specific feature or function.

**49. What is a Test Suite?**

**Answer:** A collection of test cases grouped together for execution.

**50. What is a Test Script?**

**Answer:** A set of instructions (manual or automated) to perform a test.

**51. What is a Test Report?**

**Answer:** A document summarizing test execution results, defects, and findings.

**52. What is a Bug Report?**

**Answer:** A document describing a defect, including steps to reproduce and expected vs. actual results.

**53. What is a Defect Life Cycle?**

**Answer:** The stages a defect goes through, including New → Assigned → In Progress → Resolved → Verified → Closed.

**54. What is Defect Density?**

**Answer:** The number of defects per unit of code (e.g., per 1,000 lines of code).

**55. What is a Severity and Priority in Defect Management?**

**Answer:**

- **Severity:** Impact of the defect on the system. (Critical, High, Medium, Low)
- **Priority:** Urgency to fix the defect. (High, Medium, Low)

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## Automation Testing - Advanced Concepts

**56. What are the disadvantages of Automation Testing?**

**Answer:** High initial investment, maintenance effort, and inability to handle dynamic UI elements efficiently.

**57. What is Continuous Testing?**

**Answer:** Automated testing performed continuously in DevOps pipelines.

**58. What is CI/CD in software testing?**

**Answer:**

- **CI (Continuous Integration):** Developers frequently merge code and run tests.
- **CD (Continuous Deployment):** Automates deployment after passing tests.

**59. What is Page Object Model (POM) in Selenium?**

**Answer:** A design pattern where UI elements are stored separately from test scripts.

**60. What is a Hybrid Framework?**

**Answer:** A combination of Data-Driven, Keyword-Driven, and Modular testing

frameworks.

**61. What is BDD (Behavior-Driven Development)?**

**Answer:** A testing approach using natural language syntax (e.g., Cucumber, Gherkin).

**62. What is TDD (Test-Driven Development)?**

**Answer:** Writing test cases before writing the actual code.

**63. What is an Assertion in Testing?**

**Answer:** A statement that verifies expected vs. actual results in automation scripts.

**64. What is Parallel Testing?**

**Answer:** Running multiple test cases simultaneously on different browsers or devices.

**65. What is the role of Jenkins in Automation Testing?**

**Answer:** It is a CI/CD tool that automates test execution in pipelines.

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## Performance and Load Testing

**66. What is Latency in Performance Testing?**

**Answer:** The time delay between request and response in a system.

**67. What is Throughput in Performance Testing?**

**Answer:** The number of transactions processed per second.

**68. What is a Bottleneck in Performance Testing?**

**Answer:** A point in the system causing performance degradation.

**69. What is Ramp-Up and Ramp-Down in Load Testing?**

**Answer:**

- **Ramp-Up:** Gradually increasing the load to check performance.
- **Ramp-Down:** Gradually reducing the load after peak testing.

**70. What are Think Times in Performance Testing?**

**Answer:** The pause time between consecutive user actions in a script.

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## Security Testing Questions

**71. What is Penetration Testing?**

**Answer:** Simulating attacks to identify security vulnerabilities.

**72. What is OWASP?**

**Answer:** Open Web Application Security Project, providing security guidelines.

**73. What is CSRF (Cross-Site Request Forgery)?**

**Answer:** A security attack tricking users into performing unwanted actions.

**74. What is Clickjacking?**

**Answer:** A malicious technique tricking users into clicking something they didn't intend to.

**75. What is Fuzz Testing?**

**Answer:** Testing by providing invalid or random inputs to check system stability.

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## Mobile Testing

**76. What is Mobile Testing?**

**Answer:** Testing applications on mobile devices for functionality, usability, and performance.

**77. What is Appium?**

**Answer:** An open-source automation tool for mobile applications.

**78. What is the difference between Emulator and Simulator?**

**Answer:**

- **Emulator:** Mimics hardware and software behavior (Android Emulator).
- **Simulator:** Mimics only software behavior (iOS Simulator).

**79. What is Monkey Testing in Mobile Apps?**

**Answer:** Random testing of mobile apps to check crashes.

**80. What is Responsive Testing?**

**Answer:** Ensuring an app adapts to different screen sizes and resolutions.

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## Database Testing

**81. What is Database Testing?**

**Answer:** Verifying data integrity, consistency, and performance of database



transactions.

**82. What SQL commands are used in Database Testing?**

**Answer:** SELECT, INSERT, UPDATE, DELETE, JOIN, GROUP BY, ORDER BY.

**83. What is Data Migration Testing?**

**Answer:** Testing data transfer between different databases or versions.

**84. What is ACID in Database Testing?**

**Answer:**

- Atomicity
- Consistency
- Isolation
- Durability

**85. What is Referential Integrity?**

**Answer:** Ensuring relationships between database tables are maintained.

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## Agile & DevOps Testing

**86. What is Scrum in Agile?**

**Answer:** A framework for iterative software development with sprints.

**87. What is a Sprint in Agile?**

**Answer:** A time-boxed development cycle (usually 2-4 weeks).

**88. What is the role of a Tester in Agile?**

**Answer:** Collaborating with developers, performing continuous testing, and automating tests.

**89. What is Kanban?**

**Answer:** A visual workflow management system used in Agile development.

**90. What is Shift-Left Testing?**

**Answer:** Moving testing earlier in the development cycle.

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## Miscellaneous Questions

**91. What is ISO 9001 in Software Testing?**

**Answer:** A quality management standard ensuring software reliability.

**92. What is CMMI in Software Testing?**

**Answer:** A process improvement framework for software development.

**93. What is ISTQB?**

**Answer:** International Software Testing Qualifications Board, offering certifications.

**94. What is a Test Harness?**

**Answer:** A framework that automates the execution of test cases.

**95. What is a Test Bed?**

**Answer:** An environment set up for software testing.

**96. What is Alpha Testing?**

**Answer:** Testing performed internally before public release.

**97. What is Beta Testing?**

**Answer:** Testing performed by real users before official launch.

**98. What is Mutation Testing?**

**Answer:** Intentionally introducing bugs to verify test case effectiveness.

**99. What is Risk-Based Testing?**

**Answer:** Prioritizing test cases based on potential risks.

**100. What are Exit Criteria in Testing?**

**Answer:** Conditions that must be met before testing can be stopped.