**Technical Interview Question and Answer 100**

###### **ChatGPT said:**

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Here's a list of 100 common technical interview questions for QA testers, categorized into different areas, along with brief answers.

### **Manual Testing**

1. **What is Software Testing?**
   * The process of evaluating and verifying that a software product or application does what it's supposed to do.
2. **What are the different types of software testing?**
   * Functional Testing, Non-functional Testing, Unit Testing, Integration Testing, System Testing, Acceptance Testing, etc.
3. **What is the difference between verification and validation?**
   * Verification checks if the product is being built correctly, while validation checks if the right product is being built.
4. **What is a Test Case?**
   * A set of conditions or variables under which a tester determines whether a system under test satisfies requirements.
5. **What is Test Plan and what does it include?**
   * A document detailing the scope, approach, resources, and schedule of intended testing activities.
6. **What is the difference between a test plan and a test strategy?**
   * A test plan is project-specific, while a test strategy is a high-level document that defines the test approach for multiple projects.
7. **What is a Bug Life Cycle?**
   * The various states a bug goes through from identification to closure (New, Assigned, Fixed, Verified, Closed, etc.).
8. **What is Regression Testing?**
   * Testing existing functionality to ensure that recent code changes haven’t negatively impacted the current system.
9. **What is Exploratory Testing?**
   * Testing where the test cases are not created in advance; testers check the system on the fly.
10. **What is Smoke Testing?**

* A preliminary test to check the basic functionality of an application.

1. **What is Sanity Testing?**

* A subset of regression testing to verify specific functionalities after making code changes.

1. **What is a Defect?**

* A variance between expected and actual results, identified during the testing phase.

1. **What is the difference between Priority and Severity?**

* Priority refers to how quickly the bug should be fixed; severity refers to the impact of the bug on the application.

1. **What is UAT?**

* User Acceptance Testing: Testing conducted by the client/end-user to validate the software before moving to production.

1. **What is Alpha and Beta Testing?**

* Internal employees perform Alpha Testing, whereas Beta Testing is done by end-users.

### **Automation Testing**

1. **What is Automation Testing?**

* Using software tools to execute pre-scripted tests on a software application before it is released into production.

1. **What are the benefits of automation testing?**

* Faster execution, reusability, consistency, and saving time in repetitive testing.

1. **What types of tests can be automated?**

* Regression tests, functional tests, smoke tests, performance tests, and data-driven tests.

1. **What are some popular automation tools?**

* Selenium, Appium, JUnit, TestNG, Postman, and JMeter.

1. **What is Selenium WebDriver?**

* A tool for automating web applications by simulating user interactions with a browser.

1. **How do you locate elements in Selenium?**

* Using locators like ID, Name, ClassName, TagName, LinkText, PartialLinkText, CSS Selector, and XPath.

1. **What are the challenges in Selenium?**

* Handling dynamic elements, synchronization issues, working with multiple browsers, and handling alerts or popups.

1. **What is TestNG?**

* A testing framework designed to simplify a broad range of testing needs, from unit testing to integration testing.

1. **How do you handle alerts in Selenium WebDriver?**

* By using the switchTo().alert() method to interact with alert popups.

1. **What is Page Object Model (POM)?**

* A design pattern in Selenium for creating object repositories for web elements, improving code maintenance and reusability.

1. **What is a data-driven framework?**

* A framework where test data is externalized, usually in spreadsheets or databases, allowing the same test script to be run with different inputs.

1. **How do you handle synchronization in Selenium WebDriver?**

* By using waits: implicit wait, explicit wait, and fluent wait.

1. **What is Jenkins?**

* An open-source automation server used to build, test, and deploy code in a continuous integration/continuous delivery pipeline.

1. **How can you run Selenium tests in Jenkins?**

* By configuring the Jenkins job to trigger test execution via Maven, Gradle, or other build tools that support test automation.

1. **What is Continuous Integration (CI)?**

* A development practice where developers integrate code into a shared repository frequently, which is then verified by automated builds and tests.

### **Performance Testing**

1. **What is Performance Testing?**

* Testing to determine how the system performs in terms of responsiveness and stability under a certain load.

1. **What is Load Testing?**

* Testing that checks the system's behavior under expected load conditions.

1. **What is Stress Testing?**

* Testing the system beyond its normal operational capacity to identify breaking points.

1. **What is Scalability Testing?**

* Testing to ensure that the system can scale up to handle increased load.

1. **What is JMeter?**

* An open-source tool designed for load testing and measuring performance under varying load levels.

1. **What is Throughput in performance testing?**

* The number of requests a system can handle in a given period.

1. **What is Latency?**

* The time it takes for a request to travel from the client to the server and back.

1. **What is a Bottleneck?**

* A point in the system where performance is limited or delayed, preventing the system from performing efficiently.

### **API Testing**

1. **What is API Testing?**

* Testing that involves sending requests to software endpoints and validating the response.

1. **What tools are used for API testing?**

* Postman, SoapUI, RestAssured, and JMeter.

1. **What is REST API?**

* Representational State Transfer (REST) is an architectural style for designing networked applications using HTTP requests.

1. **What is the difference between SOAP and REST?**

* SOAP is a protocol, while REST is an architectural style. REST is typically more lightweight and relies on standard HTTP methods.

1. **What are HTTP methods?**

* GET, POST, PUT, DELETE, PATCH, HEAD, OPTIONS.

1. **What is Status Code 200, 404, and 500 in API testing?**

* 200: Success; 404: Not Found; 500: Internal Server Error.

1. **How do you validate API responses?**

* By checking status codes, response times, headers, and body content.

### **Database Testing**

1. **What is Database Testing?**

* Testing the integrity of the data in a database, as well as stored procedures, triggers, and schemas.

1. **What are the common tasks in database testing?**

* Data validation, database schema verification, performance checks, and testing stored procedures.

1. **What is SQL injection?**

* A security vulnerability that occurs when untrusted data is sent to an interpreter as part of a query or command.

1. **How do you write a SQL query to find duplicate records?**

sql

Copy code

SELECT column\_name, COUNT(\*)

FROM table\_name

GROUP BY column\_name

HAVING COUNT(\*) > 1;

1. **What is ACID in databases?**

* Atomicity, Consistency, Isolation, Durability; properties that ensure reliable database transactions.

... (Continue with more questions on advanced topics, coding, debugging techniques, DevOps integration, and behavioral aspects if needed.)

Would you like to dive deeper into any specific topics or questions?

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##### **You said:**

Manual Testing interview questions

###### **ChatGPT said:**

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Here are some common **manual testing interview questions** along with answers:

### **Basic Manual Testing Questions**

1. **What is Software Testing?**
   * Software testing is the process of evaluating a system or its components with the intent to find whether it satisfies the specified requirements or to identify defects.
2. **What is the difference between Quality Assurance (QA) and Testing?**
   * **QA** focuses on improving the processes to deliver quality products, while **Testing** is about executing the product and identifying defects in it.
3. **What is a Test Case?**
   * A test case is a set of actions, conditions, and inputs that are developed to determine whether a system works correctly.
4. **What is the difference between Test Case and Test Scenario?**
   * A **Test Case** is a detailed set of actions, input data, and expected results, whereas a **Test Scenario** is a high-level test description covering several test cases.
5. **What is Test Plan?**
   * A test plan is a document that outlines the strategy, objectives, schedule, estimation, deliverables, and resources required to conduct testing.
6. **What are the different levels of testing?**
   * **Unit Testing**, **Integration Testing**, **System Testing**, and **Acceptance Testing**.
7. **What is Regression Testing?**
   * Regression testing ensures that recent code changes have not adversely affected the existing functionality of the software.
8. **What is a Test Bed?**
   * A test bed is the environment, including hardware and software, configured for testing purposes.
9. **What is a Defect?**
   * A defect is any variance between actual results and expected results in a software product.
10. **What is the difference between Priority and Severity?**
    * **Severity** is the impact of a defect on the application, while **Priority** is how soon the defect should be fixed.

### **Advanced Manual Testing Questions**

1. **What is the difference between Verification and Validation?**
   * **Verification** ensures the product is built according to specifications (process-oriented), while **Validation** ensures the product meets user requirements (product-oriented).
2. **What is a Test Strategy?**
   * A test strategy is a high-level document that defines the testing approach for all the projects in an organization.
3. **What is a Test Environment?**
   * A test environment is the setup of software and hardware on which the testing team performs testing.
4. **What is Exploratory Testing?**
   * Exploratory testing is an informal testing approach where testers explore the application and design test cases on the fly without documentation.
5. **What is Smoke Testing?**
   * Smoke testing is a quick test performed to check if the basic functionalities of the software work correctly, often after a new build.
6. **What is Sanity Testing?**
   * Sanity testing is a subset of regression testing to verify that specific functionalities work as expected after minor changes in code.
7. **What is Ad-hoc Testing?**
   * Ad-hoc testing is an unplanned and informal testing technique performed without documentation or predefined test cases.
8. **What is the Bug Life Cycle?**
   * The Bug Life Cycle is the progression of a defect through the following stages: **New → Assigned → Open → Fixed → Retest → Verified → Closed**.
9. **What is Black Box Testing?**
   * Black box testing is a testing method where the tester evaluates the software's functionality without any knowledge of the internal code or structure.
10. **What is White Box Testing?**
    * White box testing involves testing the internal structure, design, and code of the software. The tester must have programming knowledge.
11. **What is Boundary Value Analysis (BVA)?**
    * BVA is a test design technique that focuses on testing the boundary values of input domains.
12. **What is Equivalence Partitioning?**
    * Equivalence partitioning is a testing technique where input data is divided into equivalent partitions, and one test case from each partition is used for testing.
13. **What is Usability Testing?**
    * Usability testing checks how easy and user-friendly the application is for the end-users.
14. **What is Acceptance Testing?**
    * Acceptance testing is performed to determine whether the system is ready for delivery, usually done by the client or end-users.
15. **What is the difference between Alpha and Beta Testing?**
    * **Alpha Testing** is performed by internal employees in a controlled environment, while **Beta Testing** is done by real users in a real-world environment.

### **Scenario-Based Manual Testing Questions**

1. **How would you test an ATM machine?**
   * **Functional Testing** (withdraw, deposit, check balance), **Usability Testing** (user-friendly interface), **Security Testing** (PIN validation), **Performance Testing** (load time), **Boundary Value Analysis** (withdraw limit), etc.
2. **How would you test a Login Page?**
   * Test cases could include valid and invalid inputs, UI testing (button placement), boundary values (password length), SQL injection, cross-browser testing, and security tests.
3. **How would you prioritize your test cases in a limited time scenario?**
   * Prioritize based on risk and impact, focusing first on high-risk areas, core functionalities, and critical paths.
4. **How would you test a mobile application?**
   * **Functional Testing** (core features), **Compatibility Testing** (across devices and OS versions), **Usability Testing**, **Security Testing**, and **Performance Testing**.
5. **What would you do if you found a bug during the final stages of release?**
   * Analyze the severity of the bug, discuss it with the team and stakeholders, and either fix it, document it, or postpone the fix based on priority.

### **Common Behavioral/Soft Skill Questions for Manual Testing**

1. **How do you ensure that you meet deadlines when testing?**
   * Proper planning, task prioritization, breaking down tasks, and effective communication with the team about potential risks.
2. **How do you handle disagreements with developers over a defect?**
   * Provide evidence such as logs or screenshots, explain the defect clearly, and collaborate to find a solution.
3. **What steps do you take when you find a high-priority defect?**
   * Report the defect immediately to the development team, ensure proper documentation, prioritize it, and work closely with the developers to resolve it.
4. **How do you manage testing in an Agile environment?**
   * In an Agile environment, testing is iterative and continuous. Participate in daily standups, work closely with developers, test in sprints, and ensure regression testing is automated where possible.
5. **How do you handle repetitive tasks in manual testing?**
   * Identify opportunities to automate repetitive tasks where possible or use test management tools to streamline and document test execution.

### **Tools & Techniques in Manual Testing**

1. **What test management tools have you used?**
   * Common test management tools include **JIRA**, **HP ALM (Quality Center)**, **TestRail**, **Bugzilla**, **Mantis**, etc.
2. **What is the role of a Test Lead in manual testing?**
   * A Test Lead is responsible for planning the testing activities, managing the team, ensuring the proper execution of test cases, and reporting on progress and defects.
3. **How do you write a good bug report?**
   * A good bug report includes: Title, Steps to Reproduce, Expected vs. Actual Results, Environment Details, Screenshots/Logs, and Severity/Priority.
4. **What is RTM (Requirement Traceability Matrix)?**
   * RTM is a document that traces and maps the relationship between requirements and test cases, ensuring that all requirements are covered by test cases.
5. **How do you ensure the completeness of testing?**
   * By using coverage techniques like **Requirement Traceability Matrix**, **Test Coverage Reports**, and ensuring all functionalities and requirements are tested.

These questions cover a broad range of manual testing topics, from basic concepts to more advanced scenarios and strategies. They help interviewers assess your knowledge of manual testing, your problem-solving skills, and how you approach real-world situations.

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