1. **What are different stages of SDLC?**

**Answer:** It defines tasks performed at each steps. The life cycle defines a methodology for improving the quality of software and the overall development process.

It has 6 phases: Requirements Phase, Analysis Phase, Design Phase, Coding Phase, Testing Phase and Maintenance phase.

1. **What are the different stages of STLC?**

**Answer:** consists of series of activities carried out methodologically to help certify(test) your software product. Stages of STLC are: Requirement Analysis, Test Planning, Test Case Development, Test Environment Setup, Test Execution and Test Cycle Closure

1. **Difference between Waterfall and Agile Model?**

**Answer:** Waterfall model is divided into phases, where agile is divided into sprints.  In the Waterfall model, the “Testing” phase comes after the “Build” phase, but, in the Agile methodology, testing is typically performed concurrently with programming or at least in the same iteration as programming. Waterfall is Structured, One Big Project, Sequential Process and a process that requires clearly defined requirements upfront. But Agile is Flexible, Many Small Projects, highly collaborative and a process in which requirements are expected to evolve and change.

1. **What is Test Plan?**

**Answer:** A Software Test Plan is a document describing the testing scope and activities in a particular project. It is the basis for formally testing any software in a project. A test plan can be defined as a document describing the scope, approach, resources and schedule of testing activities

i) Reference Documents

ii) Features to be tested

iii) Features not to be tested

iv) Test Strategy

v) Levels of Testing

vi) Types of Testing

vii) Automation Plan

viii) Acceptance Criteria

ix)Test Environment

x) Staffing and Training

xi) Risks and Contingencies

xii) Approval Information

1. **What is Test strategy? What is the difference between Test plan and Test Strategy?**

**Answer:** Test strategy is an organization level plan document which is used for testing all the projects in the organization. This contains approach and strategy used for testing in any project of the enterprise.

It has components like Referral documents, Scope of testing, approach and schedule of testing activities.

1. **What is Black box testing?**

**Answer: Black Box Testing**: If one performs testing only on the **functional** part of an application without having knowledge of structural part, then it is known as black box testing. During this, external functionality is validated. Other than Unit Testing, remaining testing types belong to black box testing.

1. **What is White box testing?**

**Answer: White Box Testing**: If one performs testing on the **structural** part of an application, then that method of testing is known as white box testing. This involves verifying the internal structure of the application. Mostly it is performed by Developers.

1. **What is Test Scenario, Test Case and Test Steps, Test Scripts?**

**Answer:**

**Test Scenario:** When test requirements are grouped depending on the functionality of a module, Test scenarios are the high level classification that can be done.

**Test case** is a set of steps and expected conditions and results.

Before you test any system or test any requirement satisfied in the system, a test case needs to be designed. A test case has sets of test data, preconditions, post conditions and expected results.

**Test Steps** describe the execution **steps** and expected results that are documented against each one of those **steps**. Each **step** is marked pass or fail based on the comparison result between the expected and actual outcome.

**Test Scripts:**It is written in a programming language and it's a short program used to test part of functionality of the software system. In other words a written set of steps that should be performed manually.

1. **What is the difference between Build and Release?**

**Answer: Build** is an Executable file which is handed over to the tester to test the functionality of the developed part of the project. (Ex: Daily Build)

**Release** is that which is finally handed over to the client of the project after the development and testing phases are completed. (Ex: Production Release)

1. **What are the Build Release Notes?**

**Answer:** Requirements implemented in build

Defects fixed in this build

URL of the build

Login user and password

Database user name and password

Often, Build Release Note is sent as an email. After build is deployed, the email is sent.

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

**Answer:** New**:** When a defect is logged and posted for the first time. Its state is given as new.

**Assigned:** After the tester has posted the bug, the lead of the tester approves and assigns to developer. Its state given as assigned.

**Open:** At this state the developer has started analysing and working on the defect fix.

**Fixed:** When developer makes necessary code changes and verifies the changes then he/she can make bug status as ‘Fixed’ and the bug is passed to testing team.

[**Retest**](http://istqbexamcertification.com/what-is-retesting/)**:**  At this stage the tester does the retesting of the changed code which developer has given to him to check whether the defect got fixed or not.

[**Verified**](http://istqbexamcertification.com/what-is-verification-in-software-testing-or-what-is-software-verification/)**:** The tester tests the bug again after it got fixed by the developer. If the bug is not present in the software, he approves that the bug is fixed and changes the status to “verified”.

**Reopen:** If the bug still exists even after the bug is fixed by the developer, the tester changes the status to “reopened”. The bug goes through the life cycle once again.

**Closed:** Once the bug is fixed, it is tested by the tester. If the tester feels that the bug no longer exists in the software, he changes the status of the bug to “closed”. This state means that the bug is fixed, tested and approved.

**Duplicate:** If the bug is repeated twice or the two bugs mention the same concept of the bug, then one bug status is changed to “duplicate **“.**

**Rejected:** If the developer feels that the bug is not genuine, he rejects the bug. Then the state of the bug is changed to “rejected”.

**Deferred:** The bug, changed to deferred state means the bug is expected to be fixed in next releases.

**Not a bug:**  The state given as “Not a bug” if there is no change in the functionality of the application.

1. **What is Priority? What is severity?**

**Answer:** Priority: It is Importance of the defect with respect to client. It has levels like P1, P2, P3,P4.

Severity: It is Importance of the defect with respect to code point of view. It has different levels like Critical, Major, Moderate, Minimal.

\* High Priority and Low Severity:  
If a company logo is not properly displayed on their website.  
\*High Priority and High Severity:  
Suppose you are doing online shopping and filled payment information, but after submitting the form, you get a message like "Order has been cancelled."  
\*Low Priority and High Severity:  
If we have a typical scenario in which the application get crashed

\*Low Priority and Low Severity:  
There is a mistake like "You have registered success" instead of successfully, success is written.

1. **What is Traceability Matrix and Requirement traceability matrix?**

**Answer:** A **traceability matrix** is a document that co-relates any two-baseline documents that require a many-to-many relationship to check the completeness of the relationship. It is used to track the requirements and to check the current project requirements are met.

**Requirement traceability Matrix**: it is a document that maps and traces user requirement with test cases. The main purpose of Requirement Traceability Matrix is to see that all test cases are covered so that no functionality should miss while testing.

1. **How do you do test estimation?**

**Answer:** Test estimation is a management activity which approximate s**how long** a Task would take to complete. Estimating effort for the test is one of the **major** and **important** tasks in Test Management.

**We have two things to consider**:

i)What to estimate

Time, Resources, Human skill and Cost

ii)How to Estimate?

Work Breakdown Structure: Breaking down test project into small pieces

Three Point Estimation: Estimation method is bases on statistical data

Functional Point Method: Measure the size and give weightage to each function point

1. **What are different Levels of Testing?**

**Answer:** There are generally four recognized **levels of tests**:

unit/component **testing**, integration **testing**, system **testing**, and acceptance **testing**

1. **What are different types of testing?**

**Answer:** Different types of testing are GUI testing, **Functional testing**, **Regression testing**, Smoke testing, load testing, stress testing, security testing, stress testing, ad-hoc testing are carried out to complete **System testing**.

1. **What are the Test Design Techniques?**

**Answer:** They are the test cases derived directly from a requirement specification or black box test design technique.

The Techniques include:

* Boundary Value Analysis
* Equivalence Partitioning

Deriving test cases directly from the structure of a component or system:

* Statement Coverage, Branch Coverage, Path Coverage

Deriving test cases based on tester's experience on similar systems or testers intuition:

* Error Guessing, Exploratory Testing

1. **What is functional and Non-functional testing?**

**Answer:** Functional Testing: The goal of functional testing is to verify that the application is behaving the way it was designed to. Positive functional testing involves inputting valid inputs to see how the application responds to these and also testing to determine if outputs are correct. Negative functional testing involves using different invalid inputs, unanticipated operating conditions and other invalid operations.

**Non-Functional Testing:** They are used to determine how fast the product responds to a request or how long it takes to do an action. Examples of non-functional tests include [Load/Performance testing](http://www.ibeta.com/our-software-quality-services/load-performance/), Compatibility testing, [Localization testing](http://www.ibeta.com/our-software-quality-services/localization-testing/), Security testing, Reliability testing, Stress testing, Usability testing and Compliance testing

1. **What is the difference between Smoke and sanity testing?**

**Answer:**

* **Smoke Testing** is performed after software build to **ascertain that the critical functionalities of the program is working fine**. It is executed **"before"** any detailed functional or regression tests are executed on the software build. The **purpose is to reject a badly broken application,** so that the QA team does not waste time installing and testing the software application. In Smoke Testing, the**test cases chosen cover the most important functionality.**

**Sanity Testing** is **After** receiving **a software build, with minor changes in code, or functionality, Sanity testing is performed to ascertain that the bugs have been fixed and no further issues are introduced due to these changes.**

1. **What is Regression Testing and Retesting?**

**Answer:** The purpose of regression testing is to confirm that a recent program or code change has not adversely affected existing features.

Regression Testing is required when there is a Change in requirements and code is modified according to the requirement, New feature is added to the software, Defect fixing and Performance issue fix.

**Retesting:**  It is a process of checking bugs that are actioned by development team to verify that they are actually fixed.

1. **What is UAT testing and Pre UAT testing?**

**Answer:** Alpha and beta testing terms are used in relation to product testing.  
Pre-UAT: is the single cycle system test conducted by testers after deploying the system on a new server.  
UAT: is the test conducted by the client on the system deployed on the new server

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

**Answer:**

* Verification is Static Testing whereas Validations is Dynamic Testing.
* Verification takes place before validation.
* Verification evaluates plans, document, requirements and specification, whereas Validation evaluates product.
* Verification inputs are checklist, issues list, walkthroughs and inspection, where as in Validation testing of actual product.
* Verification output is set of document, plans, specification and requirement documents where as in Validation actual product is output.

1. **What are the Upstream and Downstream Application?**

**Answer:** An upstream system is any system that sends data to the Collaboration Server system. A downstream system is a system that receives data from the Collaboration Server system.

1. **What are system Testing and Integration testing?**

**Answer:**

**System Testing:** Testing the end to end functionality of the system as a whole is defined as a functional system testing.

**Integration testing:** Integration testing is a level of software testing process, where individual units of an application are combined and tested. It is usually performed after unit and functional testing.

1. What id Test data? How do you generate it?

Answer: Test data is actually the input given to a software program. It represents data that affects or is affected by the execution of the specific module. Depending on your testing environment you may need to CREATE Test Data (Most of the times) or at least identify a suitable test data for your test cases (is the test data is already created). Typically test data is created in-sync with the test case it is intended to be used for. Test Data can be Generated Manually, Mass copy of data from production to testing environment, Mass copy of test data from legacy client systems and Automated Test Data Generation Tools

**AGILE**

* 1. **What are the Roles in a Scrum?**

**Answer:** There are mainly three roles that a Scrum team have:

**Project Owner** – who has the responsibility of managing product backlog. Works with end users and customers and provide proper requirement to the team to build the proper product.

**Scrum Master** – Scrum master ensure proper work flow to the team.

**Scrum Team** – Each member in the team should be self-organized, dedicated and responsible for high quality of the work.

* 1. **What is a Product Backlog and Sprint Backlog?**

**Answer:** Product backlog is maintained by the project owner which contains every feature and requirement of the product.

Sprint backlog can be treated as subset of product backlog which contains features and requirements related to that particular sprint only.

* 1. **What is the difference between User Story, Task and Epic?**

**Answer: User Stories:** User Stories defines the actual business requirement. Generally created by Business owner.

**Task:**To accomplish the business requirements development team create tasks.

**Epic:** A group of related user stories is called an Epic.

* 1. **What is Zero sprint in Agile?**

**Answer: I**t can be defined as pre step to the first sprint. Activities like setting development environment, preparing backlog etc. needs to be done before starting of the first sprint and can be treated as Sprint zero.

* 1. **What is Agile Testing?**

**Answer:** Agile Testing is a practice that a QA follows in a dynamic environment where testing requirements keep changing according to the customer needs. It is done parallel to the development activity where testing team receives frequent small codes from the development team for testing.

* 1. **Explain what id Burn Up and Burn Down chart?**

**Answer:** To track the project progress burnup and burn down charts are used

Burnup Chart: It shows the progress of stories done over time

Burndown Chart: It shows how much work was left to do overtime

* 1. **What is the duration of your Sprint?**

**Answer:** 2 weeks