1. **What is Exploratory Testing?**

* This may be the only type of technique used for low-risk systems, but this approach may be

particularly useful under extreme time pressure – in fact this is one of the factors leading to

exploratory testing.

1. **What is traceability matrix?**

* A Traceability Matrix is a document that links requirements to their corresponding test cases, ensuring that all requirements are tested and met. It helps track the coverage and status of testing throughout the project.

1. **What is Boundary value testing?**

* Boundary Value Testing is a software testing technique that focuses on testing the values at the edges or boundaries of input ranges. It checks how the system behaves with minimum, maximum, and just outside those limits to identify potential defects.

1. **What is Equivalence partitioning testing?**

* Equivalence Partitioning Testing is a technique where input data is divided into groups, or "partitions," that are expected to produce similar results. Test cases are then designed to cover each partition, reducing the total number of tests needed.

1. **What is Integration testing?**

* Integration Testing is the process of testing how different modules or components of a software work together. It aims to identify issues in the interaction between integrated parts of the system.

1. **What determines the level of risk?**

* Two main factors determine the level of risk:

1. Likelihood – the probability that an event or issue will occur.

2. Impact – the potential consequences or severity if the event does occur.

Both factors are assessed to gauge the overall level of risk.

1. **What is Alpha testing?**

* **Alpha Testing** is an early phase of software testing where the product is tested by the internal team or developers. It aims to identify bugs and issues before the software is released to external users for beta testing.

1. **What is beta testing?**

* Beta Testing is the phase where a nearly finished software is released to a group of external users outside the development team. It helps identify any remaining bugs and gather feedback before the final release.

1. **What is component testing?**

* Component Testing is a type of testing that focuses on individual parts or components of a software application. It checks each component in isolation to ensure it works correctly before integrating it with other parts of the system.

1. **What is functional system testing?**

* **Functional System Testing** is the process of verifying that a software application meets all specified functional requirements. It tests the complete system to ensure that it behaves as expected in various scenarios.

1. **What is Non-Functional Testing?**

* Non-Functional Testing : Testing the attributes of a component or system that do not relate to functionality, e.g. reliability, efficiency, usability, interoperability, maintainability and portability

1. **What is GUI Testing?**

* GUI Testing assesses the graphical user interface of an application to ensure it functions correctly and is user-friendly. It checks elements like buttons, menus, and layout to verify they meet design specifications and provide a good user experience.

1. **What is Adhoc testing?**

* Adhoc testing is an informal testing type with an aim to break the system. It does not follow any test design techniques to create test cases.

1. **What is load testing?**

* Load Testing is a performance testing to check system behavior under load. Testing an

application under heavy loads, such as testing of a web site under a range of loads to

determine at what point the system’s response time degrades or fails.

1. **What is stress Testing?**

* Stress testing is used to test the stability & reliability of the system. This test mainly

determines the system on its robustness and error handling under extremely heavy load

conditions.

1. **What is white box testing and list the types of white box testing?**

* White Box Testing: Testing based on an analysis of the internal structure of the component or system.

1. **What is black box testing? What are the different black box testing techniques?**

* Black-box testing: Testing, either functional or nonfunctional, without reference to the

internal structure of the component or system.

1. Equivalence partitioning
2. Boundary value analysis
3. Decision tables
4. State transition testing
5. Use-case Testing
6. Other Black Box Testing
7. **Mention what are the categories of defects?**

* It can be of two type :

1. Defect from the product or a variance from customer/user expectations.
2. It is a flaw in the software system and has no impact until it affects the user/customer and operational system.
3. **Mention what bigbang testing is?**

* Big Bang Testing is a software testing approach where all components or modules of an application are integrated and tested simultaneously, rather than in stages.

1. **What is the purpose of exit criteria?**

* **Exit criteria** are the specific conditions or requirements that must be met before ending a particular phase of testing or the entire testing process.

1. **When should "Regression Testing" be performed?**

* **Regression Testing** should be performed whenever changes are made to the software, such as adding new features, fixing bugs, or making updates.

1. **What is 7 key principles?**

* Testing shows the presence of Defects
* Exhaustive Testing is Impossible!
* Early Testing Defect Clustering
* The Pesticide Paradox
* Testing is Context Dependent
* Absence of Errors Fallacy

1. **Difference between QA v/s QC v/s Tester**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr no | Quality Assurance | Quality Control | Testing |
| 1. | Activities which ensure the  implementation of processes,  procedures and standards in context  to verification of developed software  and intended requirements. | Activities which ensure the  verification of developed  software with respect to  documented ( not in  some cases) requirements | Activities which  ensure the  identification of  bugs/error/defects  in the Software |
| 2. | Focuses on processes and  procedures rather than conducting  actual testing on the system. | Focuses on processes and  procedures rather than conducting  actual testing on the system.  Focuses on actual testing  by executing Software with  intend to identify  bug/defect through  implementation of  procedures and process. | Focuses on actual  testing. |
| 3. | Process-oriented activities | Product-oriented activities | Product-oriented activities |
| 4. | Preventive activities. | It is a corrective process. | It is a preventive |
| 5. | I t is a subset of Software Test LifeCycle (STLC). | QC can be considered as  the subset of Quality  Assurance | Testing is the subset  of Quality Control |

1. **Difference between Smoke and Sanity**?

|  |  |  |
| --- | --- | --- |
| **Sr no** | **Smoke Testing** | **Sanity Testing** |
| **1** | Smoke Testing is performed to ascertain  that the critical functionalities of the  program is working fine | Sanity Testing is done to check the new  functionality / bugs have been fixed |
| **2** | This testing is performed by the  developers or testers | Sanity testing is usually performed by testers |
| **3** | Smoke testing is usually documented or  scripted | Sanity testing is usually not documented and is unscripted |
| **4** | Smoke testing is a subset of Regression  testing | Sanity testing is a subset of Acceptance testing |
| **5** | Smoke testing is like General Health  Check Up | Sanity Testing is like specialized health CheckUp |
| **6** | Smoke testing exercises the entire system  from end to end. | Sanity testing exercises only the particular  component of the entire system |

1. **Explain types of Performance testing.**

* Types of Performance Testing

▪ Load testing

▪ Stress testing

▪ Endurance testing

▪ Spike testing

▪ Volume testing

▪ Scalability testing

* Load testing : It checks the product’s ability to perform under anticipated user loads.
* Stress testing : It involve testing a product under extreme workloads to see whether it handles high traffic or not. The Objective is to identify the breaking point of a software product.

1. **What is Error, Defect, Bug and failure?**

* A mistake in coding is called error.
* Error found by tester is called defect.
* Defect accepted by development team then it is called bug.
* Build does not meet the requirements then it is failure.

1. **Explain the difference between Functional testing and Non-Functional testing?**

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| --- | --- | --- |
| **Sr no** | **Functional Testing** | **Non Functional Testing** |
| **1** | Functional testing is performed using  the functional specification provided by the client and verifies the system  against the functional requirements. | Non-Functional testing checks the  Performance, reliability, scalability and  other non-functional aspects of the  software system. |
| **2** | Functional testing is executed first | Non functional testing should be  performed after functional testing |
| **3** | Business requirements are the inputs to functional testing | Performance parameters like speed ,  scalability are inputs to non-functional  testing. |
| **4** | Easy to do manual testing | Tough to do manual testing |
| **5** | Types of Functional testing are  ▪ Unit Testing  ▪ Smoke Testing  ▪ Sanity Testing  ▪ Integration Testing  ▪ White box testing  ▪ Black Box testing  ▪ User Acceptance testing  ▪ Regression Testing | Types of Nonfunctional testing are  ▪ Performance Testing  ▪ Load Testing  ▪ Volume Testing  ▪ Stress Testing  ▪ Security Testing  ▪ Installation Testing  ▪ Penetration Testing  ▪ Compatibility Testing  ▪ Migration Testing |

1. **What is the difference between the STLC (Software Testing Life Cycle) and SDLC (Software**

**Development Life Cycle)?**

|  |  |  |
| --- | --- | --- |
| **Parameter** | **SDLC** | **STLC** |
| origin | Development life cycle | Testing life cycle |
| objective | The main project of SDLC life cycle is to complete successful  development of the software  including testing and other phases. | The only objective of the STLC Phase is testing |
| Requirement gathering | In SDLC the business analyst  gathers the requirements and  create Development Plan | In STLC, the QA team analyze  requirement documents like  functional and non-functional  documents and create System test  Plan |
| High & low leval design | In SDLC, the development team  create the high and low design  plans | In STLC, the test analyst creates the  integration test plan |
| coding | The real code is developed and  actual work takes place as per the design documents | The testing team prepares the test  environment and executes them |
| Maintance | SDLC Phase also includes post-deployment support and updates. | Testers, execute regression suits,  usually automation script to check  maintaince code deployed. |