1. What is Exploratory Testing?

In Exploratory Testing, experience is used to execute testing. Tests are also designed in this testing. The scope of testing is discussed, how the tests will be conducted and what problems(risks) will be there.

1. What is traceability matrix?

To protect against changes, you should be able to trace back from every system component to their original requirements that caused its presence.

1. What is Boundary value testing?

Boundary value testing tests better than equivalence partitioning. It concentrates on cases near the limits of valid ranges.

1. What is Equivalence partitioning testing?

Equivalence partitioning testing is part of Black Box Testing. The test data is divided into equal portions to check the behavior.

1. What is Integration testing?

Integration testing is done to expose defects that arise between interfaces and interaction in integrated components or systems.

1. What determines the level of risk?

Risk is a factor that could result in future negative consequences.

There are 2 level:

* Project level Risk
* Product level Risk

1. What is Alpha testing?

Alpha testing is part of acceptance testing. It is usually done by developers

at the development site.

1. What is beta testing?

Beta testing is also part of acceptance testing. It is usually done by customers at their own site.

1. What is component testing?

Component testing is done on the smallest part of the software. It is also called unit testing.

1. What is functional system testing?

In functional system testing, functions are specified. A system must perform that function in order to meet the essential requirements.

1. What is Non-Functional Testing?

In Non-Functional Testing, performance of the system is tested. It is not related to functionality.

1. What is GUI Testing?

Graphical User Interface testing is the process of testing the GUI of the system under test. All menu bars, icons, etc. are tested under this testing.

1. What is Adhoc testing?

Adhoc testing is done to test the tester. It is performed randomly without following the standard protocol. It is done to find defects randomly.

1. What is load testing?

Load testing is testing the behavior of the system under real time load conditions.

1. What is stress Testing?

In stress testing, the system is checked till the system fails/breaks down.

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

White Box Testing is testing of the internal structure of the system.

There are several types of white box testing:

* Test/code coverage
* Branch Condition testing
* Branch Condition Combination testing
* Modified Condition decision testing
* Dataflow testing
* Linear Code sequence and jump testing

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

Black box testing does not involve testing of internal structure of component or system. It is either functional or non-functional.

There are 4 testing techniques:

* + Equivalence Partitioning
  + Boundry Value Analysis
  + Decision Table
  + State Transitioning Testing

1. Mention what are the categories of defects?

There are 5 categories of defects:

* Database defect
* Critical Functionality defect
* Functionality defect
* Security defect
* User Interface defect

1. Mention what big bang testing is?

In big bang testing, all components are tested at the same time and after that, the whole system is tested at once.

1. What is the purpose of exit criteria?

The Purpose of exit criteria is when to STOP testing either at End of all testing or end of phase of testing.

1. When should "Regression Testing" be performed?

Regression testing should be performed when there is change in requirements and code modification is needed. When a new feature is added. When there is a defect or a problem that needs to be fixed.

1. What are the 7 key principles? Explain in detail?
2. Testing Shows Presence of Bugs

Testing can reduce the possibility of bugs, but it cannot prove that there will be no defects.

1. Exhaustive Testing is Impossible

Every precondition cannot be tested as it may take longer time. Testing is done on prioritization and risk analysis.

1. Early Testing

Early testing is done to prevent the defect being introduced into the code. Testing should start early in the development cycle.

1. Defect Clustering

Most defects are confined in small modules, and they are not spread evenly. Defects are generally clustered.

1. The Pesticide Paradox

Same set of test case cannot find new defects. So, test cases need to be reviewed and revised regularly. That's how the quality of the software improves.

1. Testing is Context Dependent

Every software and website are tested differently based on its context. The same set of test cases cannot be used to test everything.

1. Absence of Error Fallacy

Only identifying bugs and debugging doesn’t make a good system. If the system doesn't meet specified requirements, then it is unusable.

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

|  |  |  |
| --- | --- | --- |
| **QA (Quality Assurance)** | **QC (Quality Control)** | **Testing** |
| It is subset of STLC | It is subset of QA | It is subset of QC |
| Preventive Activities | Corrective Process | Preventive Process |
| Process Oriented | Product Oriented | Product Oriented |
| Focus on process & procedure | Focus on actual testing to identify bugs, defects | Focus on actual testing |
| Ensures implementation of process & procedures | Ensures verification of developed software | Ensures identification of bugs, defects |

1. Difference between Smoke and Sanity?

|  |  |
| --- | --- |
| **Smoke Testing** | **Sanity Testing** |
| Smoke testing is done to test critical functionality. | Sanity testing is done to check new functionality. |
| It verifies stability of the system. | It verifies rationality of the system. |
| It is scripted | It is not scripted |
| It is a subset of Regression Testing | It is a subset of Acceptance Testing |
| It is performed by developers | It is performed by testers |
| It tests the system from end to end like a general health checkup. | It tests only particular parts of the system like specialized health checkup. |

1. Difference between verification and Validation

|  |  |
| --- | --- |
| **Verification** | **Validation** |
| It is done at development level | It is done at testing level |
| It is Static | It is Dynamic |
| It is done before coding | It is done after coding |
| It is done to evaluate work product | It is done to evaluate the end product |
| It includes:  Business requirements analysis  System requirements analysis  Technical Specification  Program Specification | It includes:  Unit testing  Integration testing  System testing  Acceptance testing |

1. Explain types of Performance testing.

Types of Performance testing:

* Load Testing
* Stress Testing
* Endurance Testing
* Spike Testin
* Volume Testing
* Scalability Testing

There are mainly two types which are Load testing & Stress testing.

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

Error: When there is mistake in coding

Defect: When tester detects the mistake in coding

Bug: When developer accepts the defect

Failure: When system fails to meet specified requirements

1. Difference between Priority and Severity

|  |  |
| --- | --- |
| **Priority** | **Severity** |
| It is relative and business focused | It is absolute and customer focused |
| It shows the order in which defect should be resolved | It shows how defect can affect software |
| It indicates how soon a bug needs to be fixed | It indicates seriousness of the defect |
| It is driven by business value | It is driven by functionality |

1. What is Bug Life Cycle?

Points of Bug life cycle:

* New
* Assigned
* Open
* Fixed
* Pending retest
* Retest
* Verified
* Reopened
* Rejected
* Deferred
* Not a Bug

1. Explain the difference between Functional testing and Nonfunctional testing

|  |  |
| --- | --- |
| **Functional Testing** | **Non-Functional Testing** |
| Functional Testing is based on analysis of specification of functionality that is provided by the client | Non-Functional Testing is done to check speed, scalability, relatibility of the system |
| It is executed first | It is performed after functional testing |
| Manual or Automation tools can be used | Using tools will be affective |
| Easy to do manual testing | Tough to do manual testing |
| Input is Business requirements | Input is Performance parameters like speed, scalability |
| Includes: Smoke, Sanity, Black Box, White Box, etc. | Includes: Performance, Usability, GUI, Security, etc. |

1. To create HLR & Test Case of

* Instagram (First Page)
* Facebook (First Page)

In Excel file “Q31\_module2”. (4 sheets)

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

|  |  |
| --- | --- |
| **SDLC** | **STLC** |
| SDLC is a structure imposed on the software to be developed that describes the process of planning, documentation, deployment, ongoing maintenance and support. | STLC is a process used to test software and ensure that quality standards are met. |
| It mainly focuses on development of software | It mainly focuses on testing of the software |
| Business Analyst gathers all the requirements and prepare a document of development plan | QA team Analyse all the requirements and prepare a document on how the testing will be executed |
| It includes coding | It does not include coding |
| The phases are:  Requirement Gathering  Analysis  Design  Implementation  Testing  Maintenance | The phases are:  Requirement Analysis  Test Planning  Test Case Development  Test Environment Setup  Test Execution  Test Cycle Closure |

1. What is the difference between test scenarios, test cases, and test script?

|  |  |  |
| --- | --- | --- |
| **Test Scenario** | **Test Case** | **Test Script** |
| It is any functionality that can be tested | It is a set of steps which can be used while performing testing | It is a set of sequential instructions that detail how to execute core business function |
| Explains What to be tested | Explains How to be tested | Explains How to be tested |
| Test Scenarios are written manually | Test Cases are written manually. | Test Scripts are in scripting format |
| It is high level action | It is low level action | It is low level action |
| It is manual approach | It is manual approach | It is automated approach |

1. Explain what Test Plan is? What is the information that should be covered?

Test Planning is a document. It covers information like scope, approach, resources and schedule of intented test activities. It is done by senior QA manager. They prepare document that describes test plan strategy and cost estimation of the project. Test tool is also selected.

1. What is priority?

Priority is relative and business related. It defines the order in which the defects should be resolved.

1. What is severity?

Severity is absolute and customer focused. It shows how a defect can affect the software.

1. Advantages of Bugzilla.

There are a few advantages of Bugzilla

* + Effective bug tracking
  + Customization & Flexibility
  + Integrated Collaboration
  + Automation & Workflow Management
  + Comprehensive reporting & Analysis

1. What are the different Methodologies in Agile Development Model?

There are 2 different Methods:

* 1. Scrum
  2. Kanban

**SCRUM:**

Scrum is a framework for project management that emphasizes teamwork, accountability and iterative progress toward a well-defined goal. The framework begins with a simple premise: Start with what can be seen or known. After that, track the progress and tweak, as necessary.

**KANBAN:**

Kanban is a visual method for managing workflow at the individual, team, and even organizational level. The framework is applied using Kanban boards, a form of visual project management. In a Kanban board, tasks, represented as cards, move through stages of work, represented as columns. That way, your team can see where work is in real-time.

1. Explain the difference between Authorization and Authentication in Web testing. What are the common problems faced in Web testing?

|  |  |
| --- | --- |
| **Authorization** | **Authentication** |
| Usually, the first set of a security access control | Usually, comes after Authorization |
| Verifies user's identity | Grants or denies permission to user |
| It is visible to user | It is not visible to user |
| Common methods include:  Username, password, email, SMS | Common methods include:  Role based access control, attribute-based access control |

There are a few problems that arise in web testing:

### Ensuring cross browser compatibility

### Dealing with dynamic content

### Performance and scalability testing

### Security testing

### Test data management

### Communication and collaboration

1. To create HLR & Test Case of Web Based

* WhatsApp
* Instagram

In Excel file “Q40\_module2”. (4 sheets)

1. To create HLR and Test Case on this Link. <https://artoftesting.com/>

In Excel file “Q41\_module2”. (2 sheets)

1. Write a scenario of only WhatsApp chat messages

In excel file “scenario\_assignment2”, sheet name “WhatsApp Chat".

1. Write a Scenario of Pen

In excel file “scenario\_assignment2”, sheet name “Pen"

1. Write a Scenario of Pen Stand

In excel file “scenario\_assignment2”, sheet name “Pen stand".

1. Write a Scenario of Door

In excel file “scenario\_assignment2”, sheet name “Door".

1. Write a Scenario of ATM

In excel file “scenario\_assignment2”, sheet name “ATM".

1. When to use usability testing?

Usability testing is done to identify usability errors like disabled icons, dropdown icons, error in navigation, etc... It protects a system from failure.

1. What is the procedure for GUI Testing?

Graphical User interface testing is done to check GUI controls like menus, icons, buttons, dialogue boxes, tool bar etc...

It has 3 Approaches:

* Manual based testing
* Record and replay
* Model based testing

1. Write a Scenario of Microwave Oven

In excel file “scenario\_assignment2”, sheet name “Oven".

1. Write a Scenario of Coffee Vending Machine

In excel file “scenario\_assignment2”, sheet name “Coffee Vending Machine".

1. Write a scenario of chair

In excel file “scenario\_assignment2”, sheet name “Chair".

1. To Create Scenario (Positive & Negative)

* Gmail (Receiving Mail)
* Online Shopping to buy product (Flipkart)

In excel file “scenario\_assignment2”, sheet name “Gmail & Flipkart".

1. Write a Scenario of Wristwatch

In excel file “scenario\_assignment2”, sheet name “Wristwatch".

1. Write a Scenario of Lift (Elevator)

In excel file “scenario\_assignment2”, sheet name “Lift".

1. Write a Scenario of WhatsApp Group (Create New Group)

In excel file “scenario\_assignment2”, sheet name “WhatsApp Group".

1. Write a Scenario of WhatsApp payment

In excel file “scenario\_assignment2”, sheet name “WhatsApp Payment".