**Module- 2 (manual testing)**

* **what is exploratory testing**

. Exploratory testing is a concurrent process where Test design, execution and logging happen simultaneously Testing is often not recorded

* **What is traceability matrix?**

A document (often in table form) that maps and links **requirements** to the corresponding system component, design elements, test cases, and defects.  
It ensures that every requirement is accounted for in the system and can be traced backward and forward throughout the project lifecycle.

* **What is Boundary value testing?**

Boundary value analysis is a methodology for designing test cases that concentrates software testing effort on cases near the limits of valid ranges

* **What is Equivalence partitioning testing?**

Aim is to treat groups of inputs as equivalent and to select one representative input to test them all

* **What is Integration testing?**

Integration testing performed to expose defect in the interfaces and in the interaction between integrated components or systems

* **What determines level of risk?**

In Software Testing / QA, the level of risk is determined mainly by two factors:

1. Probability (likelihood)
2. Impact (consequence/severity)

* **What is Alpha testing?**

**Alpha testing** is a type of acceptance testing performed by developers or an independent testing team at the development site, before releasing the product to real users or the market. It is done in a controlled (virtual) environment and can involve both white-box and black-box testing techniques.

* **What is beta testing?**

Beta testing is a type of acceptance testing that is performed by real customers or end-users at their own sites in a real-time environment, before the final release of the product. It is open to the public and involves only black-box testing techniques.

* **What is component testing?**

Component testing of individual software components

* **What is functional system testing?**

Functional system testing: A requirement that specifies a function that a system or system component must perform

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

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

* **What is GUI Testing?**

Graphical User Interface (GUI) testing is the process of testing the system’s GUI of the System under Test. GUI testing involves checking the screens with the controls like menus, buttons, icons, and all types of bars – tool bar, menu bar, dialog boxes and windows etc.

* **What is Ad hoc testing?**

Ad hoc testing is an informal testing type with an aim to break the system.

* **What is load testing?**

Load testing - It’s a performance testing to check system behaviour 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.

* **What is stress Testing?**

System is stressed beyond its specifications to check how and when it fails. Performed under heavy load like putting large number beyond storage capacity

* **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.

Types of white box testing –

1. Statement coverage
2. Decision coverage
3. Condition coverage

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

Black-box testing: either functional or non-functional, without reference to the internal structure of the component or system.

Different black box testing techniques

1. Equivalence partitioning
2. Boundary value analysis
3. Decision tables
4. State transition testing
5. Use-case Testing
6. Syntax or Pattern Testing

* **Mention what are the categories of defects?**

1. functional defect
2. performance defect
3. compatibility defect
4. usability defect
5. security defect
6. syntax/ logical defect
7. integration defect

* **Mention what big bang testing is?**

In Big Bang integration testing all components or modules is integrated simultaneously, after which everything is tested as a whole.

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

1. Successful Testing of Integrated Application. Executed Test Cases are documented
2. All High prioritized bugs fixed and closed
3. Technical documents to be submitted followed by release Notes.

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

Regression Testing should be performed whenever **changes are made to the software** to ensure that the existing functionality still works correctly. It is usually performed in these situations:

* **What is 7 key principles? Explain in detail?**

1. **Testing shows presence of defect**

Testing can show that defects are present, but cannot prove that there are no defects.

1. **Exhaustive Testing is Impossible!**

Testing everything including all combinations of inputs and preconditions is not possible.

1. **Early Testing**

Testing activities should start as early as possible in the software or system development life cycle, and should be focused on defined objectives.

1. **Defect Clustering**

A small number of modules contain most of the defects discovered during pre-release testing or are responsible for the most operational failures

1. **The Pesticide Paradox**

If the same tests are repeated over and over again, eventually the same set of test cases will no longer find any new defects.

1. **Testing is Context Dependent**

Testing is context-dependent. Testing is done differently in different contexts Different kinds of sites are tested differently. For example, Safety– critical software is tested differently from an e-commerce site.

1. **Absence of Errors Fallacy**

If the system built is unusable and does not fulfil the user’s needs and expectations then finding and fixing defects does not help.

* **Explain types of Performance testing**

Software performance testing is a means of quality assurance (QA). It involves testing software applications to ensure they will perform well under their expected workload

* **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

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

A document describing the scope, approach, resources and schedule of intended test activities

* **What is priority?**

**Priority means – how quickly a bug/defect needs to be fixed.  
It indicates which bug should be solved first and which can be solved later.**

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

|  |  |  |
| --- | --- | --- |
| 1. QA Process oriented activities. | 1.QC Product oriented activities. | 1.Tester Product oriented activities. |
| 2.QA is Preventive activities | 2.QC It is a corrective process. | 2.Tester It is a preventive process |
| 3. QA is a subset of Software Test Life Cycle (STLC). | 3. QC can be considered as the subset of Quality Assurance. | 3. Testing is the subset of Quality Control. |

* **Difference between Smoke and Sanity?**

|  |  |
| --- | --- |
| 1. smoke testing performed by the developers or tester | 1. sanity testing is usually performed by tester |
| 2. smoke testing is usually documented or scripted | 2.sanity testing is usually not documented and is unscripted |
| 3. Smoke testing is like General Health Check Up | 3**.** Sanity Testing is like specialized health check up |

* **Difference between verification and Validation**

|  |  |
| --- | --- |
| 1. verification Process of checking whether the product is being built correctly | 1. Process of checking whether the right product is built |
| 1. Focus on **process** (Documentation, Design, Code review) | 1. Focus on **product** (Final software behaviour) |
| 1. Done **during development phase** | 1. Done **after development, during testing** |

* **Difference between Priority and Severity**

|  |  |
| --- | --- |
| 1. **Priority means how quickly a defect/bug needs to be fixed.** | 1. **Severity means how much impact a defect/bug has on the system.** |
| 1. Product Manager / Business Team | 2. Tester / QA Team |
| 1. **A spelling mistake on the homepage → High Priority but Low Severity (because it looks bad to users but does not affect functionality).** | 3. Application crash when clicking Save → High Severity but Low Priority (because it happens rarely, but when it does, the entire system crashes). |
| 1. Business point of view | 4. Technical point of view |

* **Explain the difference between Functional testing and Non-Functional testing**

|  |  |
| --- | --- |
| 1. Functional testing is executed first | 1. Non-functional testing should be performed after functional testing |
| 1. Functional testing describes what the product does | 2. Non-functional testing describes how good the product works |
| 1. Functional testing Easy to do manual testing | 3. Non-functional Tough to do manual testing |

* **What is Bug Life Cycle?**

**NEW**

**ASSIGNED**

**DUPLICATE**

**REJECTED**

**DEFFERED**

**NOT A BUG**

**OPEN**

**FIXED**

**PENDING**

**RETEST**

**REOPENED**

**RETEST**

**CLOSED**

**VERIFIED**

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

|  |  |
| --- | --- |
| * **SDLC** | * **STLC** |
| 1. End-to-end software development process   (To build and deliver the software) | 1. End-to-end software testing process   (To test and improve the software’s quality) |
| Requirement → Design → Development → Testing → Deployment → Maintenance | Requirement Analysis → Planning → Test Design → Execution → Closure |
| Developers, Testers, Business Analysts, Stakeholders | Testers (mainly) |

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

|  |  |  |
| --- | --- | --- |
| * **TEST SCENARIO** | * **TEST CASE** | * **TEST SCRIPT** |
| 1. High-level description of what to test | 1. Step-by-step procedure to test a scenario | |  | | --- | |  |  |  | | --- | | 1. Automation code for executing test cases | |
| 1. broad | 1. Detailed | 2. Technical/Automation |
| 1. "Check login functionality" | 1. Enter username & password → Click login → Verify dashboard | 3. Selenium/Python script for login |

* **What is severity?**

Severity tells how much impact a bug/defect has on the system.  
It measures the technical impact, not how quickly it needs to be fixed.

* **Bugs categories are**

1. Functional bags
2. Performance bags
3. GUI bags
4. Security bags
5. Compatibility bags
6. Integration bags
7. Data bags
8. Usability bags

* **Advantage of Bug zila**

1. Available at no cost and can be customized.
2. Can be accessed from any browser, no separate installation required.
3. Easy to filter, search, and generate detailed bug reports.
4. Automatic email updates whenever a bug status changes.
5. Different roles (Admin, Developer, Tester) with controlled permissions.

* **What are the different Methodologies in Agile Development Model?**

**1. Scrum**

* Most popular Agile framework.
* Work is divided into sprints (2–4 weeks).
* Roles: Product Owner, Scrum Master, Development Team.
* Artifacts: Product Backlog, Sprint Backlog, Increment.
* Focuses on continuous feedback and adaptation.

### 2. **Kanban**

* Visual workflow management using **boards & cards.**
* No fixed iterations; continuous delivery.
* Focuses on **limiting Work in Progress (WIP).**
* Improves efficiency and flow.

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

|  |  |
| --- | --- |
| AUTHORIZATION | AUTHENTICATION |
| 1. Verifies **what the user is allowed to do** (Access control). | * 1. Verifies **who the user is** (Identity check). |
| * 1. Grants or denies access to specific features/resources based on roles/permissions. | 2.   |  | | --- | |  |  |  | | --- | | Confirms identity using username/password, OTP, biometrics, etc. | |
| * 1. After login, only **Admin can access Admin Panel**, not a normal user → Authorization. | 3. After login, only **Admin can access Admin Panel**, not a normal user → Authorization. |

* Common problems

1. **Broken Links** – Dead or invalid links that don’t lead anywhere.
2. **Responsive Issues** – UI breaking or not displaying properly on mobile, tablet, and desktop.
3. **Cross-Browser Compatibility Issues** – Website not working properly in different browsers (Chrome, Firefox, Edge, Safari).

* **Create Test Cases on WhatsApp Group Chat.**

This answer attached to the excel sheet

* **Write a scenario of only WhatsApp chat messages**

This answer attached to the excel sheet

* **Write a Scenario of Pen**

This answer attached to the excel sheet

* **Write a Scenario of Door**

This answer attached to the excel sheet

* **When to used Usability Testing?**

This answer attached to the excel sheet

* **What is the procedure for GUI Testing?**

This answer attached to the excel sheet

* **Write a scenario of Microwave Owen**

This answer attached to the excel sheet

* **Write a scenario of Coffee vending Machine**

This answer attached to the excel sheet

* **Write a scenario of chair**

This answer attached to the excel sheet

* **Create Test Cases on Compose Mail Functionality**.

This answer attached to the excel sheet

* **Write a Scenario of Wrist Watch**

This answer attached to the excel sheet

* **Write a Scenario of Lift (Elevator)**

This answer attached to the excel sheet

* **Write a Scenario of WhatsApp payment**

This answer attached to the excel sheet