**Modual-2**

1. **What is Exploratory Testing?**

Exploratory testing is a concurrent process where test design, execution and logging happen simultaneously.

The focus of exploratory testing is more on testing as a “thinking” activity.

1. **What is traceability matrix?**

To protect against changes, you should be able to track back from every system component to the original requirement that caused its presence.

1. **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, Boundary value analysis is a method which refines equivalence partitioning.

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

Equivalence partitioning is the process of defining the optimum number of tests by, reviewing documents such as the functional design specification and detailed design specification and identifying each input condition within function.

EP can be used for all levels of testing.

1. **What is Integration Testing?**

Integration testing performed to expose defects in the interfaces and in the interactions between integrated components or systems.

Integration testing is a level of the software testing process where individual units are combined and tested as a group.

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

A factor that could results in future negative consequences; usually expressed as impact and likelihood.

A risk could be any future event with a negative consequence need to identify the risks associated with your project.

Risk are of two types

* Project risk
* Product risk

1. **What is alpha testing?**

Alpha testing is dentally performed and carried out at the developing organization location with the involvement of developers.

It is always performed by the developers at the software development site.

1. **What is beta testing?**

Beta testing is always open to the market and public, it is usually conducted for software product, it is performed in real time environment.

It is always performed by the customers at their own site.

1. **What is Component testing?**

Component testing is a level of software testing process where individual component of the software is tested.

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

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

Requirement based functional testing

Process based testing

1. **What is non-Functional testing?**

Non-Functional 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?**

Graphical user interface testing is the process of the testing the system GUI of the system under test. GUI testing involves checking the screens with the controls like menus, buttons, icons and all types of bars—toolbar, menu bar, dialog box and windows etc.

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 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 arrange of loads to determine at what point the system response time degrade or fails.

Load testing is a kind of performance testing which determine systems performance under real life load conditions.

1. **What is stress testing?**

Stress testing system is stressed beyond its specification to check how and when it fails. Preformed under heavy load like putting large number beyond storage capacity, complex database queries, continues inputs to system or database load.

1. **What is White Box testing and list all types of Whitebox testing.**

White box testing based on an analysis of the internal structure of the component or system.

There are 3 types of white box testing.

* Statement coverage
* Decision coverage
* Condition coverage

1. **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.

There are four techniques in black box testing.

* Equivalence partitioning
* Boundary value analysis
* Decision tables
* State transition testing

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

There are five types of defects categories.

* Data quality / Database Defects
* Critical Functionality Defects
* Functionality Defects
* Security Defects
* User interface Defects

1. **What is big bang testing?**

In big bang testing integration testing all component or modules are integrated simultaneously after which everything is tested as a whole.

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

* How do we know when to stop testing?
* Run out of time?
* Run out of budget?
* The business tells you it went live last night!
* Boss says stop?
* All defects have been fixed?

1. **When should regression testing be performed?**

* Change in requirements and code is modified according to the requirement.
* New feature is added to the software.
* Defect fixing.
* Performance issue fix.

1. **What is 7 key principle? Explain in details.**

* Testing shows presence of defects:

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

Testing reduce the probability of undiscovered defects remaining the software but even if no defects are found, it is not a proof of correctness.

* Exhaustive testing is impossible:

Testing everything including all combination of inputs and precondition is not possible.

In stand of doing the exhaustive testing we can use risks and properties to focus testing efforts.

* 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.

Testing activities should be focused on defined objectives- outlined in the test strategy.

* 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.

Defects are not evenly spread in a system they are clustered.

* Pesticides Paradox:

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

To overcome this pesticide paradox the test cases need to be regularly reviewed and revised and new and different tests need to be written to exercise different parts of the software or system to potentially find more defects.

* Testing Context Dependent:

Testing is basically context dependent.

Testing is done differently in different contexts.

Different kinds of sites are tested differently.

* Absence of Errors Fallacy:

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

1. **Difference between QA & QC & Tester.**

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| **QA** | **QC** | **Tester** |
| Focus on processes and produces rather than conducting actual testing on the system. | Focuses on actual testing by executing software with intend to identify bug through implementation of procedures and process. | Focuses on actual testing. |
| Process oriented activities. | Product oriented activities. | Product oriented activities. |
| Preventive activities. | It is a corrective process. | It is a preventive process. |
| It is a subset of software test life cycle (STLC) | It is a subset of Quality Assurance (QA) | It is a subset of Quality Control (QC) |

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

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| **Smoke Testing** | **Sanity Testing** |
| This testing is performed by the developer and testers. | Sanity testing is usually performed by the testers. |
| Smoke testing is usually documented and scripted. | Sanity testing is not documented and is unscripted. |
| Smoke testing is subset of regression testing | Sanity testing is a subset of acceptance testing. |
| Smoke testing exercise the entire system from end to end. | Sanity testing exercise only the particular component of the entire system. |

1. **Difference between verification and validation model.**

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| **Verification** | **validation** |
| In v-model before coding phase is called verification. | In v-model after coding phase is called validation. |
| Before coding phase is also known as a development level. | After coding phase is also known as a testing level. |
| In verification phase  Business requirement.  System requirement.  Technical specification.  Programme specification. | In validation phase  Unit test.  Integration test  System test  Acceptance test |

1. **Explain types of performance testing.**

* Load testing
* Stress testing
* Endurance testing
* Spike testing
* Volume testing
* Scalability testing

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

Error: A mistake in coding is called error.

Defect: Error found by tester is called defect.

Bug: Defect accepted by the development team is called bug.

Failure: Build does not meet the requirements then it is failure.

1. **Difference between priority and severity.**

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| **Priority** | **severity** |
| Priority is relative and business-focused. | Severity is absolute and customer-focused. |
| Priority defines the order in which we should resolve a defect. | Severity is the extent to which the defect can affect the software. |
| This priority status is set by the tester to the developer mentioning the time frame. | Severity defines the impact that a given defect has on the system. |
| Priority types  Low  Medium  High  critical | Severity types  Critical  Major  Moderate  Minor  cosmetic |

1. **What is bug life cycle?**

A computer bug is an error flaw mistake failure and fault in a computer programme that prevents it from working correctly or produces an incorrect result. Bugs arise from mistakes and errors, made by people in either a programme source code and its design.

1. **Difference between Functional testing and Non-Functional testing.**

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| **Functional testing** | **Non-functional testing** |
| Functional testing is executed first. | Non-functional testing should be performed after functional testing. |
| Manual testing or automation tools can be used for functional testing. | Using tools will be effective for this testing. |
| Functional testing describes what the product does. | Non-functional testing describes like speed, scalability, are input to non-functional testing. |
| Easy to do manual testing. | Tough to do manual testing. |

1. **Difference between SDLC and STLC.**

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| **SDLC** | **STLC** |
| It is software development life cycle. | It is software testing life cycle. |
| SDLC phases  Requirement gathering  Analysis  Design  Implementation  Testing  maintenance | STLC phases  Requirement analysis  Test planning  Test case development  Test environment setup  Test execution  Test cycle closure |
| SDLC is mainly related to software development. | STLC is mainly related to software testing. |
| Goal of SDLC is to complete developed software. | Goal of STLC is to complete testing of software. |

1. **What is difference between test scenario, test case, test script.**

Test scenario: A scenario is any functionality that can be tested.

Test case: Test case involve the set of steps condition and input which can be used while performing the testing the tasks.

Test script: A set sequential instruction that detail how to execute a core business function.

1. **What is test plan? What is the information should be covered?**

Test planning: A document describing the scope approach resources and schedule of the test activities.

* Test planning
* Test planning strategy
* Test planning factor
* Test planning activity
* Exit criteria

1. **What is priority?**

Priority is relative and business-focused. Priority defines the order in which we should resolves a defect.

1. **What is severity?**

Severity is absolute and customer-focused. Severity is the extent to which the defect can affect the software.

1. **What are the different Methodologies in Agile Development Model?**
2. Scrum
3. kanban
4. **What is the difference between test scenarios, test cases, and test script?**

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| **Test Scenarios** | **Test Cases** | **Test Script** |
| A scenario is any functionality that can be tested. it is also called test condition, or test possibility. | Test case involve the set of steps, conditions and inputs data which can be used performing the testing tasks. | A set of sequential instruction that detail how to execute a core business function. |

1. **Advantage of Bugzilla?**
2. Key features of Bugzilla include.
3. Advanced search capabilities.
4. E- mail notifications.
5. Modify/file bug by e-mail.
6. Time tracking.
7. Strong security.
8. Customization.
9. Localization.
10. **Explain the difference between Authorization and Authentication in Web testing. What are the common problems faced in Web testing?**

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| **Authentication** | **Authorization** |
| In the authentication process, users or persons are verified. | This process is same as user or persons are verified. |
| It’s done before the authorization | While the process is done after the authentication process. |
| It needs usually the user’s login details | While its need the user’s privilege or security levels |
| Authentication determines whether the person is user or not | While it determines what permission does the user have? |