***Module – 2 ( Manual Testing )***

**Q 1. What is Exploratory Testing?**

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

**Q 2. What is traceability matrix?**

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

**Q 3. What is boundary value testing?**

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

**Q 4. What is Equivalence partitioning testing?**

**Ans.** 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 a function,

∙ Selecting input data that is representative of all other data that would likely invoke the same process for that particular condition.

**Q 5. What is Integration testing?**

**Ans.** Integration Testing is a level of software testing process in which individual units are combined and tested as a group.

**Q 6. What determines the level of risk?**

**Ans.** The likelihood of an adverse event and the impact of the event.

**Q 7. What is Alpha testing?**

**Ans.** Alpha testing is a type of software testing where the software is tested by the developers themselves. It helps identify bugs and issues before releasing it to a wider audience.

**Q 8. What is beta testing?**

**Ans.** Beta testing is the phase of software testing where the software is tested by a group of external users in a real-world environment. Its purpose is to gather feedback and identify any remaining issues before the official release.

**Q 9. What is component testing?**

**Ans.** Component (Unit) Testing is a level of the software testing process where individual units/components of a software/system are tested.

**Q 10. What is functional system testing?**

**Ans.** Functional System Testing is a requirement that specifies a function that a system or system component must perform. A Requirement may exist as a text document and/or a model.

There are two types of techniques

∙ Requirement-Based Functional Testing

∙ Process-Based Testing

**Q 11. What is Non-Functional Testing?**

**Ans.** Non-functional testing is testing the attributes of a component or system that do not relate to functionality, e.g. reliability, efficiency, usability, interoperability, maintainability and portability.

**Q 12. What is GUI Testing?**

**Ans.** Graphical user interface (GUI) testing is the process of testing 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 boxes and windows etc.

**Q 13. What is Ad hoc testing?**

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

**Q 14. What is load testing?**

**Ans.** It’s a performance testing to check system behaviour under load. Testing an application under heavy loads, such as testing of a website under arrange of loads to determine at what point the system’s response time degrades or fails.

**Q 15. What is stress testing?**

**Ans.** System is stressed beyond its specifications to check how and when it fails. Performed under heavy load like putting large number beyond storage capacity, complex database queries, continuous input to system or database load.

**Q 16. What is white box testing and list the types of white box testing?**

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

Structure-based testing technique is also known as ‘white-box’ or ‘glass-box’ testing technique because here the testers require knowledge of how the software is implemented, how it works.

Types of white box testing are:-

∙ Structural Testing

∙ Test/Code Coverage

\* Statement coverage

\* Decision coverage

\* Condition coverage

∙ Branch Condition testing

∙ Branch Condition Combination testing

∙ Modified Condition Decision testing

∙ Dataflow testing

∙ Linear Code Sequence And Jump (LCSAJ) testing

**Q 17. What is black box testing? What are the different black box testing techniques?**

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

Specification based testing technique is also known as ‘black box’ or input/output driven testing techniques because they view the software as a black box with inputs and outputs.

There is four specification-based or black-box techniques:

∙ Equivalence partitioning

∙ Boundary value analysis

∙ Decision tables

∙ State transition testing

**Q 18. Mention what are the categories of defects?**

**Ans.** Quality control professionals typically classify quality defects into three main categories: minor, major and critical.

**Q 19. Mention what big bang testing is?**

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

Big Bang testing has the advantage that everything is finished before integration testing starts.

The major disadvantage is that in general it is time-consuming and difficult to trace the cause of failures because of this late integration.

**Q 20. What is the purpose of exit criteria?**

**Ans.** The purpose of Exit criteria is to define when we STOP testing either at the END of all testing / END of phase of testing.

**Q 21. When should "Regression Testing" be performed?**

**Ans.** Regression testing should be carried out:

∙ when the system is stable and the system or the environment changes

∙ when testing bug-fix releases as part of the maintenance phase

∙ when change in requirements and code is modified according to the requirement

∙ when new feature is added to the software

∙ Defect fixing

∙ Performance issue fix

**Q 22. What is the 7 key principles? Explain in detail.**

**Ans.** 7key principles are listed below: -

∙ Testing shows presence of Defects:-

Testing can show that defects are present , but cannot prove that there are no defects. Testing reduces the probability of undiscovered defects remaining in the software but, even if no defects are found, it is not a proof of correctness.

∙ Exhaustive Testing is Impossible! :-

Testing everything including all combinations of inputs and preconditions is not possible. So, instead of doing the exhaustive testing we can use risks and priorities 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.

∙ 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’.

∙ 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. 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 is 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’s needs and expectations then finding and fixing defects does not help. If we build a system and, in doing so, find and fix defects. It doesn’t make it a good system. Even after defects have been resolved it may still be unusable and/or does not fulfil the users needs and expectations.

**Q 23. Difference between QA v/s QC v/s Testing.**

**Ans.**

|  |  |  |
| --- | --- | --- |
| **QA (Quality**  **Assurance)** | **QC (Quality**  **Control)** | **TESTING** |
| Process oriented activities. | Product oriented activity. | Product oriented activity. |
| Preventive activities. | It is a corrective process. | It is a preventive process. |
| It is a subset of STLC. | It can be considered as the subset of QA. | Testing is the subset of QC. |

**Q 24. Difference between Smoke and Sanity?**

**Ans.**

|  |  |
| --- | --- |
| **Smoke Testing** | **Sanity Testing** |
| 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. |
| This testing is performed by the developers or testers. | This testing is usually performed by testers. |
| Smoke testing is usually documented or scripted. | Sanity testing is usually not documented and unscripted. |
| Smoke testing is a subset of regression testing. | Sanity testing is a subset of acceptance testing. |
| Smoke testing exercises the entire system from end to end. | Sanity testing exercises only the particular component of the entire system. |
| Smoke testing is like general health check up. | Sanity testing is like specialised health check up. |

**Q 25. Difference between verification and Validation.**

**Ans.**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Verification** | **Validation** |
| Definition | The process of evaluating work-products of a development phase to determine whether they meet the specified requirements for that phase. | The process of evaluating software during or at the end of the development process to determine whether it satisfies specified business requirements. |
| Objective | To ensure that the product is being built according to the requirements and design specifications. In other words, to ensure that work products meet their specified requirements. | To ensure that the product actually meets the user’s needs and that the specifications were correct in the first place. In other words, to demonstrate that the product fulfils its intended environment. |
| Evaluation items | Plans, requirement specs, design specs, code, test cases. | The actual product / software. |
| Activities | Reviews walkthroughs inspections. | Testing. |

**Q 26. Explain types of performance testing.**

**Ans.** Types of Performance Testing:-

• Load testing

• Stress testing

• Endurance testing

• Spike testing

• Volume testing

• Scalability testing

**Q 27. What is Error, Defect, Bug and failure?**

**Ans.** Error - A mistake in coding is called error.

Defect - Error found by tester is called defect.

Bug - Defect accepted by development team then it is called bug.

Failure – when the build does not meet the requirements then it is called failure.

**Q 28. Difference between Priority and Severity.**

**Ans.**

|  |  |
| --- | --- |
| **Priority** | **Severity** |
| Priority is associated with scheduling. | Severity is associated with functionality. |
| It indicate how soon the bug should be fixed. | It indicate the seriousness of defect. |
| Priority of defect is consultation with the client. | QA engineer determine the severity level. |
| Priority is driven by business level. | Severity is driven by functionality. |
| Priority levels are: Critical, high, medium, low. | Severity levels are: Critical, major, minor, moderate & Cosmetic. |

**Q 29. What is Bug Life Cycle?**

**Ans.** The bug life cycle is nothing but the various phases a bug undergoes after it is raised or reported.

The different phases of the Bug life cycle are: -

• New or Opened

• Assigned

• Fixed

• Tested

• Closed

**Q 30. Explain the difference between Functional testing and Non-functional**

**testing.**

**Ans.**

|  |  |
| --- | --- |
| **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 how good the product works. |
| Easy to do manual testing. | Tough to do manual testing. |

**Q 31. To create HTL & Test-case of**

1. **(Instagram, Facebook) only 1st page**
2. **Facebook login page.**

**Ans.**

[**https://1drv.ms/x/s!Av7iCNQmdo9agSE7lY\_sR7s6MQdY**](https://1drv.ms/x/s!Av7iCNQmdo9agSE7lY_sR7s6MQdY)

**Q 32. What is the difference between STLC & SDLC.**

**Ans.** The

|  |  |  |
| --- | --- | --- |
|  | **SDLC** | **STLC** |
| Definition | SDLC is a structure imposed of a development of software product that defines the process for planning, implementation, design, deployment, testing and ongoing maintenance & support | STLC is a set of steps used to test software products |
| Phases | 1. Requirement Gathering  2. Analysis  3. Design  4. Implementation  5. Testing  6. Maintenance | 1. Requirement Analysis  2. Test Planning  3. Test Case Development  4. Test Environment Set Up  5. Test Execution  6. Test Cycle Closure |
| By Whom | SDLC phase is carried out by Software Development Team | STLC Phases are carried out by software testing team |
| Goal | Goal of SDLC is to complete successful development of software | Goal of STLC is to complete successful testing of software |
| Relation | SDLC is mainly related to software development | STLC is mainly related to software testing |

**Q 33. What is the difference between test scenarios, test cases and test script ?**

**Ans.**

|  |  |  |
| --- | --- | --- |
| **Test scenario** | **Test case** | **Test script** |
| A scenario is any functionality that can be tested. It is also called test condition, or test possibility. | Test cases involve the set of steps, conditions and inputs which can be used while performing the testing tasks. | A set of sequential instruction that detail how to execute a core business function. |
| Test scenarios ensure that the business processes and flows are as per the functional requirements. | Test cases are powerful artifacts that are beneficial for future teammates, as well as a good source of knowing how a system and particular feature works. |  |
| Test Scenario is developed in form of document. | Test case is developed in form of templates. | Test script is developed in form of scripting. |
| Requires less time | Requires more resources and time. | Requires less time for testing scripts. |
|  | Test Case is a manual approach of software testing. | Test Script is an automatic approach of software testing. |

**Q 34. Explain what Test Plan is? What is the information that should be covered.**

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

\* Determining the scope and risks, and identifying the objectives of testing. Defining the overall approach of testing (the test strategy), including the definition of the test levels and entry and exit criteria.

**Q 35. What is priority?**

**Ans.** Priority refers to how quickly the fault should be rectified and how much it affects the business aspects of the software.

**Q 36. What is severity?**

**Ans.** Severity refers to how important the flow is to the product’s functionality and how much it affects the technical aspects of the software.

**Q 37. Bug categories are…**

**Ans.** Security, Database, Functionality(Critical/General), UI

**Q 38. Advantages of bugzila.**

**Ans.**

**•** It is easy to use & maintain

• Bugzilla can track our bugs that are generated during development

• Bug search criteria Is very efficient

**Q 39. What are the different Methodologies in Agile Development Model?**

**Ans.** There are various methodologies present in agile testing and those are listed below:

Scrum, Kanban, Lean & Extreme Programming (XP)

**Q 40. Explain the difference between Authorization and Authentication in Web testing. What are the common problems faced in Web testing?**

**Ans.**

|  |  |
| --- | --- |
| **Authentication** | **Authorization** |
| Authentication is the process of identifying a user to provide access to a system | Authorization is the process of giving permission to access the resources. |
| It is usually performed before the authorization | It is usually done once the user is successfully authenticated |
| Ex. Entering login details is necessary for the employees to authenticate themselves to access the organizational emails or software | Ex. After employees successfully authenticate themselves, they can access and work on certain functions only as per their work & profiles. |
| Data is provided through Token IDs | Data is provided through access token |
| It requires login details of the user, such as user name & password etc. | It requires the user’s privilege or security level. |

**Q 47. When to used usability testing?**

**Ans.** Usability Testing identifies usability errors in the development cycle and can save a product from failure.

• Which icon or jargon represents what?

• Which page needs to be navigated

• Error message are not consistent or effectively displayed Session time not sufficient.

**Q 48. What is the procedure for GUI testing?**

**Ans.** GUI testing involves checking the screens with the conrols like menus, buttons, icons and all types of bars-Tool bar, menu bar, dialogue boxes and windows etc..

**Q 41. To create HLR & Test Cases of web based ( WhatsApp, Instagram).**

**Ans.**

[**https://1drv.ms/x/s!Av7iCNQmdo9agR941zGNaFBI0vSd**](https://1drv.ms/x/s!Av7iCNQmdo9agR941zGNaFBI0vSd)

**Q 42. To create HLR and test case on Art of testing.**

**Ans.**

[**https://1drv.ms/x/s!Av7iCNQmdo9agSNr4mmkqzkZfO7b**](https://1drv.ms/x/s!Av7iCNQmdo9agSNr4mmkqzkZfO7b)

**Q 43. Write a scenario of only WhatsApp chat messages.**

**Q 44. Write a scenario of pen.**

**Q 45. Write a scenario of pen stand.**

**Q 46. Write a scenario of Door.**

**Q 49. Write a scenario of ATM.**

**Q 50. Write a scenario of microwave oven.**

**Q 51. Write a scenario of coffee vending machine.**

**Q 52. Write a scenario of chair.**

**Q 53. Write a scenario of gmail ( receiving mail).**

**Q 54. Online shopping to buy product ( flip cart ).**

**Q 55. Write a scenario of wrist watch.**

**Q 56. Write a scenario of lift ( elevator ).**

**Q 57. Write a scenario of WhatsApp group ( generate group).**

**Q 58. Write a scenario of WhatsApp payment.**

**Ans.** of 43 to 46 and 49 to 58

<https://1drv.ms/x/s!Av7iCNQmdo9agR2HQS1DkeP3jLPV>