Software Testing Assignment

Module–2(Manual Testing)

q-1) What is Exploratory Testing?

Ans- Exploratory testing is an approach to software testing that emphasizes simultaneous learning, test design, and test execution. Unlike traditional scripted testing, where testers follow predefined test cases, exploratory testing allows testers to dynamically design and execute tests based on their understanding and investigation of the application.

q-2)What is traceability matrix?

Ans- A traceability matrix is a document, usually in the form of a table, that helps ensure the completeness and consistency of a project by mapping and tracking the relationships between various elements within the project. It is commonly used in software development and project management to connect requirements, test cases, and defects, among other things.

q-3 What is Boundary value testing?

Ans- Boundary value testing (BVT) is a type of software testing technique that focuses on the values at the boundaries of input domains rather than those within the range. It is based on the principle that errors often occur at the edges of input ranges, making boundary values more likely to uncover defects than other values within the range.

Q4 What is Equivalence partitioning testing?

Ans- Equivalence Partitioning Testing (EPT) is a software testing technique that divides input data into partitions or classes where test cases can be derived. Each partition is expected to be treated similarly by the system, meaning that if one test case in a partition works correctly, all other test cases in that partition are also expected to work correctly. This method helps reduce the number of test cases needed while maintaining effective test coverage.

Q 5 What is Integration testing?

Ans- Integration testing is a level of software testing where individual units or components are combined and tested as a group to identify issues that occur when these units interact. The primary goal of integration testing is to verify that different modules or services in an application work together as expected.

Q 6 What determines the level of risk?

**Ans-** The level of risk in any context, including project management, software development, or other business processes, is determined by two primary factors:

1. **Probability of Occurrence**: The likelihood that a particular risk event will happen.
2. **Impact**: The potential consequences or severity of the effect if the risk event occurs.

Q7What is Alpha testing?

Ans- Alpha testing is a type of software testing performed to identify bugs before releasing the product to real users or the public. It is typically conducted by internal employees or a select group of users within the organization that developed the software. The primary goal of alpha testing is to refine the product by catching and fixing bugs, usability issues, and other defects early in the development process.

Q8 What is beta testing?

Ans - Beta testing is a type of software testing conducted after alpha testing and before the official release of the product. It involves real users outside the organization that developed the software, allowing them to use the product in real-world conditions. The primary goal of beta testing is to identify any remaining issues, bugs, or usability problems that were not discovered during the earlier testing phases.

Q9 What is component testing?

Ans- Component testing, also known as unit testing or module testing, is a software testing technique that focuses on testing individual components or units of code in isolation. The goal of component testing is to verify that each component or module functions correctly and meets its specified requirements.

Q10 What isfunctional system testing?

Ans- Functional system testing is a software testing technique that evaluates the behavior of a complete and integrated software system against its specified functional requirements. It involves testing the system as a whole to ensure that all individual components work together seamlessly and that the system meets the desired functionality outlined in the requirements.

Q11 What is Non-Functional Testing?

Ans- Non-functional testing is a type of software testing that focuses on evaluating the non-functional aspects of a software system, such as performance, usability, reliability, scalability, security, and compatibility. Unlike functional testing, which verifies specific functions and features, non-functional testing assesses how well the system performs under various conditions and constraints.

Q12 What is GUI Testing?

ans - GUI testing, or Graphical User Interface testing, is a type of software testing that focuses on verifying the functionality, usability, and visual appearance of the graphical user interface (GUI) of a software application. The GUI is the part of the software that users interact with directly, including windows, buttons, menus, forms, icons, and other graphical elements.

Q13 What is Adhoc testing?

Ans-   
Ad hoc testing is an informal and spontaneous software testing technique that involves testing the software application without any predefined test cases or formal test plans. Testers perform ad hoc testing based on their intuition, experience, and knowledge of the system to identify defects, explore functionalities, and evaluate system behavior in an unstructured manner.

Q14 What is load testing?

Ans-   
Load testing is a type of software testing that assesses how well a system can handle a specific workload or level of activity. The goal is to evaluate the system's performance under expected and peak load conditions, identify bottlenecks, and ensure that it meets performance requirements.

Q15 What is stress Testing?

Ans- Stress testing is a type of software testing that evaluates the stability, robustness, and reliability of a system under extreme or beyond-normal load conditions. The goal is to identify how the system behaves when subjected to stress levels that exceed its design specifications or expected operating conditions.

Q16 What is white box testing and list the types of white box testing?

Ans- White box testing, also known as clear box testing, glass box testing, transparent box testing, and structural testing, is a method of testing software that involves looking inside the application's code and structure. The goal is to validate the internal workings of the application, such as code logic, pathways, and conditions. This contrasts with black box testing, which focuses on testing the functionality of the software without knowing its internal workings.

Q17 What is black box testing? What are the different black box testing techniques?

Ans-Black box testing is a method of software testing that examines the functionality of an application without peering into its internal structures or workings. This type of testing focuses on the input and output of the software system, ensuring that the software behaves as expected. Testers are not concerned with how the code is implemented but rather with what the software does. This contrasts with white box testing, which involves looking at the internal code structure.

Q18 Mention what are the categories of defects?

Ans- Defects in software can be categorized in various ways based on different criteria such as their nature, severity, impact, and the phase of development in which they are introduced or detected. Here are some common categories of defects

Q19 Mention what bigbang testing is?

Ans- Big Bang Testing is an approach to integration testing where all the components or modules of a software system are integrated simultaneously, rather than incrementally. Once all the modules are integrated, the entire system is tested in one go to verify its functionality, performance, and behavior.

Q20 What is the purpose of exit criteria?

Ans- Exit criteria are a set of conditions or requirements that must be met before a specific phase of the software development or testing process can be considered complete. They serve as a checklist to ensure that all necessary tasks have been completed and that the product meets the required quality standards. Exit criteria help to manage and control the progress of a project by providing a clear definition of when a particular activity can be considered done.

Q21 When should "Regression Testing" be performed?

Ans- Regression testing is a crucial aspect of the software testing process, performed to ensure that recent code changes have not adversely affected existing functionality. Here are the specific scenarios when regression testing should be performed

Q22 What is 7 key principles? Explain in detail?

Ans- : The principles of software testing guide testers to effectively and efficiently find defects and ensure the quality of software. These principles help to maximize the efficiency of the testing process. Here are the seven key principles of software testing, explained in detail

Q23 Difference between QA v/s QC v/s Tester

Ans - Understanding the distinctions between Quality Assurance (QA), Quality Control (QC), and the role of a Tester is essential for effective software development and testing. Here are the detailed differences:

Q24 Difference between Smoke and Sanity?

Ans- Smoke testing and sanity testing are both subsets of testing that aim to quickly evaluate the basic functionality of an application. However, they serve different purposes and are applied at different stages of the software testing lifecycle. Here are the detailed differences between smoke testing and sanity testing:

Q25 Difference between verification and Validation

Ans-   
Verification and validation are both essential parts of the software testing and quality assurance process, but they focus on different aspects and occur at different stages of development. Here’s a detailed comparison:

Q26 Explain types of Performance testing.

Ans-   
Performance testing is a crucial aspect of software testing that focuses on evaluating the performance characteristics of a software application under various conditions. Here are the types of performance testing commonly Load testing

Q27 What is Error, Defect, Bug and failure?

AnsIn essence, errors are human actions that lead to defects, which in turn may result in bugs that cause failures when the software is in use. Identifying and resolving defects and bugs are crucial steps in ensuring software quality and reliability.

Q28 Difference between Priority and Severity

* Ans- **Priority** is about managing resources and deciding which bugs to address first based on business needs and timelines.
* **Severity** is about understanding the technical impact of bugs on the software's functionality, regardless of business priorities.
* Both Priority and Severity are important in bug tracking and management, as they help prioritize bug fixes and ensure critical issues are addressed promptly.

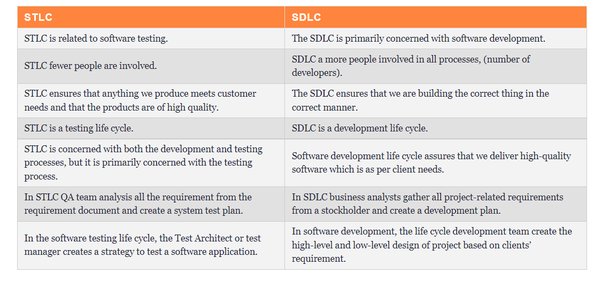
Q29 What is Bug Life Cycle?

Ans-   
The Bug Life Cycle, also known as the Defect Life Cycle, describes the stages that a bug or defect goes through from discovery to resolution. It is a standardized process followed by software development and testing teams to track and manage bugs effectively. Here are the typical stages in the Bug Life Cycle:

Q30 Explain the difference between Functional testing and NonFunctional testing

* Ans- **Functional Testing** verifies that the software functions as intended and meets the specified functional requirements.
* **Non-Functional Testing** evaluates the quality attributes of the software, such as performance, usability, security, and reliability, under various conditions.
* Both types of testing are crucial for ensuring the overall quality and effectiveness of a software system.

Q31 What isthe difference between the STLC (Software Testing Life Cycle) and SDLC (Software Development Life Cycle)?

Ans - 

Q 32 What is the difference between test scenarios, test cases, and test script?

Ans - A test scenario is any functionality that a software testing company can examine. It is also called a Test Condition or Test Possibility. A test case is a document that lists the steps a QA engineer needs to execute. A test script is a short program written in a programming language.

q 33 Explain what Test Plan is? What isthe information that should be covered.

Ans A test plan is a document that outlines the objectives, resources, and processes for testing a software or hardware product. It acts as a roadmap for the testing process and provides guidance for testers and stakeholders.

* Purpose

A test plan provides clarity about the necessary tests to ensure a product functions properly. It's a project management plan that includes an overview, scope, methodology, resources, schedule, risks, and communication plan.

Q34 What is priority?

Ans- In software testing, priority refers to the urgency with which a defect needs to be fixed, based on its impact on the business or the project timeline. It also determines the order in which developers fix bugs and helps allocate resources

Q35 What is severity?

Ans - in software testing, severity is a measure of how much a bug or error affects an application or system's functionality, performance, or stability. Bugs with a higher severity score are more disruptive and could have a greater impact on the software's operational capability. For example, a bug that prevents an application from starting would be considered highly severe because it prevents users from using the application

Q36 Bug categories are…

Ans –

Functional bugs

Unit-level bugs

Syntax errors

Q37 Advantage of Bugzila .

Ans –

* Track code changes and bug fixes
* Improve communication
* Simplify defect tracking
* Reduce deployment delays
* Prevent app downtime
* Plan, organize, and release software

Q38 Difference between priority and severity

Ans - Priority is a term that defines how fast we need to fix a defect. Severity is basically a parameter that denotes the total impact of a given defect on any software. Priority is a parameter that decides the order in which we should fix the defects. Severity relates to the standards of quality.

Q39 What are the different Methodologies in Agile Development Model?

* Ans Scrum: Ideal for projects with changing requirements, using short sprints of 1-2 weeks.
* Kanban: Visualizes project progress and is good for tasks requiring consistent output.
* Lean: Streamlines processes to eliminate waste and prioritize customer value.
* Extreme Programming (XP): Improves software quality and responsiveness to customer satisfaction.
* Adaptive Project Framework (APF): Works well for projects with unclear details, as it adapts to evolving client needs.
* Dynamic Systems Development Method (DSDM): Focuses on the entire software development lifecycle, allowing project requirements to change mid-stream.
* Feature Driven Development (FDD): Uses a short-iteration model and is intended for use by large teams

Q40 • Explain the difference between Authorization and Authentication in Web testing.What are the common problems faced in Web testing?

Ans - Authentication is the process of verifying the identity of an individual. A user can interact with a web application using multiple actions. Access to specific resources can be restricted by using user levels. Authorization is the process of controlling user access via assigned roles and privileges.