Module-2 (manual testing)

**1What is Exploratory Testing?**

->Exploratory testing is anapproachto software testing that is often described as simultaneous learning, test design, and execution. It focuses on discovery and relies on the guidance of the individual tester to uncover defects that are not easily covered in the scope of other tests.

**2What is traceability matrix?**

->A traceability matrix in software testing — otherwise known as a test matrix — is used to prove that tests have been run. It documents test cases, test runs, and test results. Requirements and issues may also be used in a test matrix.

**3What is Boundary value testing?**

->Every partition has its maximum and minimum values and these maximum and minimum values are the boundary values of a partition.

**4What is Equivalence partitioning testing?**

->Equivalence Partitioning Method is also known as Equivalence class partitioning (ECP). It is a software testing technique or black-box testing that divides input domain into classes of data, and with the help of these classes of data, test cases can be derived.

**5• What is Integration testing?**

->Integration testing -- also known as integration and testing (I&T) -- is a type of software testing in which the different units, modules or components of a software application are tested as a combined entity. However, these modules may be coded by different programmers.

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

->Risk Analysis must take into consideration the sensitivity of data processed and stored by the system, as well as the likelihood and impact of potential threat events. We use a simple methodology to translate these probabilities into risk levels and an overall system risk level.

**7What is Alpha testing?**

->Alpha testing is the initial phase of validating whether a new product will perform as expected. Alpha tests are carried out early in the development process by internal staff and are followed up with beta tests, in which a sampling of the intended audience actually tries the product out.

**8What is beta testing?**

->In software development, a beta test is the second phase of software testing in which a sampling of the intended audience tries the product out. Beta is the second letter of the Greek alphabet. Originally, the term alpha test meant the first phase of testing in a software development process.

**9What is component testing?**

->Component testing, also known as program or module testing, is done after unit testing. In this type of testing those test objects can be tested independently as a component without integrating with other components e.g. modules, classes, objects, and programs. This testing is done by the development team.

**10What is functional system testing?**

->Functional testing is a type of testing that seeks to establish whether each application feature works as per the software requirements. Each function is compared to the corresponding requirement to ascertain whether its output is consistent with the end user's expectations.

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

->Non-functional testing assesses application properties that aren't critical to functionality but contribute to the end-user experience. Performance and reliability under load aren't functional components of a software system but can certainly make or break the user experience

**12What is GUI Testing?**

->Graphical User Interface Testing (GUI) Testing is the process for ensuring proper functionality of the graphical user interface (GUI) for a specific application

**13What is Adhoc testing?**

->Adhoc testing is a type of software testing which is performed informally and randomly after the formal testing is completed to find out any loophole in the system. For this reason, it is also known as Random testing or Monkey testing.

**14What is load testing?**

->Load testing is the process of subjecting a computer, peripheral, server, network or application to a work level approaching the limits of its specifications.

**15What is stress Testing?**

Stress testing is the process of determining the ability of a computer, network, program or device to maintain a certain level of effectiveness under unfavorable conditions. The process can involve quantitative tests done in a lab, such as measuring the frequency of errors or system crashes.

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

-> white box testing which also known as glass box is testing, structural testing, clear box testing, open box testing and transparent box testing. It tests internal coding and infrastructure of a software focus on checking of predefined inputs against expected and desired outputs.

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

->Black box testing is a software testing methodology in which the tester analyzes the functionality of an application without a thorough knowledge of its internal design. Conversely, in white box testing, the tester is knowledgeable of the internal design of the application and analyzes it during testing..

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

->Common Types of Defects

* Arithmetic Defects.
* Logical Defects.
* Syntax Defects.
* Multithreading Defects.
* Interface Defects.
* Performance Defects.

**19Mention what bigbang testing is?**

->Big Bang Integration Testing is an integration testing strategy wherein all units are linked at once, resulting in a complete system.

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

->Exit criterion is used to determine whether a given test activity has been completed or NOT. Exit criteria can be defined for all of the test activities right from planning, specification and execution. Exit criterion should be part of test plan and decided in the planning stage.

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

->Regression testing is done after functional testing has concluded, to verify that the other functionalities are working. In the corporate world, regression testing has traditionally been performed by a software quality assurance team after the development team has completed work.

**22What is 7 key principles? Explain in detail?**

1. Testing shows presence of defects
2. Exhaustive testing is not possible
3. Early testing
4. Defect clustering
5. Pesticide paradox
6. Testing is context dependent
7. Absence of errors fallacy

**1Testing 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, testing is not a proof of correctness.

**2Exhaustive testing is not possible=** It is not possible to perform complete testing or exhaustive testing. For most of the systems, it is near impossible because of the following reasons: The domain of possible inputs of a program is too large to be completely used in testing a system. There are both valid inputs and invalid inputs

**3Early testing=** Early Testing: To find the defect in the software, early test activity shall be started. The defect detected in the early phases of SDLC will be very less expensive.

**4Defect clustering=**  Bugs are not often distributed evenly throughout an application. Defect clustering simply means that a small number of features have caused the majority of quality issues in an application

**5 Pesticide paradox=**  Pesticide paradox: If the same kinds of tests are repeated again and again, eventually the same set of test cases will no longer be able to find any new bugs.

**6Testing is context dependent=** The testing approach depends on the context of the software developed. Different types of software need to perform different types of testing. For example, The testing of the e-commerce site is different from the testing of the Android application.

**7Absence of errors fallacy=** If your software or system is unusable (or does not fulfill users' wishes) then it does not matter how many defects are found and fixed – it is still unusable.

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

=> While QA testing focuses on providing assurance that quality requested will be achieved, QC testing focuses on fulfilling the quality requested. QA focuses on preventing defect while QC focuses on identifying the defect

**24Difference between Smoke and Sanity?**

=>Smoke Testing is performed to ascertain that the critical functionalities of the program are working fine. Sanity testing is done at random to verify that each functionality is working as expected

**25Difference between verification and Validation**

=> Verification is a process of determining if the software is designed and developed as per the specified requirements. Validation is the process of checking if the software (end product) has met the client's true needs and expectations

**26Explain types of Performance testing.**

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

=>We can say that a mistake made by a programmer during coding is called an error, an error found during the unit testing in the development phase is called a defect, an error found during the testing phase is called a bug and when an error is found at an end user's end is called as the failure

**28Difference between Priority and Severity**

=> **Severity**  
Severity is defined as the extent to which a particular defect can create an impact on the software. Severity is a parameter to denote the implication and the impact of the defect on the functionality of the software.

**Priority**  
Priority is defined as parameter that decides the order in which a defect should be fixed. Defect having the higher priority should be fixed first.

**29What is Bug Life Cycle?**

=>Defect life cycle, also known as Bug Life cycle is the journey of a defect cycle, which a defect goes through during its lifetime. It varies from organization to organization and also from project to project as it is governed by the software testing process and also depends upon the tools used.

**30Explain the difference between Functional testing and NonFunctional testing**

=> Functional testing ensures that functions and features of the application work properly. Non-functional testing examines other aspects of how well the application works. Functional testing tests the functionality of an app. Non-functional testing tests the performance of these functions