**1 What is software testing?**

A- the process of evaluating and verifying that a software product or application does what it is supposed to do.

**2 What is Exploratory Testing?**

**A-** Exploratory Testing is directed from requirements and exploring during testing.

1 Determination of test cases during testing.

2 Investigation of system or application.

3 Emphasizes on adaptability and learning.

4 Involves Investigation.

5 Is about Improvement of test design.

**3 What is traceability matrix?**

**A-** Traceability Matrix (also known as Requirement Traceability Matrix - RTM) is a table which is used to trace the requirements during the Software development life cycle. It can be used for forward tracing (i.e. from Requirements to Design or Coding) or backward (i.e. from Coding to Requirements).

**4 What is Boundary value testing?**

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

**5 What is Equivalence partitioning testing?**

**A-** 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.

**6 What is Integration testing?**

**A-** Integration Testing is a level of the software testing process where individual units are combined and tested as a group. It is performed to expose defects in the interfaces and in the interactions between integrated components or systems.

There are 2 levels of Integration Testing

∙ Component Integration Testing

∙ System Integration Testing

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

**A-** The likelihood of an adverse event and the impact of the event.

**8 What is Alpha testing?**

A- A testing technique is used to test the business functionality or business logic of the application in an end-to-end manner, in much the same way a User or an operator might interact with the system during its normal use.

It is always performed by the developers at the software development site. Sometimes it is also performed by an Independent testing team.

It is considered User Acceptance Testing (UAT) which is done at the developer’s area. Unit testing, integration testing and system testing when combined are known as alpha testing.

**9 What is beta testing?**

**A-** Beta Testing (field testing) is performed and carried out by users or you can say people at their own locations and site using customer data. Beta Testing is always performed at the time when software products and projects are marketed. Beta testing can be considered “pre-release” testing.

**10 What is component testing?**

1. Component (Unit) is a minimal software item that can be tested in isolation. It means “A unit is the smallest testable part of software.” It is the testing of individual software components.

Unit Testing is a level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed.

**11 What is functional system testing?**

**A-** 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

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

**A-** The non-functional aspects of a system are all the attributes other than business functionality and are as important as the functional aspects. These include:

∙ the look and feel and ease of use of the system

∙ how quickly the system performs

∙ how much the system can do for the user

It is also about:

∙ how easy and quick the system is to install

∙ how robust it is

∙ how quickly the system can recover from a crash

**13 What is GUI Testing?**

**A-** The process of testing a product that uses a graphical user interface, to ensure it meets its written specifications. This is normally done by the testing teams.

**14 What is Adhoc testing?**

**A-** Adhoc testing is an informal testing type with the aim to break the system. It does not follow any test design techniques to create test cases. In fact, it does not create test cases altogether. Adhoc testing can be achieved with the testing technique called Error Guessing. Error guessing is a technique where experienced and good testers are encouraged to think of situations in which the software may not be able to cope.

There are different types of Adhoc testing and they are listed below:

∙ Buddy Testing

∙ Pair testing

∙ Monkey Testing

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

A- 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  
 **16 What is black box testing?**

**A-** Black-box testing, either functional or non-functional, without reference to the internal structure of the component or system. The testers have no knowledge of how the system or component is structured inside the box. In black-box testing the tester is concentrating on what the software does, not how it does it.

**A-17 What are the different black box testing techniques?**

**A-** There is four specification-based or black-box techniques:  
 ∙ Equivalence partitioning

∙ Boundary value analysis  
 ∙ Decision tables  
 ∙ State transition testing  
 ∙ Use-case Testing  
 ∙ Other Black Box Testing  
 ∙ Syntax or Pattern Testing

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

**A-**  Quality control professionals typically classify quality defects into three main categories: minor, major and critical.  **19 Mention what big bang testing is?**

**A-** 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. Here all components are integrated together at once and then tested.

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

**A-** The purpose of exit criteria is: -

∙ To check the test logs against the exit criteria specified in test planning.

∙ To assess if more tests are needed or if the exit criteria specified should be changed.

∙ To write a test summary report for stakeholders.

∙ If the exit criteria have not been met

∙ Assess if more tests are needed

∙ Assess which test activities may need to be repeated

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

**A-** 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

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

**A-** **7 key 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 fulfill the user’s needs and expectations then finding and fixing defects does not help. Even after defects have been resolved it may still be unusable and/or does not fulfil the users’

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

**A- ∙** QA activities ensure the implementation of processes, procedures and standards in context to verification of developed software and intended requirements While QC activities which ensure the verification of developed software with respect to documented (or not in some cases) requirements. And tester activities which ensure the identification of bugs/errors/defects in the Software.

**∙** QA focuses on processes and procedures rather than conducting actual testing on the system. QC focuses on actual testing by executing Software with intent to identify bugs/defects through the implementation of procedures and processes. While the tester focuses on actual testing.

**∙** QA is a preventive activity. QC does a corrective process while the tester does a preventive process.

**∙** QA is a subset of the Software Test Life Cycle (STLC). QC can be considered as the subset of Quality Assurance. Testing is the subset of Quality Control.

**24 Difference between Smoke and Sanity?**

**A-** ∙ Smoke Testing is performed to ascertain that the critical functionalities of the program are working fine while Sanity Testing is done to check the new functionality/bugs have been fixed.

∙The objective of Smoke testing is to verify the "stability" of the system in order to proceed with more rigorous testing while The objective of the sanity testing is to verify the "rationality" of the system in order to proceed with more rigorous testing.

∙Smoke testing is performed by the developers or testers while Sanity testing is usually performed by testers.

∙Smoke testing is usually documented or scripted while Sanity testing is usually not documented and is unscripted.

∙Smoke testing is a subset of Regression testing while Smoke testing is a subset of Regression testing.

∙Smoke testing exercises the entire system from end to end while Sanity testing exercises only the particular component of the entire system.

∙Smoke testing is like a General Health Check Up while Sanity Testing is like a specialized health check up.

**25 Difference between verification and Validation.**

**A-** ∙ Verification is the process of evaluating work products (not the actual final product) of a development phase to determine whether they meet the specified requirements for that phase while Validation is the process of evaluating software during or at the end of the development process to determine whether it satisfies specified business requirements.

∙ The objective of the verification phase is 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. While objective of the validation phase is 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 use when placed in its intended environment.

**026 Explain types of Performance testing.**

Types of Performance Testing:-

\* Load testing

\* Stress testing

\* Endurance testing

\* Spike testing

\* Volume testing

\* Scalability testing

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

**A-** Error: – It is the Deviation between the actual and the expected value.

Defect: – It is found in the product itself after it is shipped to the respective customer.

Bug: – It is found in the development environment before the product is shipped to the respective customer.

Failure: - It is a ‘Deviation of the component or system from its expected delivery, service or result’

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

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

**29 What is Bug Life Cycle?**

**A-** 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

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

**testing.**

Functional testing is performed using the functional specification provided by the client and verifies the system against the functional requirements while Non-Functional testing checks the Performance, reliability, scalability and other non-functional aspects of the software system.

∙ Functional testing is executed first while Non-functional testing should be performed after functional testing.

∙ Manual testing or automation tools can be used for functional testing while Using tools will be effective for Non-functional testing.

∙ Business requirements are the inputs to functional testing while Performance parameters like speed and scalability are inputs to non-functional testing.

∙ Functional testing describes what the product does while Non-functional testing describes how good the product.

∙ Functional testing works Easy to do manual testing while Non-functional testing is tough to do manual testing.

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**A-** [Instagram and facebook test cases&HLR.xlsx](https://docs.google.com/spreadsheets/d/11iE3eTSp7BQq5U4oufiRMk9TyKPi17gc/edit?usp=sharing&ouid=102014073353504257351&rtpof=true&sd=true)

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

**A-STLC (Software Testing Life Cycle) :-**STLC is a process used to test software and ensure that quality standards are met. Tests are carried out systematically over several phases. During product development, phases of the STLC may be performed multiple times until a product is deemed suitable for release. Stages of STLC Fundamental are Test Planning and Controlling Test Analysis and Design Test Implementation and Execution Evaluating Exit Criteria and Reporting Test Closure Activities.

**SDLC (Software Development Life Cycle):-** SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing maintenance and support. There are a number of different development models. A Software Development Life Cycle is essentially a series of steps, or phases, that provide a model for the development and lifecycle management of an application or piece of software.

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

**A-**  **Test scenarios:-** A Scenario is any functionality that can be tested. It is also called Test Condition, or Test Possibility. Test Scenario is ‘What to be tested’ Test scenario is nothing but test procedure. The scenarios are derived from use cases. Test Scenario represents a series of actions that are associated together. Scenario is thread of operations .

**Test cases:-** Test cases involve the set of steps, conditions and inputs which can be used while performing the testing tasks. Test Case is ‘How to be tested’ Test case consist of set of input values, execution precondition, expected Results and executed post-condition developed to cover certain test Condition. Test cases are derived from test scenario.

**Test script:-** The Test Procedures Specification specifies the sequence of actions for a test, i.e. one or more Test Cases It is also known as a Test Script The Test Script can be manual or automated.

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

**A-**  **Test Plan :-** 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.

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

**A-** There are various methodologies present in agile testing and those are listed below:

**\* Scrum**

**\* eXtreme Programming**

Below listed methodologies are used less frequently:

**Dynamic System Development Method (DSDM):-** This is an Iterative and incremental approach that emphasizes the continuous user involvement.

**Test Driven Development (TDD):-** This is a technique which has short iterations where new test cases covering the desired improvement or new functionality are written first.

**Feature Driven Development:-**  This is an iterative and incremental software development process and this can aim depending on the features.

**XBreed:-** Agile enterprise previously known as Xbreed .It is an agile way of managing, architecting and monitoring the enterprise.

**Crystal Crystal:-**  is an adaptive technique mainly used for software development methodologies.

**36 Explain the difference between Authorization and Authentication in Web testing.**

**Ans. Authentication:-** The process of establishing the identity of the user. Authentication can take many forms including but not limited to: passwords, biometrics, radio frequency identification, etc. **Authorization:-** The process of determining that a requester is allowed to receive a service or perform an operation. Access control is an example of authorization.

**37 What are the common problems faced in Web testing?**

**A-** Factors that make Web Application testing challenging:

### Apps should be ADA compliant

### Slow network speed and poor bandwidth

### Firewalls Aspect

### Security of the data

### Limited web testing schedule

### Intranet versus Internet based Applications

### Several Application flows (Ins and outs) are possible

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