**1.What is Exploratory Testing?**

Exploratory Testing technique is concurrent process where test design, execution and login happen simultaneously.

**2. What is traceability matrix?**

Test conditions should be able to be linked back to their sources in the test basis, this is known as traceability.

**3. What is Boundary value analysis testing?**

* Boundary value Analysis (B.V.A) is the process of testing Boundaries of input and output.
* Boundaries like minimum maximum, start end, lower upper etc…
* Values inside Boundaries where called as Boundaries value and testing of it called Boundary value analysis Testing.

Example 1.

customer wants to build box button with min character value 6 and maximum character value 12

|  |
| --- |
| Min 6 Max 12 |

Min 6 Max 12

X-1 X X+1 X-1 X X+1

=5 6 7 11 12 13

Fail Pass Pass Pass Pass Fail

|  |  |
| --- | --- |
| INPUT | OUTPUT |
| ABCDE 5 Character | FAIL No output or proper validation message  B.V.A Testing …No need to test for further 4 character as it boundaries value has been checked |
| 1234567891011 12 Character. | Pass further proceed |
| 12345678910111 13 Character | FAIL No output or proper validation message  B.V.A Testing …No need to test for further 14 character as it boundaries value has been checked |
| 123456 6 Character | Pass further proceed |

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

* Aim is to treat groups of inputs as equivalent and to select one representative input to test them all.
* Test case are designed to cover each partition at least once.
* Applied in all level of testing.
* Aim is to Reduce test case and maximise the coverage.

Example 1\_\_ one company giving bonus of 1000 ₹ to their employee. And giving 2000 ₹ extra to employee who has an experience of 3 year or more. And giving 500 ₹ to employee who got Customer Appreciation (C. A).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Employee name and history | **Adwait**  is on notice period (Resigned) | **Rahul**  Current employee  Experience – 5 year  C.A - No | **Krishna**  Current employee  Experience – 2 year  C.A - Yes | **Raghav**  Current employee  Experience – 1 year  C.A - No |
| Employee | No 0 ₹ | Yes 1000 ₹ | Yes 1000 ₹ | Yes 1000 ₹ |
| Experience  (3 year + exp) | - | Yes 2000 ₹ | No 0 ₹ | No 0 ₹ |
| (C.A) | - | No 0 ₹ | Yes 500 ₹ | No 0 ₹ |

Adwait =0₹ Rahul Krishna Raghav

0 = 3000 ₹ =1500 ₹ 1000 ₹

It check each and every partition at least one. Check each part condition and proceed.

**5. What is Integration testing?**

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

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

* Risk is determined by a combination of Probability and Severity.
* The levels are Low,Medium, High, and Extremely High.

Priority: -

* it is a parameter defines how fast we need to fix defect.

Severity: -

* it is a parameter that defines how badly it will impact on that system.

**7. What is Alpha testing**?

* Alpha Testing is a type of acceptance testing; performed to identify all possible issues and bugs before releasing the final product to the end users

**8. What is beta testing?**

* Beta testing is performed by real users of the software application in real environment and it can be considered as a form of extern User Acceptance testing It is the final test before shipping a product to the customers.

**9. What is component testing?**

* Testing performed to expose defects in the Interfaces and interaction between integrated components.

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

* Testing based on an analysis of the specification of the functionality of a component or system.
* Involves Blackbox testing
* Executed first

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

* Non-Functional Testing is not related to Functionality but testing of behaviour(attribute) of system like reliability, efficiency, usability etc…
* Involves white box testing
* Executed after functional testing

**12.What is GUI Testing?**

* Graphical User Interface (GUI) testing is the process of testing the system’s GUI of the System under Test.
* GUI testing involves checking the screens with the controls like menus, buttons, icons, and all types of bars – tool bar, menu bar, dialog boxes and windows.

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

* Ad hoc testing is an informal type of testing type aim is to break the system.
* Doesn’t follow Test process of SDLC so it doesn’t create testcase.
* Only experienced tester who have high knowledge and deep understanding about testing can perform ad hoc-testing.

**14. What is load testing?**

* It’s a performance testing to check system behaviour under load.
* **Definition: -Testing of stability and response time of application by applying load Which is equal as per designed number of user or less then that.**
* Example: an application is made for 1 million user then testing of application by applying load of 1 million user that is called load testing.

**15. What is stress Testing?**

* System is stressed beyond its specifications to check how and when it fails.
* **Definition: - testing of behaviour of application by applying load greater then desired load.**
* **Example:** customer want application for 1 million user.

testing at 1 million user called load testing.

Testing at 1.5 million user called stress testing.

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

* Testing based on an analysis of the internal structure of the component or system to be know.

**Types of White box Testing**

Statement coverage

Decision coverage

Condition coverage

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

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

**Types of Black box Testing**

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

**18. Mention what big bang testing is?**

* testing of all components or modules is integrated simultaneously, after which everything is tested as a whole.

**19. What is the purpose of exit criteria?**

* Executed Test Cases are documented . All High prioritized bugs fixed and closed . Technical documents to be submitted followed by release Notes.

**20. When should Regression Testing be performed?**

* A new requirement is added to an existing feature.
* A new feature or functionality is added.

**21. What is 7 key principles? Explain in detail?**

**Testing shows presence of Defects** :

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

**Exhaustive Testing is Impossible**:

* Testing everything including all combinations of input sand preconditions is not possible

**Early Testing:**

* Testing activities should start as early as possible in the development lifecycle.
* Testing in early phase can prevent the defect before introduced into the code

**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 overland over again Eventually the same set of test cases will no longer find any new defects

**Testing is Context Dependent**:

* testing is basically context dependent.
* Testing is done differently in different contexts

Example: - testing of e-commerce site is different and testing of facebook app is different.

**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.

**22.Difference between QA v/s QC v/s Tester**

|  |  |  |  |
| --- | --- | --- | --- |
| No | QA | QC | Tester |
| 1 | Focuses on procedures rather than actual testing | Focuses on testing by identify bugs/defects through implementation of process and procedures | Focuses on actual testing |
| 2 | Process oriented activities | Product oriented activities | Product oriented activities |
| 3 | It is Preventive process | It is Corrective process | It is Preventive process |
| 4 | It is subset of Software test lifecycle (STLC) | It is subset of QA | It is subset of QC |

**23. Difference between Smoke and Sanity?**

|  |  |  |
| --- | --- | --- |
| No | Smoke testing | Sanity testing |
| 1 | Smoke testing is a testing of critical functionality perform on post software build | Sanity testing is testing of new functionality and testing that bugs have been fixed and n further issues are introduced due to change in code. |
| 2 | It is usually documented or scripted | It is usually not documented or un-scripted |
| 3 | It is a subset of Regression testing | It is a subset of Acceptance testing |

**24. Difference between verification and Validation**

|  |  |  |
| --- | --- | --- |
| No | Verification | validation |
| 1 | Verification can be define as evaluating system (software application) whether it meets specify requirement or not **in development phase** | Verification can be define as evaluating system (software application) whether it meets specify requirement or not **at the end of development phase** |
| 2 | Done by developer | Done by Tester |
| 3 | Before the launch it is called verification | After the launch it is called validation. |

**25. Explain types of Performance testing.**

* Performance testing means Quality Assurance (QA). Testing of software application to ensure that perform well under their expected load
* Testing of stability and response time are as expected and perform well.

**Types of performance testing**

Load testing: -

* Testing of stability and response time of application by applying load Which is equal as per designed number of user or less then that.

Stress testing: -

* testing of behaviour of application by applying load greater than desired load.

Scalability testing: -

* testing of behaviour of application by applying load where and when system is unstable.

Volume Testing: -

* Testing of stability and response time of application by applying huge volume of data.

Endurance Testing/ Soak testing: -

* Testing of stability and response time of application by applying load continuously for long period of time.
* Example: testing of Netflix app - 10 million user watch Netflix for 17+ hours

Example:

1. customer want to build application for 2000 user
2. Testing by applying load of 2000 user is called ……………………Load Testing
3. Testing my more load example testing by applying load of 2800 user is called…… Stress testing
4. Do testing with increase load again and again and application crashed at 3500 user that is called as ………………………. Scalability testing.

**26. What is Error, Defect, Bug and failure?**

* A mistake in coding is called as Error.
* Error founded by tester is called defect.
* Defect accepted by developer is called as Bug
* It build does not meet the requirements then it is failure.

**27. Difference between Priority and Severity**

Priority: -

* it is a parameter defines how fast we need to fix defect.
* The levels are Low, Medium, High, and Extremely High.

Severity: -

* it is a parameter that defines how badly it will impact on that system.
* The levels are Low, Medium, High, and Extremely High.
* It is absolute customer focused.

**28. What is Bug Life Cycle?**

* The duration or time span between the first-time defects is found and the time that it is closed successfully. The process in between rejected, postponed or deferred is called as Defect Life Cycle.

**29. Explain the difference between Functional testing and Non-Functional testing.**

**Functional testing**

* Testing based on an analysis of the specification of the functionality of a component or system.
* Involves Blackbox testing
* Executed first

**Non-Functional Testing**

* Non-Functional Testing is not related to Functionality but testing of behaviour(attribute) of system like reliability, efficiency, usability etc…
* Involves white box testing
* Executed after functional testing

**--------------------Scenarios are in Microsoft-Exell files---------------------**