1. What is Exploratory testing?

- Exploratory testing is an approach to software testing that is concisely described as simultaneous learning, test design and test execution. Exploratory testing seeks to find out how the software actually works, and to ask questions about how it will handle difficult and easy cases.

2. What is traceability matrix?

- In software development, a traceability matrix is a document, usually in the form of a table, used to assist in determining the completeness of a relationship by correlating any two baseline documents using a many-to-many relationship comparison. It is often used with high-level requirements.

3. What is Boundary value testing?

- Boundary-value analysis is a software testing technique in which tests are designed to include representatives of boundary values in a range. The idea comes from the boundary. Given that we have a set of test vectors to test the system, a topology can be defined on that set.

4. What is Equivalence partitioning testing?

- equivalence class partitioning is a software testing technique that divides the input data of a software unit into partitions of equivalent data from which test cases can be derived. In principle, test cases are designed to cover each partition at least once.

5. What is Integration testing?

- Integration testing is the phase in software testing in which the whole software module is tested or if it consists of multiple software modules they are combined and then tested as a group. Integration testing is conducted to evaluate the compliance of a system or component with specified functional recruitments. It occurs after unit testing and before system testing.

6. What determines the level of risk?

- In software testing Risk are the possible problems that might endanger the objectives of the project stakeholders. It is the possibility of a negative or undesirable outcome.

7. What is Alpha testing?

- Alpha Testing is a type of software testing performed to identify bugs before releasing the product to real users or to the public. Alpha Testing is one of the user acceptance testing.

8. What is beta testing?

- Beta testing is the process of testing a software product or service in a real-world environment before its official release.

9. What is component testing?

- There is seven components of testing
- **Requirement Analysis:**
- User requirement related to each component is observed.
- **Test Planning:**
- Test is planned according to the analysis of the requirements of the user.
- **Test Specification:**
- In this section it is specified that which test case must be run and which test case should be skipped.
- **Test Execution:**
- Once the test cases are specified according to the user requirements, test cases are executed.
- **Test Recording:**
- Test recording is the having record of the defects that are detected.
- **Test Verification:**
- Test verification is the process to determine whether the product meet specification.
- **Completion:**
- This is the last phase of the testing process in which the result is analysed.

10. What is functional system testing?

- Functional testing is basically defined as a type of testing that verifies that each function of the software application works in conformance with the requirement and specification. This testing is not concerned with the source code of the application. Each functionality of the software application is tested by providing appropriate test input, expecting the output, and comparing the actual output with the expected output. This testing focuses on checking the user interface, APIs, database, security, client or server application, and functionality of the Application Under Test. Functional testing can be manual or automated.

11. What is Non-Functional Testing?

- Non-functional Testing is a type of software testing that is performed to verify the non-functional requirements of the application. It verifies whether the behavior of the system is as per the requirement or not. It tests all the aspects that are not tested in functional testing. Non-functional testing is a software testing technique that checks the non-functional attributes of the system. Non-functional testing is defined as a type of software testing to check non-functional aspects of a software application. It is designed to test the readiness of a system as per nonfunctional parameters which are never addressed by functional testing. Non-functional testing is as important as functional testing.

12. What is GUI Testing?

- GUI Testing is the process for ensuring proper functionality of the graphical user interface (GUI) for a specific application. GUI testing generally evaluates a design of elements such as layout, colours and also fonts, font sizes, labels, text boxes, text formatting, captions, buttons, lists, icons, links, and content. GUI testing processes

may be either manual or automatic and are often performed by third-party companies, rather than developers or end users.

13. What 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. Adhoc testing is not performed in structured way so it is not based on any methodological approach. That's why Adhoc testing is a type of Unstructured Software Testing.

14. What is load testing?

- Load testing is a type of performance testing that determines the performance of a system, software product, or software application under real-life-based load conditions. This article focuses on discussing load testing in detail.

15. What is stress Testing?

- Stress Testing is a software testing technique that determines the robustness of software by testing beyond the limits of normal operation. Stress testing is defined as a type of software testing that verifies the stability and reliability of the system. This test particularly determines the system on its robustness and error handling under extremely heavy load conditions. It even tests beyond the normal operating point and analyses how the system works under extreme conditions. Stress testing is performed to ensure that the system would not crash under crunch situations. Stress testing is also known as Endurance Testing or Torture Testing**.**

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

- It is based on an analysis of the internal structure of the component or system. The tester required the knowledge of how the software is implemented and how its work.
- There is six types of white box testing.
    a. Test/code coverage
    b. Statement coverage
    c. Decision/branch coverage
    d. Condition coverage
    e. Basic path coverage
    f. Loop coverage

17. What is black box testing and list the types of white box testing?

- Black-box testing is a type of software testing in which the tester is not concerned with the internal knowledge or implementation details of the software but rather focuses on validating the functionality based on the provided specifications or requirements.
- There is six types of black box testing
    a. Equivalence Partitioning
    b. Boundary value analysis
    c. Decision table
    d. State transition testing

e. Usecase testing
f. Other black box testing

18. Mention what are the categories of defects?

- Data base
- Critical functionality defect
- Functionality defect
- Security defect
- User interface defect

19. Mention what big bang testing is?

- Integration testing is a type of testing that is used to check the functionality of integrated components of a software system. It is usually performed after unit testing and before validation testing. In integration testing, individual software components are combined and tested as a group.

20. What 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.

21. When should "Regression Testing" be performed?

- When the system is stable and system of environment changes.
- When testing bug fix release as part of the maintenance phase.

22. What is 7 key principles Explain in detail?

- **Testing show presence of defect**
- **Exhaustive testing is impossible**
- **Early Testing**
  - Testing activities should start as early as possible in the software or system development life cycle and should be focused on defined objects.
- **Defecating cluster**
  - A small number of modules contain most of defects discovered during pre-release testing or responsible for the most operational failure.it is always comes from the cluster.
- **Pesticide Paradox**
  - It is the same tests are repeated over and over again eventually the same set of the test case will no longer find any new defects
  - To overcome this pesticide paradox the test case need to be regularly review and revised and new and different test need to be written to exercise different parts of the software or system to potentially find more defects.
- **Testing is context dependent**
  - Different kinds of sites are tested differently.
- **Absence of errors fallacy**
  - Even after defects have been resolved it may still be unusable and or done not full fill the user's need and expectations.

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

Quality Assurance	Quality Control	Testing
QA includes activities that ensure the implementation of processes, procedures and standards in context to verification of developed software and intended requirements.	It includes activities that ensure the verification of a developed software with respect to documented (or not in some cases) requirements.	It includes activities that ensure the identification of bugs/error/defects in a software.
Focuses on processes and procedures rather than conducting actual testing on the system.	Focuses on actual testing by executing the software with an aim to identify bug/defect through implementation of procedures and process.	Focuses on actual testing
Process-oriented activities.	Product-oriented activities.	Product-oriented activities.
It is a subset of 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?

- Smoke testing is done to make sure that build we received from development team is testable or not.it is done at built level. document part needed .it is the part of regration testing and it is done by developer.

- Sanity is subset of regression testing.it is done during release phase of the product or application to check the main functionality without going deeper it is done at release level and document are not needed and it is done by the tester.

25.Difference between verification and Validation

- **Verification**
  - Verification is the process of checking that software achieves its goal without any bugs. It is the process to ensure whether the product that is developed is right or not. It verifies whether the developed product fulfils the requirements that we have. Verification is simply known as Static testing.
- **Validation**
  - Validation is the process of checking whether the software product is up to the mark or in other words product has high-level requirements. It is the process of checking the validation of the product i.e. it checks what we are developing is the right product. it is a validation of actual and expected products. Validation is simply known as Dynamic Testing.

□

26.Explain types of Performance testing.

- **Load testing:** Load testing simulates a real-world load on the system to see how it performs under stress. It helps identify bottlenecks and determine the maximum number of users or transactions the system can handle.
- **Stress testing:** Stress testing is a type of load testing that tests the system's ability to handle a high load above normal usage levels. It helps identify the breaking point of the system and any potential issues that may occur under heavy load conditions.
- **Spike testing:** Spike testing is a type of load testing that tests the system's ability to handle sudden spikes in traffic. It helps identify any issues that may occur when the system is suddenly hit with a high number of requests.
- **Soak testing:** Soak testing is a type of load testing that tests the system's ability to handle a sustained load over a prolonged period. It helps identify any issues that may occur after prolonged usage of the system.
- **Endurance testing:** This type of testing is similar to soak testing, but it focuses on the long-term behaviour of the system under a constant load.

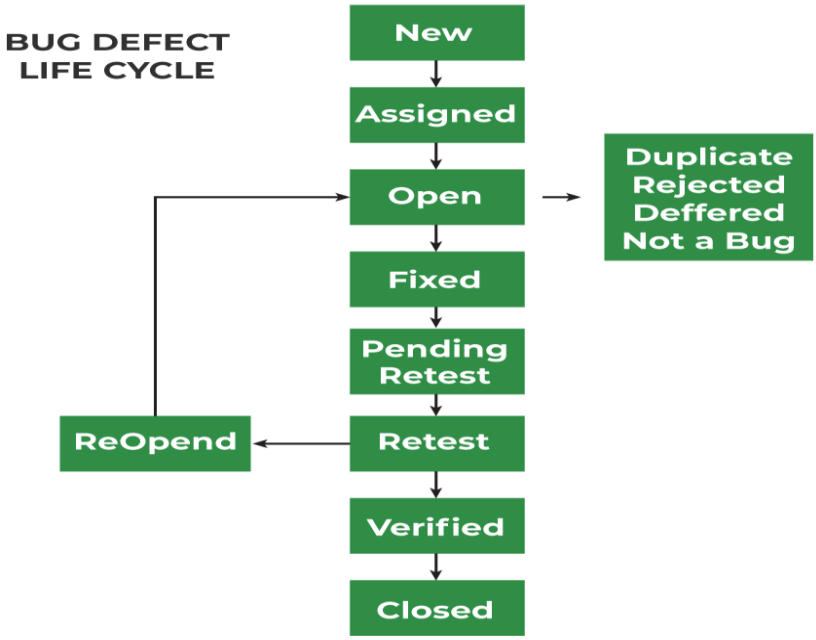
27.What is Error, Defect, Bug and failure?

- **Error**: A human action that produces an incorrect result.
- **Defect**: Incorrect result getting by tester.
- **Bug**: incorrect result getting by developer.
- **Failure**: Not done by its requirement.

28.Difference between Priority and Severity?

- Severity is defined as the extent to which a particular defect can create an impact on the software.
- Priority is defined as a parameter that decides the order in which a defect should be fixed. Defects having a higher priority should be fixed first.

29.What is Bug Life Cycle?



30.Explain the difference between Functional testing and Nonfunctional testing

Functional Testing	Non-functional Testing
It verifies the operations and actions of an application.	It verifies the behavior of an application.
It is based on requirements of customer.	It is based on expectations of customer.
It helps to enhance the behavior of the application.	It helps to improve the performance of the application.
Functional testing is easy to execute manually.	It is hard to execute non-functional testing manually.
It tests what the product does.	It describes how the product does.
Functional testing is based on the business requirement.	Non-functional testing is based on the performance requirement.
Examples: • Unit Testing • Smoke Testing • Integration testing • Regression Testing	**Examples:** • PerfomanceTesting • Load Testing • Stress testing • Scalability Testing

31.What is the difference between the STLC and SDLC?

SDLC	STLC
SDLC is mainly related to software development.	STLC is mainly related to software testing.
Besides development other phases like testing is also included.	It focuses only on testing the software.

SDLC	STLC
SDLC involves total six phases or steps.	STLC involves only five phases or steps.
In SDLC, more number of members (developers) are required for the whole process.	In STLC, less number of members (testers) are needed.
In SDLC, development team makes the plans and designs based on the requirements.	In STLC, testing team(Test Lead or Test Architect) makes the plans and designs.
Goal of SDLC is to complete successful development of software.	Goal of STLC is to complete successful testing of software.
It helps in developing good quality software.	It helps in making the software defects free.
SDLC phases are completed before the STLC phases.	STLC phases are performed after SDLC phases.
Post deployment support , enhancement , and update are to be included if necessary.	Regression tests are run by QA team to check deployed maintenance code and maintains test cases and automated scripts.
Creation of reusable software systems is the end result of SDLC.	A tested software system is the end result of STLC.

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

- **Test scenarios:**
  A document that covers the entire end-to-end functionality of the software very briefly (in one line) from an end-user perspective.
- **Test case:**
  A detailed document that covers the entire testing process of a specific feature of the software.
- **Test script:**
  Test Script is a program that runs various test data on the functionality of an application.

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

- A test plan is a document that consists of all future testing-related activities. It is prepared at the project level and in general, it defines work products to be tested, how they will be tested, and test type distribution among the testers.
- test strategies, objectives, schedule, estimations, deadlines, and resources required to complete that project. These all are information should be covered in test plan.

34. What is priority?

- Priority is a parameter to decide the order in which defects should be fixed.
- Priority means how fast the defect has to be fixed.

35. What is severity?

- Severity is a parameter to denote the impact of a particular defect on the software.
- Severity means how severe the defect is affecting the functionality.

36. Advantage of Bugzila.

- Bugzilla a great tool for bug tracking and management, and it is available as an open source tool.
- It is an open-source tool for bug tracking and management.
- We can customize as per our requirements.
- It offers an advanced search option; it is very useful to find required data from the list.

37. What are the different Methodologies in Agile Development Model?

- Agile scrum methodologies
- Lean
- Kanban
- Extreme programming
- Crystal
- Dynamic system development method
- Feature divine development