MODULE-2

1. What is Exploratory Testing?
- Exploratory Testing is a concurrent process where Test design, execution and logging happen simultaneously. Testing is often not recorded.

2. What is traceability matrix?
- A software process should help you keeping the virtual table up-to-date.

3. What is Boundary value testing?
- Boundary Value Testing is a black-box technique in software testing that focuses on testing values at the edges or boundaries of input domains.

4. What is Equivalence partitioning testing?
- Equivalence partitioning testing that Aim is to treat groups of inputs as equivalent and to select one input to test them all.

5. What is Integration testing?
- It is a level of software testing process where individual units are combined and tested as a group.

6. What determines the level of risk?
- The level of risk is determined by two main factors – impact and likelihood.

7. What is Alpha testing?
- Alpha testing is internal testing done at the developer site to find bugs before releasing the product to external users.

8. What is beta testing?
- Beta testing is user acceptance testing where the product tested by real uses in their real environment before final release.

9. What is component testing?
- Component testing also known as unit or module testing, verifies the behaviour and output of individual software components.

10. What is functional system testing?
- Functional testing type of software testing that verifies whether each function of an application works according to the specified requirements.

11. What is Non-Functional Testing?
- Non-functional testing is a type of software testing that verifies how well an application performs, rather than what functions performs.

12. What is GUI Testing?

- GUI Testing is testing technique where the applications graphical interface is test to ensure it meets design specifications and provides the correct user experience.

13. What is Adhoc testing?

- Adhoc testing is a informal testing type with an aim to break the system.

14. What is load testing?

- Load testing is a performance testing to check system behaviour under load. Testing an application under heavy loads, such as testing of a web site under a range of loads to determine at what point the system's response time degrades or fails.

15. What is stress Testing?

- System is stressed beyond its specifications to check how and when it fails. Performed under heavy load like putting large number beyond storage capacity, complex database queries, continuous input to system or database load.

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

- White box testing means testing based on internal structure.
- 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, either functional or non-functional, without reference to the internal structure.
- There are four black box techniques:-
    - Equivalence partitioning
    - Boundary value analysis
    - state transition testing
    - Decision table testing

18. Mention what are the categories of defects?

- Functional defects, Performance defect, Usability Defects, Compatibility Defects, Security Defects, presentation defects, Logical defects, validation defects, Integration defects, Database Defects, Configuration defects

19. Mention what big bang testing is?

- Big Bang Testing is a software integration testing approach where all modules or components are integrated together at once, and then the entire system is tested as a whole.

20. What is the purpose of exit criteria?

- Exit Criteria purpose is to define clear and measurable conditions that must be met before starting, continuing, or completing a testing activity or phase.

21. When should "Regression Testing" be performed?

- Regression testing should be performed **whenever existing code is changed**, including after new features are added, bugs are fixed, code is optimized, or configurations/environments are updated, to ensure these changes haven't broken previously working functionality.

22. 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 is not possible, so instead if doing exhaustive testing we can use risks priorities to focus testing efforts.
- Early testing: -
  Testing activities should start as early as possible in development life cycle.
- Defect clustering: -
  Defects are not evenly speared in a system they are “clustered”.
- The pesticide paradox: -
  If same tests are repeated over and over again, then no longer find new defects. To overcome this test cases, need to review and revised.
- Testing is context dependent: -
  Basically, testing is context dependent because testing is done differently in different contexts.
- Absence of errors fallacy: -
  Even after defects have been resolved it may still be unusable or does not fulfil the users need and expectations.

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

Testing	QC	QA
Subset of QA	Quality control	Quantity assurance
Focus on test execution	Focus on product	Focus on process
Actual testing	Finds defect	Prevents defect
Done during development or after development	Done after development	Done before development

24. Difference between Smoke and Sanity?

Smoke	sanity
To check whether build is stable or not	To check specific function is working or not
When we get a new build	When any new feature is added or bug fix
Basic and critical functionality	Bug fix or related feature
Explore: - app install, login, dashboard, logout, app crash or not	Scenario: - app crashes with invalid data login feature (login, dashboard, logout)

25. Difference between verification and Validation

Verification	Validation
Static testing (Review of document)	Dynamic testing (Actual testing)

Are you building the product right	Are the building the right product
Review throughout Inspection	Testing

26. Explain types of Performance testing.

- Performance Testing checks how a system behaves in terms of speed, responsiveness, stability, and scalability under different conditions.
- Types of Performance Testing:
    - **Load Testing** – Checks performance under normal expected load.
    - **Stress Testing** – Tests system beyond its capacity to find breaking point.
    - **Spike Testing** – Tests response to sudden increase or decrease in load.
    - **Endurance (Soak) Testing** – Tests system stability over a long time.
    - **Scalability Testing** – Checks ability to handle increased users or data.
    - **Volume Testing** – Tests performance with large amounts of data.
    - **Capacity Testing** – Determines maximum load the system can handle.

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

- A mistake in coding is called error.
- Error found by tester is called defect.
- Defect accepted by development team then it is called bug.
- Build does not meet the requirements then it is called failure.

28. Difference between Priority and Severity

Severity	Priority
Severity tells how serious the defect is	Priority tells how soon the defect should be fixed
It shows the impact on the system or user	It shows the order in which defects must be fixed
Decided mostly by testers	Decided mostly by product managers or clients
High Severity- major failure, crash, or data loss	High priority- fix immediately

29. What is Bug Life Cycle?

- Bug Life Cycle (Defect Life Cycle) is the process that every bug/defect goes through from the moment it is found until it is fixed and closed.

30. Explain the difference between Functional testing and Non-Functional testing

Functional	Non-Functional
Tests what the system does	Tests how well the system works
Check features	checks performance, security, usability
Based on users/business	Based on quality standards
Eg-Login valid/invalid	Eg-Login loads in 1 section

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

Aspect	**SDLC**	**STLC**
Domain	SDLC is mainly related to software development.	STLC is mainly related to software testing.
Focus	Besides development other phases like testing is also included.	It focuses only on testing the software.
Phases	SDLC involves total six phases or steps.	STLC involves only five phases or steps.
Number of Member	In SDLC, more number of members (developers) are required for the whole process.	In STLC, less number of members (testers) are needed.
Team Involved	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.
Objective	Goal of SDLC is to complete successful development of software.	Goal of STLC is to complete successful testing of software.
End Result	It helps in developing good quality software.	It helps in making the software defects free.
Execution	SDLC phases are completed before the STLC phases.	STLC phases are performed after SDLC phases.
Maintenance	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.

Aspect	SDLC	STLC
End Result	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?

Feature	Test Scenario	Test Case	Test Script
Level	High-level	Detailed	Programmatic
Format	Statement/Goal	Document with steps, inputs, and expected outputs	Code in a programming language
Execution	Manual planning	Manual execution	Automated execution
Purpose	Ensure comprehensive coverage	Verify functionality manually	Automate repeatable tests efficiently

33. Explain what Test Plan is? What is the information that should be covered.
- Test planning in STLC is a phase in which a senior QA Manages determines the test plan strategy along with efforts and cost estimates for the project.
- Moreover, the resources, test environment, test limitations and the testing schedules are also determined.

34. What is priority?
- Priority is relative and business focused, priority defines the order in which we should resolved a defect.

35. What is severity?
- Severity is absolute & customer focused. It is the extent to which the defect can affect the software.

36. Bug categories are…
- Functional, Performance, Usability, Security, Compatibility, Logic, and Syntax (code errors)

37. Advantage of Bugzilla

- The Advantages of Bugzilla are:
    - it is an open-source widely used bug tracker;
    - it is easy in usage and its user interface is understandable for people without technical knowledge;
    - it easily integrates with test management instruments;
    - it integrates with an e-mailing system;
    - it automates documentation.

38. Difference between priority and severity

Feature	Severity	Priority
Definition	The degree to which a defect impacts the functionality of the software.	The order or urgency in which a defect should be fixed.
Determined By	Typically assigned by the testing engineer based on technical impact.	Determined by the product manager or client based on business value.
Nature of Value	Generally objective and less likely to change over time.	Subjective and can change based on project circumstances or business needs.
Focus	Focuses on the technical aspect and quality standards of the product.	Focuses on scheduling, customer requirements, and business value.

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

- Iterative incremental model
- Work divided into small parts
- Need to complex work at a specific time
- Daily meeting
- Continuous testing & feedback
- Continuous improvement
- Customers are involved in every phase
- Fast and flexible delivery

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

Feature	Authentication	Authorization
Purpose	To verify the identity of a user or system.	To grant or deny permissions to a verified user for accessing resources.
Question Answered	"Who are you?"	"What are you allowed to do?"
Process	Involves credentials like username/password, OTPs, or biometric scans.	Involves checking roles, permissions, or access control lists (ACLs).
Timing	Happens first in the access control process.	Happens after successful authentication.
Example	Logging into an email account with your password.	Being able to view your inbox but not modify another user's account settings.