Defect Management

1. What is exploratory testing?

➔ Exploratory testing is a concurrent process where Test design, execution and logging happen simultaneously.

➔ When functionality are checked in structure manner then functionality are check step by step.

➔ When functionality are checked in ad-hoc manner then functionality are check randomly.

2. What is traceability matrix?

➔ Traceability matrix is a one type of tracking.

➔ To protect against changes you should be able to trace back from every system component to the original requirement that caused its presence.

➔ There is three type of traceability matrix:

->Forward Traceability – Mapping of Requirements to Test cases

-> Backward Traceability – Mapping of Test Cases to Requirements

->Bi-Directional Traceability - A Good Traceability matrix is the References from test cases to basis documentation and vice versa.

3. What is boundary value analysis testing?

➔ In boundary value analysis valid values are devied in same part it's not fix.

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

➔ Boundary value analysis is a method which refines equivalence partitioning.

4. What is equivalence partitioning testing?

➔ In equivalence partitioning testing 'in rang' value is devied in same part.

➔ Aim is to treat groups of inputs as equivalent and to select one representative input to test them all

➔ Equivalence partitioning can be use for all levels of testing.

5. What is integration testing?

➔ Testing performed to expose defects in the interfaces and in the interactions between integrated components or systems.

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

➔ There are 2 levels of Integration Testing

1) Component Integration Testing
   (i) functional testing

(ii) non-functional testing

2) System Integration Testing

➔ There is two types methods of Integration Testing:

1) Bing Bang Integration Testing

2) Incremental Integration Testing

(i) Top Down Approach

(ii) Bottom Up Approach

6. What is determines the level of risk?

➔ A factor that could result in future negative consequences; usually expressed as impact and likelihood.

➔ There is two type of risk:

(1) Product risk

(2) Project risk

7. What is Alpha testing?

➔ Alpha is always performed by the developers at the software development site.

➔ Sometimes it is also performed by Independent Testing Team.

➔ It is conducted for the software application and project.

➔ It is always performed in Virtual Environment.

➔ It comes under the category of both White Box Testing and Black Box Testing.

8. What is Beta testing?

➔ Beta testing is always performed by the customers at their own site.

➔ It is not performed by Independent Testing Team.

➔ Beta Testing is always open to the market and public.

➔ It is performed in Real Time Environment.

➔ It is only a kind of Black Box Testing.

9. What is component testing?

➔ A minimal software item that can be tested in isolation. It means “A unit is the smallest testable part of software.”

➔ Another name of component testing = Unit Testing, Module Testing or Program Testing

➔ Unit tests are written and run by software developers and when developers do testing then it’s call debugging.

➔ Component testing is performed by using the White Box Testing method.

10. What is functional system testing?

➔ A requirement that specifies a function that a system or system component must perform.

➔ There is two type of functional system testing:

(1) Requirement Based Functional Testing

(2) Process Based Testing

-> Accuracy, Interoperability, Compliance, Auditability, Suitability are checked in functional system testing.

11. What is non-functional testing?

➔ Testing the attributes of a component or system that do not relate to functionality.

➔ Performance testing is carried out to check & fine tune system response times.

➔ Reliability, Performance, Usability, Maintainability are check in non-functional testing

12. What is GUI testing?

➔ 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 etc.

13. What is ad-hoc testing?

➔ Ad-hoc testing can be achieved with the testing technique called Error Guessing.

➔ The knowledge of testers in the system under test is very high.

➔ There is three type of ad-hoc testing:

1) Buddy Testing : Two buddies mutually work on identifying defects in the same module. One is a tester and second is a developer.

2) Pair testing : Two testers are work on identifying defects in the same module.
3) Monkey testing : Randomly test the product or application without test cases with a goal to break the system.

14. What is load testing?

➔ Load testing is a performance testing to check system behaviour under load.

➔ It is perform for the application behaves when multiple users access it simultaneously.

➔ This testing usually identifies the maximum operating capacity of an application.

15. What is Stress testing?

➔ System is stressed beyond its specifications to check how and when it fails.

➔ Stress testing is used to test the stability & reliability of the system.

➔ Stress Testing is done to make sure that the system would not crash under crunch situations.

➔ Stress testing is also known as endurance testing.

➔ The main purpose of stress testing is to make sure that the system recovers after failure which is called as recoverability.

➔

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

➔ Testing based on an analysis of the internal structure of the component or system.

➔ White box testing is also called glass testing or open box testing.

➔ There is three type of white box testing:

1) Statement coverage
2) Decision coverage
3) Condition coverage

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

➔ Black box testing is either functional or non-functional, without reference to the internal structure of the component or system.

➔ Specification-based testing technique is also known as ‘black-box’

➔ The technique of testing without having any knowledge of the interior workings of the application is Black Box testing.

18. Mention what are the categories of defects?

➔ Database Defects, Critical Functionality Defects, Functionality Defects, Security Defects, User Interface Defects. These are the categories of defects.

19. Mention what big-bang testing is?

➔ In Big Bang integration testing all components or modules is integrated simultaneously, after which everything is tested as a whole.

➔ Big Bang testing has the advantage that everything is finished before integration testing starts.

20. What is the purpose of exit criteria?

➔ We can know when to stop testing that is purpose of exit criteria.

21. When should "Regression Testing" be performed?

➔ When smoke testing and sanity testing are passed then Regression testing performed.

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

➔ 7 key principles is a general testing principles.

➔ 1) Testing shows presence of 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.

2) Exhaustive testing is impossible

=> Testing everything including all combinations of inputs and preconditions is not possible.

3) Early testing

=> Testing activities should start as early as possible in the development life cycle

4) Defect clustering

=> Cluster means group.

=> Any defect, it is create problem in his group's functionality. That type of defect remove fast.

5) The Pesticide Paradox

=> Regularly reviewed and revised any project to different testing team.

=> This type of defect we can find more defects.

6) Testing is context dependent

=> Different kinds of sites are tested differently because different sites have functionalities are different.

7) Absence of error fallacy

=> Any site, which has no defects but his clint's requirements are not full-fill.

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

➔ QA - Activities which ensure the implementation of processes, procedures and standards in context to

verification of developed software and intended requirements.

➔ QC - Activities which ensure the verification of developed software with respect to documented (or not in some cases) requirements.

➔ Tester - Activities which ensure the identification of bugs/error/defects in the Software.

24. Difference between Smoke and Sanity?

➔ If critical functionalities are check then perform a smoke testing.

➔ If new added or updated functionalities are check then perform a sanity testing.

25. Difference between verification and Validation

➔ Business Requirement Analysis, System Design, Architectural Design, Module Design and Coding are perform in verification.

➔ Unit testing, Integration testing, System testing and Acceptance testing are perform in validation.

26. Explain types of Performance testing.

1) Stress testing

➔ Stress Testing is done to make sure that the system would not crash under crunch situations.

➔ Stress testing is also known as endurance testing.

➔ Most prominent use of stress testing is to determine the limit, at which the system or software or hardware breaks.

2) Load testing

➔ Load testing is a performance testing to check system behaviour under load.

➔ This testing usually identifies the maximum operating capacity of an application.

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

➔ Error – When developer make a mistake then it's called error.

➔ Defect – When that error found by tester then it's called defect.

➔ Bug – When tester assign that defect to developer team and developer team will accept that defect then it's called bug.

➔ Failure – When negative behaviour suddenly occurs unexpectedly.

28. Difference between Priority and Severity

➔ Priority : Priority is Relative and Business-Focused.

➔ Severity : Severity is absolute and Customer-Focused.

29. What is bug life cycle?

➔ A computer bug is an error, flaw, mistake, failure, or fault in a computer program that prevents it from working correctly or produces an incorrect result. Bugs arise from mistakes and errors, made by people, in either a program's source code or its design.

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

➔ Functional testing :

- ⇨ Functional testing is performed using the functional specification provided by the client and verifies the system against the functional requirements.
- ⇨ Functional testing is executed first
- ⇨ Functional testing describes what the product does.

➔ Non-Functional testing :

- ⇨ Non-Functional testing checks the Performance reliability, scalability and other non-functional aspects of the software system.
- ⇨ Non-functional testing should be performed after functional testing
- ⇨ Non-functional testing describes how good the product works.

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

➔ STLC : Software Testing Life Cycle

- ⇨ STLC is done by testers.
- ⇨ It is a process of software testing.
- ⇨ Testers are only find error/defect/bug but not correct that.

➔ SDLC : Software Development Life Cycle

- ⇨ SDLC is done by designer, developer and tester.
- ⇨ It is a process of design, development, testing and maintenance computer software or application.
- ⇨ Developer find error/defect/bug and correct that.

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

➔ Test scenarios : A Scenario is any functionality that can be tested. It is also called Test Condition, or Test Possibility.

➔ Test cases : Test cases involve the set of steps, conditions and inputs which can be used while performing the testing tasks.

➔ Test script : A set of sequential instruction that detail how to execute a core business function.

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

➔ Test plan means A document describing the scope, approach, resources and schedule of intended test activities.

➔ What to test, what roles will perform the test activities, how the test activities should be done, and how the test results will be evaluated? Are covered in test plan.

34. What is priority?

➔ Priority is Relative and Business-Focused.

➔ There is four type of priority :

- ⇨ Low
- ⇨ Medium
- ⇨ High
- ⇨ Critical

35. What is severity?

➔ Severity is absolute and Customer-Focused.

➔ There is five type of severity :

- ⇨ Critical
- ⇨ Major (High)
- ⇨ Moderate (Medium)
- ⇨ Minor (Low)
- ⇨ Cosmetic

36. Bug categories are…

➔ Bug categories are Security, Database, Functionality, UI.

37. Advantage of Bugzilla.

➔ We can see past communication between developer and tester.

➔ We can add defects and generate csv file of defect report.

➔ We can add new users, under us.

➔ We can add multiple projects and add multiple components in any project.

➔ We can edit and delete past data.

38. Difference between priority and severity

➔ Priority : Priority is Relative and Business-Focused.

➔ Severity : Severity is absolute and Customer-Focused.

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

➔ Agile model is a combination of iterative and incremental models.

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

➔ Authorization :-

- ⇨ Correct access control for different user roles
- ⇨ What the user allowed to do

➔ Authentication :-

- ⇨ Valid/invalid credentials & Security of login mechanism
- ⇨ Who the user is

➔ The common problems in web testing :-

- ⇨ Functionality issue
- ⇨ Missing resources
- ⇨ Security issue
- ⇨ Design Problems
- ⇨ Tab view issue
- ⇨ Colour combinations issue

41. When to used Usability Testing?

➔ In these problem used usability testing:

- ⇨ Drop-down select lists is no work properly.
- ⇨ Tab and Shift + Tab order should not work properly.
- ⇨ Any buttons on a page are not accessible.
- ⇨ If any pages not have a title.
- ⇨ Page text is not left-justified.

42. What is the procedure for GUI Testing?

➔ The procedure for GUI Testing is:

- ⇨ Build the model
- ⇨ Determine Inputs for the model
- ⇨ Calculate expected output for the model
- ⇨ Run the Tests
- ⇨ Compare the actual output with the expected output
- ⇨ Decision on further action on the model.