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**Topic: HP ALM (Quality Center),Manual Testing, SDLC, STLC, Agile, Waterfall, V-Model, Computer Networking & Basic Computer Knowledge - Theory**

1) What Is the Difference Between SDLC and STLC?

**SDLC is used to cover all software development life cycles. STLC is used to cover the entire testing life cycles. SDLC begins with the planning phase and covers the entire development. Whereas STLC begin with the test planning and covers different type of testing. SDLC done before STLC**

2) What Is STLC?

**STLC is software testing life cycles. STLC provides a step-by-step process to ensure quality of software testing. Also, STLC ensures that all the testing processes are carried out in an orderly and planned manner.**

3) What is HP ALM (Quality Center) used for? Or What are the benefits and features of Quality Center?

**HP ALM (Quality Center) is a pure manual software test management tool. It Is used for web-based tool to support high level of communication with business analyst, developers and testers and carefully driving an efficient application testing process in its entirety.**

4) What is the difference between Test Director and Quality Center?

**Quality center is a highly upgraded version of test director built by mercury. The difference is Quality center is more secure than Test Director. In Quality Center the login page shows projects associated only to the logged in user, unlike in Test Director where one can see all the available projects.**

5) What is pair testing?

**Pair testing is one kind of software testing that done by two team member they work together at one keyboard to test the software application, one tester dose the testing and other reviews the testing , that way tester can be a better chance to identify defects .Bug or error ,**

6) What different types of testing may be considered and used for testing the web applications?

**The tester can perform the test like web application under Functionality Testing, Usability testing Interface Testing, Database Testing, Compatibility testing, Performance Testing, Security testing, Crowd Testing,**

7) What are the different types of software quality model?

**The different types of software quality model are Mc call’s model, BOEHM mode, FURPS model, GHEZZI model, IEEE model and the DROMEY’S quality models.**

8) How to measure the software quality?

**There are many metrics that can perform to measure the quality of the software like function point analysis and complexity of a software.**

9) How to write a test case?

**The format of standard test case template including test case ID, test scenario, test steps, test data, expected result, actual result, pass/ fail.**

10) Why and how to prioritize test cases?

**We should prioritize test cases ensures that the end product is as per acceding to client demand. we cannot test everything so we must prioritize. Selecting test cases at random is not an effective strategy. We need to use a more intelligent approach that helps identify which tests are most important. In short, that’s why we must prioritize our test case.**

11) List out different types of documentation/documents used in the software testing

**List of different types documentation are test policy. test strategy. test step. test case. defect report and test summary report.**

12) How system testing is different to acceptance testing?

**System testing is both functional and non- functional testing. acceptance testing is only functional testing. system testing done before the acceptance testing. acceptance testing done after the system testing**

13) List out different approaches and methods to design tests.

**There are different types of approaches and methods we can use for our tests design like Unit test (test individual component). Integration testing (test component groups). System testing (test the integrated system). Acceptance testing (test the final system).**

14) Whether test coverage and code coverage are similar terms?

**Both are quality of the application code. Code coverage is applied to describe how much application code exercised when an application is running. While test coverage is often used to describe test cases that are written against the requirement document.**

15) What are the roles and responsibilities of a tester or a QA engineer?

**A QA engineer is roles and responsibilities to identify issues in software before the product launch. Duties include identifying and analyzing any bugs and errors found during the test phase and documenting them for review after testing.**

16) What is positive and negative testing?

**Positive testing is testing the application by giving a valid data and negative testing is testing the application by giving a negative data.**

17) When to start and stop testing?

**Testing starts right from the requirements phase and continues till the end of test deadline, but there might be possibility for testing as we go with the development a software whether it bug are found and updates are crated.**

18) Difference between load and stress testing.

**Load testing is performed to find out the upper limit of the system or application. stress testing is performed to find out the behavior of the system or application.**

19) Whether a software application can be 100% tested?

**Software application cannot be 100% tested because after deployment bug can be found and updates need to be releases.**

20) Does test strategy and test plan define the same purpose?

**The test plan is a document to explain the scope, objective and level of software testing task, whereas test strategy explain how testing needs to be done. A test plan is applied at the project level, whereas test strategy is applied at the organization level. Test Plan can be changed, whereas Test Strategy cannot change.**

21) What is the difference between verification and validation approach of software testing?

**The difference between verification and validation is Verification is done by QA team to ensure that the software is as per the specifications in the software requirements specification document. And Validation is to check whether the software meets the customer expectations and requirements.**

22) Why non-functional testing is equally important to functional testing?

**Non-functional testing is concerned with the non-functional requirements and is designed specifically to evaluate the readiness of a system according to the various criteria which are not covered by functional testing.**

23) What is the advantage of automation over manual testing approach and vice-versa?

**Automation test is reliable it is run by one time of execution. whereas manual test is not consistence in test condition. automation test is easy to run tests frequently while manual test is time consuming.**

24) Difference between retesting and regression testing.

**Regression testing is a type of software testing that intends to ensure that changes like defect fixes or enhancements to the module or application have not affecting unchanged part. Retesting is done to make sure that the tests cases which failed in last execution are passing after the defects against those failures are fixed.**

25) Smoke and Sanity testing are used to test software builds. Are they similar??

**Smoke Testing is done by both developers and testers whereas Sanity Testing is done by testers. Smoke Testing verifies the critical functionalities of the system. whereas Sanity Testing verifies the new functionality like bug fixes. Smoke testing is documented. whereas Sanity testing is not documented.**

26) What Spiral Model?

**The spiral model is a combination of sequential and prototype models. This model is best used for large projects which involve continuous enhancements. There are specific activities that are done in one iteration (spiral) where the output is a small prototype of the large software. The same activities are then repeated for all the spirals until the entire software is built.**

27) What is test execution?

**Test execution is the process of executing the code and comparing the expected and actual results. There are Copple of test execution process like execute test, report bugs, capture test status continuously, resolve blocking issues as they arise.**

28) What are the different levels of testing?

**There are so many tests in software testing. but There are generally four recognized levels of testing: unit testing, integration testing, system testing, and acceptance testing.**

29) What is unit testing?

**Unit is the smallest testable part of software testing. It usually has one or a few inputs and usually a single output. Unit testing conducts on a single program or single module. Unit Testing is white box testing technique. Unit testing is conducted by the developers.**

30) What is the role of developer in unit testing?

**Developer writes a part of section of code in the application just to check the function. developer can also separate the function so it can be tested over and over again,**

31) What is integration testing?

**Integration testing is a level of software testing where individual units are combined and tested as a group. Integration testing focuses on checking data communication amongst these modules. Integrated Testing is white box testing technique. Integrated testing is conducted by the developers.**

32) What is system testing?

**System testing is a level of software testing where complete and integrated software tested. Testing over all functionality of the application with respective client requirements.**

33) What is acceptance testing?

**Acceptance Testing is a types of software testing where a system is tested for acceptability. It is to evaluate the compliance of the system with the business requirements and give final green signal whether it is acceptable for delivery or not.**

34) Different types of acceptance testing.

**There are some types of software testing we can apply when we do acceptance testing like Alpha & Beta Testing. Contract Acceptance Testing. Regulation Acceptance Testing. Operational Acceptance Testing. Black Box Testing**

35) Difference between alpha and beta testing.

**Difference between alpha test and beta test are alpha test is a type of software testing is applied to identify bugs or defect before deploying the product to real time users. The beta test is applied by real users of the software application in a real time environment**

36) What Is Prototype Model?

**Prototype model is a software development model. By using this prototype, the client can get an “actual feel” of the system, since the interactions with prototype can enable the client to better understand the requirements of the desired system.**

37) What Are the Advantages and Disadvantages of V Model?

**There are so many Advantages and Disadvantages in V- shaped model like. the Advantages is progress goes in vary systematic way. Testing starts from requirement level. easy to keep track on progress, now Disadvantages is it’s not a good option if requirement changed frequently. not good for any bigger and complex project. the client sees the only final project not step by step modules.**

38) What Are the Advantages and Disadvantages of Waterfall Model?

**There are so many Advantages and Disadvantages in waterfall model, like the advantages is well understood. It’s Easy to arrange in tasks. Works well for smaller projects where requirements are very well understood. and result are wall documented. Now Disadvantages are high amounts of risk and uncertainty. It cannot apply any changes to the requirement. so, it does not see the product until the moment of its completion.**

39) What Is Meant by Agile Model?

**Agile model is one of most popular models in software developing life cycle. in agile model client can make changes any times in during the project building. it delivers result frequently from a couple of weeks to couple of months with high preference to the shorter time frame. Agile methodology helps businesspeople and developer work together** **daily throughout the project.**

40) What is integration testing?

**Integration testing one of software testing where individual unite put together and tested as a group. the purpose of this test to verify the faults in the interaction between integrated unite.**

41) What are test plan, test suite and test case?

**Test plan is described how to test. when to test. who will test and what to test. Test case are inputs, execution, condition and expected result for test execution. test suite contains all new feature and test case test suite has more detailed**

42) How to design test cases?

**best way designing the test case is following criteria the language is simple and easy to understand. make sure all positive and negative wall highlight. and tested as a user’s prospective.**

43) What is test environment?

**Test environment is to consists of elements that support test execution with software. Hardware and network work together. for the test environment a key to set up like system and application .test data. Hardware including server operating system.**

44) Why test environment is needed?

**in software life cycle test environment are really important. so, tester can modify data without affecting any real- life information. With a well-built Test Environment, it is possible to simulate the conditions that any system will experience when the testing has been completed and moved into production.**

45) What Is Meant by V Model?

**The V- shaped model one of software developing life cycle. Its where the test execution occurs in a logical order. This model is also go two way as a Verification and Validation model. So, there are Verification phases on one side of the ‘V’ and Validation phases on the other side. The Coding Phase joins the two sides of the V-Model.**

46) What Is Meant by Waterfall Model?

**The waterfall model is one of famous method in software lifecycle. it so simplest model of software in development paradigm. all model of phases of SDLC will function one after another in throughout the process. When the first phase is done then only second phase will start on.**

47) What Is Maintenance Phase?

**When system is operational then the maintenance phase will come. which means any changed the software needs or there are any new requirements that client wants after releasing its can be implemented. And if is any bugs or defect found it can be resolve.**

48) What Is Deployment Phase?

**The deployment phase is the final step in SDLC. it put product into production level where product can be real time phase. after project team tests all functionality and its meet all product requirement as a client wants then it will deploy and hand over to real time scenario. its call deployment phase.**

49) What Is Testing Phase?

**The testing phase in SDLC where we focus on examination and discovery. During the testing time developer find out in software the building software code and programming work according to client demand. and identifies any defect in the software in order to produce a quality product.**

50) What Is Coding Phase?

**In software lifecycle coding phase are really important. developer write code and implement the design. the code written is a popper language is called programming language. Putting a good code can be less testing and save more time from tester also good code can be save unnecessary testing.**

51) What Is Design Phase?

**Design phase is related to filling the product’s design. the design phase address how the system complies the objective. During the design phase each step in designed in details including the data structure, user interface, and programing design and its work on model of system.**

52) What Is the Difference Between Fs Document and SRS Document?

**In difference between FS and SRS are SRS describe all the business functionalities of the application. And FRS describe the particular functionalities of every single page in detail from start to end in application.**

53) What Is the Difference Between CRS and SRS?

**In difference between CRS and SRS are CRS is Customer Requirement Specification. It is a document which is given by the Customer and it is in Business method. SRS is System Requirement Specification. It is describing each and every functionality of every phase as well as part of the modules.**

54) What Is SRS?

**In the software development lifecycle means the system requirement specification. Its fully describes what the software will do and how it will be expected to perform and give total definition of the behavior of the system present them shelf**

55) What Is Requirement Gathering Phase?

**Requirement gathering phase is very important part of SDLC. where business analyses. developer and client meet together and explain what are the budget need. and which software use for building the application.**

56) What Are the Models In SDLC?

**The models in SDLC is agile models, waterfall model, Spiral Model, v- shaped model, Big Bang Model, Iterative Mode.**

57) What Are the Phases Of SDLC?

**There are 7 phases in SDLC Requirement gathering, analysis, Design, coding, Testing, Deployment,**

**Maintenance,**

58) What Is the Purpose Of SDLC?

**The purpose of SDLC to build software industry to design the software, develop and test high quality of software. The SDLC is to produce a high-quality software that meet client expectation and requirement. And it’s gets done within times and cost acceding budget.**

59) What Is SDLC?

**SDLC or Software Development Life Cycle is a framework that defines the steps involved in the development of software at each phase. It covers the detailed plan for building, deploying and maintaining the software.**

60) What is software testing life cycle (STLC)?

**STLC or software testing life cycle is one of the major parts of SDLC, it done by a software test team to produce high quality software.**

61) What is Software Quality Assurance (SQA)?

**Software quality assurance is assured value in the software. It is design of activities which ensure processes. procedures as well as standard for the project and work on correctly.**

62) What is Software Quality Control (SQC)?

**Software quality control is a set of activities for ensuring quality in software products the activities focus on identifying defects in the actual products produced.**

63) What is Software Testing?

**Software testing is one of the biggest parts of SDLC its work to find any defect. Bugs or error in software. And actual result matches with expected result as far as client requirement.**

64) Whether, software quality assurance (SQA), software quality control (SQC) and software testing are similar terms?

**There are not similar terms because their function is different. like SQA is preventing while SQC is identify and improving while testing is finding the defect.**

65) Then, what’s the difference between SQA, SQC and Testing?

**SQA is managing quality where as SQC is verifying quality and testing is testing quality. SQA is assures you what are doing is the right things. SQC is assures that the end result of what you had done is exactly what you expected.**

66) How STLC is related to or different from SDLC (software development life cycle)?

**SDLC is process to development or build software where STLC is after build a software we need to see the product quality is meet client requirement or not software need to be tested by test team. so one is for build and one for test the building product.**

67) What are the phases involved in the software testing life cycle?

**The phases involved in software testing life cycle are requirement analysis, test planning, test case development, environment setup, test execution, test cycle closure.**

68) Why there is a bug/defect in software?

**There are many reasons can be when it comes to Bug or defect in software. The most common reason is human mistakes in software design and coding. When a developer writes the code for software and is not suited for the software the it will come back as defect or bug**

**Topic: Database – MYSQL – Practical & Theory**

1) In which language MySQL has been written?

**My SQL is written in C and C ++. which are the most famous programming language for graphical application that can run on windows and Macintosh all formant**

2) What is SQL?

**SQL is Structured Query Language. it is a programming language that is used to communicate with and manipulate databases.**

3) What are the differences between DDL, DML and DCL in SQL?

**DDL is data definition language - it’s what you use to define tables, indexes, views, partitions,**

**DML is data manipulation language. The most common DML is the commands to insert, update, select, or delete. Merge is gaining in popularity.**

**DCL is data control language - it’s how one grants access to the objects one created with DDL, or stored procedures.**

4) What is a Database?

**Database is a data structure that stores organized information. More specifically, a database is an electronic system that allows data to be easily accessed, manipulated and updated.**

5) Does SQL support programming language features?

**SQL does not support programming language because it is a command language. Programmer write a command to update. delete. save into system and system give the answers.**

6) What are the differences between SQL and PL/SQL?

**SQL is a database Structured Query Language. And PL/SQL is a database programming language using SQL.**

7) Write an SQL query to find names of employee start with ‘A’?

**SELECT \* FROM EMPLOYESS WHERE EMPNAME LIKE ‘A%’ ;**

8) What is an index?

**Indexes are special lookup tables where database search engine can use to speed up data retrieval. Indexes are used to quickly locate data without having to search every row in a database table every time a database table is accessed.**

9) What are the technical specifications of MySQL?

**MYSQL technical specification are flexible structure, high performance, manageable and easy to use, replication and high availability, security and storage management.**

10) What is the difference between MySQL and SQL?

**The difference between MYSQL And SQL are MySQL is an RDBMS to store, retrieve, modify and administrate a database using SQL. And SQL is a Structured Query Language. It is useful to manage relational databases.**

11) What is the difference between database and table?

**The database is the organization of data with specific features to access them. Table is a collection of rows and column to store data in the database contains multiple tables**

12) What are the disadvantages of MySQL?

**Disadvantages in MySQL does not support a very large database size as efficiently. also Its suffers from poor performance scaling.**

13) What are the advantages of MySQL in comparison to Oracle?

**The advantages of MYSQL is first, reliable, robust and is a open source database system. MySQL is suited to small business. Where as Oracle is for big database and handle large database request**

14) Write a SQL statement to create a simple table countries including columns country\_id,country\_name and region\_id.

**Create table countries (**

**COUNTRY\_ID varchar (2),**

**COUNTRY\_NAME varchar(40),**

**REGION\_ID decimal (10,0)**

**);**

**DESC countries;**