**Assignment-6**

**Testing Type(Part-1)**

1. What is Functional Testing ?

Functional testing is a type of testing which verifies that each **function** of the software application operates in conformance with the requirement specification. This testing mainly involves black box testing and it is not concerned about the source code of the application.

Each and every functionality of the system is tested by providing appropriate input, verifying the output and comparing the actual results with the expected results.

2.List various types of Functional Testing?

There are various functional testing techniques which are as follows:

* Unit Testing.
* Smoke testing.
* Sanity testing.
* Integration Testing.
* Interface Testing.
* System Testing.
* Regression Testing.
* UAT.

1. What is the difference between Re-testing and Regression Testing ?
2. **Retesting** is done to make sure that bug is fixed and failed functionality is working fine or not, This is kind of verification method followed in testing field for the fixed bugs. Whereas, **Regression** is re-execution of the test cases for unchanged part to see that unchanged functionality is working fine are not.
3. **Retesting** is a planned testing while **Regression** is know as the generic testing.
4. **Retesting** is only done for failed Test cases while **Regression** is done for passed test cases.
5. We should always keep this in mind, **Re-testing has higher priority** than the **regression testing**. But in bigger projects **Retesting and Regression** is done in parallel effort.But never forget importance of both in the success of the project.

4.What is Smoke Testing?

It is also known as build acceptance testing. It is a surface level testing. .

Smoke testing is performed by developers before releasing the build to the testing team and after releasing the build to the testing team it is performed by testers whether to accept the build for further testing or not.

1. Why Smoke Testing is known as Build Acceptance Testing**?**

**Smoke testing** is also known by the name BAT (Build Acceptance Test) because it establishes the acceptance criteria for QA to accept and reject a build for further testing. So apart from **smoke testing** it is also very important for software people to know about build.

1. What is Build in Software Testing?

A build is called as the version of software, typically one that is still in testing stage.

**Conclusion:**

If the build clears the Smoke test, then it is accepted by QA for further testing, however if the build fails the Smoke test, then it’s rejected and QA reverts back to previously accepted build.

Script is use for smoke testing but does not for sanity.

1. What is Sanity Testing?

**Sanity testing** is the surface level testing where QA engineer verifies that all the menus, functions, commands available in the product and project are working fine.

It is used to determine if the section of the application is still working after a minor change.

Sanity testing can be narrow and deep. Sanity test is a narrow regression test that focuses on one or a few areas of functionality.

8.When we Perform Sanity Testing **?**

**Sanity testing** is performed when development team needs to know quick state of the product after they have done changes in the code or there is some controlled code change in a feature to fix any critical issue, and stringent release time-frame does not allow complete regression testing

9 What is Scenarios Based Testing?

Scenario-based testing is one method of documenting software specifications and requirements for the project. Scenario-based testing is used for writing tests for individual user scenario, which would check their work. Scenarios concentrate on the principal objectives and requirements. If the scenario runs from start to finish, then it passes.

Scenario testing helps testers to explore how the software will work in the hands of an end user. Since scenario testing tests the business flow of the software, it helps in finding lot of defects which cannot be found with other types of testing.

10. What is the difference between Ad-hoc and Monkey Testing?

**Adhoc Testing :**  
This type of testing is done without any formal Test Plan or Test Case creation. Ad-hoc testing helps in deciding the scope and duration of the various other testing and it also helps testers in learning the application prior starting with any other testing.

**Monkey testing:**

Monkey testing is a software testing technique in which the testing is performed on the system under test randomly. The Input data that is used to test also generated randomly and keyed into the system.

**Monkey testing** is similar **to Ad hoc testing** .it is also conducted randomly , and without any planning or preparation . many programmers categorize Monkey testing as a type of Ad hoc testing due to this reason . however monkey testing differs from Ad hoc testing in one significant manner , monkey testing can be done without any knowledge or information about the software .

11. What is Forward Compatibility and Backward Compatibility?

Compatibility is a non- functional testing to ensure customer satisfaction. It is to determine whether your software application or product is proficient enough to run in different browsers, database, hardware, operating system, mobile devices and networks. Application could also impact due to different versions, resolution, internet speed and configuration etc.

**Types of Software compatibility testing:**

* **Browser compatibility testing**
* **Hardware**
* **Networks**
* **Mobile Devices**
* **Operating System**
* **Versions**

**Versions**  
It is important to test the software applications in different versions of the software. There are two different types of version inspection.

**Backward Compatibility Testing** – Testing of the application or software in old or previous versions. It is also known as downward compatible.

**Forward Compatibility Testing** -Testing of the application or software in new or upcoming versions. It is also known as forward compatible.

12.What is the difference between Load Testing and Performance Testing?

**Load testing** is related to volume of the data that a software can handle.

**performance testing** is related to speed that concentrates on peak load time, threshold, page-load time and responsiveness time.

13. What is the difference between Load Testing and Stress Testing?

* Testing the app with maximum number of user and input is defined as **load testing.** While testing the app with more than maximum number of user and input is defined as **stress testing**.
* **In Load testing we** measure the system performance based on a volume of users**.**
* **While in Stress testing** **we** measure the breakpoint of a system

14.Explain the concept of recovery testing with help of example?

**Recovery Testing** is performed to determine whether operations can be continued after a disaster or after the integrity of the system has been lost. The purpose of recovery testing is to verify the system’s ability to recover from varying points of failure.

For example: When an application is receiving data from a network, unplug the connecting cable. After some time, plug the cable back in and analyze the application’s ability to continue receiving data from the point at which the network connection was broken

15.How much time the s/w will take to recover after crashes?

There are three types:

1. Mean time to failure that is when the first failure occurred.

2.Mean time to Repair that is how much time it has taken from reporting of an error to resolving that error.

3. Mean time between failures

16. how much time the error took from the first failure to occur?

**MTBF**: Mean Time between Failures. This average time excludes the time spent waiting for repair, being repaired, being re-qualified, and other downing events such as inspections and preventive maintenance and so on; it is intended to measure only the time a system is available and operating.

17.A regression test:  
a. Will always be automated  
b. Will help ensure unchanged areas of the software have not been affected  
c. Will help ensure changed areas of the software have not been affected  
d. Can only be run during user acceptance testing

18.Which of the following statements about component testing is not true?  
a. Component testing should be performed by development  
b. Component testing is also know as isolation or module testing  
c. Component testing should have completion criteria planned  
d. Component testing does not involve regression testing

19.Software testing accounts to what percent of software development costs?  
a. 10-20  
b. 40-50  
c. 70-80  
d. 5-10

20.What is Comparison Testing?

Comparison testing can help test engineers to understand strength and weakness of the software product with others. The approach of comparison testing involves comparing files and folders concurrently.

A comparison testing can be carried out in two ways

* **Direct comparison testing**: It is a testing of particular parts of each site against each other. Usually, multiple sites are compared side by side.
* **Objective comparison testing**: Execute the same test for each site separately. Usually, one site at a time is tested.

Comparison testing can be done in following ways:

* Competitors current site against your current site
* Competitors current version against the older version
* Yours current version against the older version