**Software Testing Assignment**

**Module - 2 ( Manual Testing )**

**1 . What is Exploratory Testing ?**

**Ans :**

Exploratory testing is a concurrent process . Test Design , execution and logging happen simultaneously , Testing is often not recored , Makes use of experience , heuristics and test patterns.

**2 . What is traceability matrix ?**

**Ans :**

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

**3 . What is Boundary value testing ?**

**Ans :**

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 ?**

**Ans :**

Aim is to treat groups of inputs as equivalent and to select one representative input to test them all . EP can be used for all levels of testing .

**5 . What is Integration testing ?**

**Ans :**

Integration testing – Testing performed to expose defects in the interfaces and in the interactions between integrated components or systems . **OR**  Integration testing is a level of the software testing processwhere individual units are combined and tested as a group .

**6 . What determines the level of risk ?**

**Ans :**

A Properly designed test that passes , reduces the overall level of Risk in system Risk - A factor that could result in future negative consequences usually expressed as impact and likehood .

1. Project Risk
2. Product Risk

**7 . What is Alpha testing ?**

**Ans :**

Alpha Testing is definitely performed and carried out at the developing organization’s location with the involvement of developers .

**8 . What is beta testing ?**

**Ans :**

Beta Testing is always open to the market and public . Beta Testing can be considered “ Pre – release “ testing .

**9 . What is Component testing ?**

**Ans :**

Component ( Unit ) – A minimal software item that can be tested in isolation . It means “ A unit is the smallest testable part of software “ . The testing of individual software components .

**10 . What is Functional system testing ?**

**Ans :**

Functional System Testing : A requirement that specifies a function that a system or system component must perform . A requirements may exist as a text documents and / or a model.

**11 . What is Non – Functional Testing ?**

**Ans :**

Non – Functional testing : Testing the attributes of a componentor system that do not relate to

**e.g.** reliability , efficiency , usability , interoperability , maintainability and portability .

**12 . What is GUI Testing ?**

**Ans :**

Graphical User Interface 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 Adhoc testing ?**

**Ans :**

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

**14 . What is load testing ?**

**Ans :**

Load Testing – Its a Performance testing to check system behavior under load. Testing an application under heavy loads , such as testing of a web site under arrange of loads to determine at what point the system’ s response time degradesor fails .

**15 . What is stress Testing ?**

**Ans :**

Stress testing – System is stressed beyond its specifications to checkhow and when if fails . Performed under heavy load like putting largenumber 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 ?**

**Ans :**

White box testing : Testing based on an analysis of the internalstructure of the component or system .

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

**Ans :**

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

**Techniques of Black Box Testing :**

1. Equivalence partitioning
2. Boundary value analysis
3. Decision tables
4. State transition testing

**18 . Mention what are the categories of defect ?**

**Ans :**

**1)** Arithmetic Defects

**2)** Logical Defect

**3)** Syntax Defects

**4)** Multithreading Defects

**5)** Interface Defects

**6)** Performance Defects

**19 . Mention what bigbang testing is ?**

**Ans :**

Big Bang integration testing all componets or modules is integrated simultaneously , after which everything is tested as a whole . Big Bang testing has the advantages that everything is , finished before integration testing starts .

**20 . What is the purpose of exit criteria ?**

**Ans :**

Exit criterion is used to determine whether a given test activity has been completed or not .

**21 . When should “ Regression Testing “ be performed ?**

**Ans :**

Regression testing is necessary after any feauture enhancement , bug fix , or configuration changes . For Example , when developers add a new widget to an application .

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

**Ans :**

**1) Testing shows presence of Defect :**

* Hence , testing principle states that – testing talks about the presence of defects and don’t talk about the absence of defects .

**2 ) Exhaustive Testing is Impossible**

* Exhaustive testing is not possible . Instead , we need the optimal amount of testing based on the risk assessment of the application .

**3 ) Early Testing**

* Early Testing – Testing should start as early as possible in the software Development Life Cycle .

**4 ) Defect Clustering a**

* Defect Clustering which states that a small number of modules contain most of the defects detected .

**5 ) The Pesticide Paradox**

* Repetitive use of the same pesticide mix to eradicate insects during farming will over time lead to the insects developing resistance to the pesticide .

**6 ) Testing is context Dependent**

* Testing is context dependent which basically means that the way you test an e-commerce site will be different from the way you test a commercial off the shelf application .

**7 ) Absence of Errors Fallacy**

* It is possible that software which is 99% bug-free is still unusable . This can be the case if the system is tested thoroughly for the wrong requirement .

**23 ) Difference between QA v/s QC v/s Tester**

**Ans :**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.N** | **Quality Assurance** | **Quality Control** | **Testing** |
| **1** | Activities which ensure the implementation of processes , procedures and standards in context to verification of developed software and intended requirement | Activities which ensure the verification of developed software with respect to documented requirement | Activities which ensure the identification of bugs/error/defects in the Software |
| **2** | Focuses on processes and procedures rather than conducting actual testing on the system | Focuses on actual testing by excecuting software with intend to identify bug/defect through implementation of procedures and process . | Focuses on actual testing |
| **3** | Process oriented activities | Product oriented activities | Product oriented activities |
| **4** | Preventive activities | It is corrective process | It is a preventive process |
| **5** | It is a subset of software Test Life Cycle | QC can be considered as the subset of Quality Assurance | Testing is the subset of Quality Control |

**24 ) Difference between Smoke and Sanity ?**

**Ans :**

|  |  |  |
| --- | --- | --- |
| **S . N** | **Smoke Testing** | **Sanity Testing** |
| **1** | Smoke testing is performed to ascertain that the critical functionalities of the program is working fine | Sanity Testing is done to check the new functionality / bugs have been fixed |
| **2** | The objectives of this testing is to verify “stability “ of the system in order to with more rigorous testing . | The objective of the testing is to verify the “rationality” of the system in order proceed to proceed with more rigorous testing . |
| **3** | This testing is performed by the developers or tester . | Santiy testing is usually performed by tester . |
| **4** | Smoke testing is usually documented or scripted is unscripted . | Sanity testing is usually not documented and |
| **5** | Smoke testing is a subset of regression testing . | Sanity testing is a subset of acceptance testing |
| **6** | Smoke testing is like general health check | Santiy testing is like specialized health |

**25 ) Difference between verification and Validation ?**

**Ans :**

|  |  |  |
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| **S .N** | **Verification** | **Validation** |
| **1** | It includes checking documents, design , codes and programs . | It includes testing and validating the actual product . |
| **2** | Verification is the static testing . | Validation is the dynamic testing |
| **3** | It does not include the execution of the code | It includes the execution of the code . |
| **4** | Methods used in verification are reviews , walkthroughs , inspections and desk-checking. | Methods used in validation are black box testing , white box testing and non-functional testing |
| **5** | Verification is for prevention of errors | Validation begins as soon as project starts |

**26 ) Explain types of performance testing ?**

**Ans :**

**1 )** Load testing

**2 )** Stress testing

**3 )** Endurance testing

**4 )** Spike testing

**5 )** Volume testing

**6 )** Scalability testing AW

**27 ) What is Error , Defect , Bug and failure ?**

**Ans :**

**Error :** It is an informal name specified to the defect .

**Defect :** The Defect is the difference between the actual outcomes and expected outputs .

**Bug :** It is an informal name specified to the defect .

**Failure :** If the software has lots of defects, it leads to failure or causes failure .

**28 ) Difference between Priority and Severity ?**

**Ans :**

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| --- | --- | --- |
| **S . No** | **Priority** | **Severity** |
| **1** | The value of Priority is subjective | The value of severity is objective . |
| **2** | The value of priority changes from time to time | The value of severity changes continually from time to time |
| **3** | Priority relates to the scheduling of defects to resolve them in software | Severity relates to the standards of quality . |
| **4** | The product manager basically decides a defect’s priority level . | The testing engineer basically decides a defect’s severity level . |
| **5** | There are 3 types of prioritises : high , medium , low | There are 5 types of severities : Cosmetic , Minor , Moderate , Major , and critical |

**29 ) When to used Usability Testing ?**

**Ans :** Aesthetics and design are important . Howell productions usually determine show well it works. Which icon or jagon represents what ? Error messages are not consistent or effectively displayed Session time not sufficient .

**30 ) What is the procedure for GUI Testing ?**

**Ans :** MANUAL BASED TESTING: Under this approach , graphical screens are checked manually by testers in conformance with the requirements stated in business requirements document. RECORD AND REPLAY

* GUI testing can be done using automation tool. This is done in 2 parts. During Record, test steps are captured into the automation tool . During playback, the recorded test steps are executed on the Applicationunder Test . Example of such tools - QTP .

**31 ) What is the difference between the STLC and SDLC**

**Ans :**

|  |  |  |
| --- | --- | --- |
| **Sr . No** | **SDLC** | **STLC** |
| **1** | Development Life Cycle | Testing Life Cycle |
| **2** | It SDLC, the development team creates the high and low-level design plans | In STLC, the test analyst creates the integration Test Plan |
| **3** | SDLC phase also includes post-deployment supports and updates. | Testers , execute regression suits, usually automation scripts to check maintenance code deployed |

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

**Ans :**

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| --- | --- | --- | --- |
| **Sr . No** | **Test Scenario** | **Test Cases** | **Test Script** |
| **1** | It focuses on morewhat to test than how to test | Test Case is a manual approach of software testing . | Test Script is an automatic approach of software testing |
| **2** | Test scenarios are high-level actions . | Test Case are classified as positive , reusable , negative and UI test cases | Test Script are characterized as manual test script and automation test script |

**33 ) What is Priority ?**

**Ans :** Priority is Relative and Business-focused . Priority defines the order in which we should resolve a defect .

**34 ) What is severity ?**

**Ans :** Severity is absolute and customer -focused . it is the extent to which the defect can affect the software .

**35 ) Advantage of Bugzilla**

**Ans :** Advanced search capabilities

* E-mail Notifications
* Modify/file buges by e-mail
* Time tracking
* Strong security
* Customization Localization

**36 ) What is Bug Life Cycle ?**

**Ans :**

The duration or time span between the first time defects is found and the time that it is closed successfully, rejected , postponed or deferred is called as ‘ Bug Life Cycle ‘ .

**37 ) Explain the difference between Functional testing and NonFunctional testing ?**

**Ans :**

|  |  |  |
| --- | --- | --- |
| **S .No** | **Functional Testing** | **Non-Functional Testing** |
| **1** | Functional testing is executed first | Non – Functional testing Should be performed after functional testing |
| **2** | Manual testing or automation tools can be used for functional testing | Using tools will be effective for this testing |
| **3** | Business requirements are the inputs to functional testing | Performance parameters like speed , scalability are inputs to non-functional testing |
| **4** | Functional testing describes what the products does | Nonfunctional testing describes how good the product works |
| **5** | Easy to do manual testing | Tough to do manual testing |

**38 ) What are the different Methodologies in Agile Development Model**

**Ans :** There are four types of Methodologies in Agile Development model

* Individuals and interactions
* Working software
* Customer collaboration
* Responding to change