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**DIPLOMA SOFTWARE TESTING AND AUTOMATION(SELENIUM)**

**ASSIGNMENT: MODULE-2**

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| Q-1 | | What is Exploratory Testing? | |
| ANS | | **This may be the only type of technique used for low-risk systems, but this approach may be particularly useful under extreme time pressure – in fact this is one of the factors leading to exploratory testing** | |
| Q-2 | | What is traceability matrix? | |
| ANS | | **Test conditions should be able to be linked back to their sources**  **in the test basis, this is known as traceability**  **To protect against changes you should be able to trace back from every**  **system component to the original requirement that caused its presence** | |
| Q-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** | |
| Q-4 | | What is Equivalence partitioning testing? | |
| ANS | | **The numbers fall into a partition where each would have the same, or equivalent, result i.e. an Equivalence Partition (EP) or Equivalence Class** | |
| Q-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**  **Integration Testing is a level of the software testing process**  **where individual units are combined and tested as a group** | |
| Q-6 | | What determines the level of risk? | |
| ANS | | **A properly designed test that passes, reduces the overall level of Risk in a system**  **Risk – ‘A factor that could result in future negative consequences; usually expressed as impact and likelihood’**  **Risks are of two types**  **Project Risks**  **Product Risk** | |
| Q-7 | | What is Alpha testing? | |
| ANS | | **It is always performed by the developers at the software development site**  **-Sometimes it is also performed by Independent Testing Team.**  **-Alpha Testing is not open to the market and public**  **-It is conducted for the software application and project.**  **-It is always performed in Virtual Environment.** | |
| Q-8 | | What is beta testing? | |
| ANS | | **It 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 usually conducted for software product.**  **-It is performed in Real Time Environment.** | |
| Q-9 | | What is component testing? | |
| ANS | | **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.**  **Unit Testing is a level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed** | |
| Q-10 | | What is functional system testing? | |
| ANS | | **Testing based on an analysis of the**  **specification of the functionality of a component or system.** | |
| Q-11 | | What is Non-Functional Testing? | |
| ANS | | **Testing the attributes of a component**  **or system that do not relate to functionality, e.g. reliability,**  **efficiency, usability, interoperability, maintainability and**  **portability** | |
| Q-12 | | What is GUI Testing? | |
| ANS | | **Graphical User Interface (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** | |
| Q-13 | | What is Adhoc testing? | |
| ANS | | **Adhoc testing is an informal testing type with an aim to break the**  **system.**  **-It does not follow any test design techniques to create test cases**  **-In fact is does not create test cases altogether!**  **-Main aim of this testing is to find defects by random checking**  **-Adhoc testing can be achieved with the testing technique**  **called Error Guessing.** | |
| Q-14 | | What is load testing? | |
| ANS | | **Its a performance testing to check system behavior 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** | |
| Q-15 | | What is stress Testing? | |
| ANS | | **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.**  **The different types of coverage are:**  **Statement coverage**  **Decision coverage**  **Condition coverage**  **-Other White Box Techniques**  **Branch Condition testing**  **Branch Condition Combination testing**  **Modified Condition Decision testing**  **Dataflow testing**  **Linear Code Sequence And Jump (LCSAJ) testing** | |
| Q-16 | | What is white box testing and list the types of white box testing? | |
| ANS | | **Testing based on an analysis of the internal structure of the component or system**  **Structure-based testing technique is also known as ‘white-box’**  **or ‘glass-box’ testing technique because here the testers require**  **knowledge of how the software is implemented, how it works** | |
| Q-17 | | What is black box testing? What are the different black box testing techniques? | |
| ANS | | **Testing, either functional or non-functional,**  **without reference to the internal structure of the component**  **or system**   1. **Equivalence partitioning** 2. **Boundary value analysis** 3. **Decision tables** 4. **State transition testing** 5. **Use-case Testing** 6. **Other Black Box Testing**   **Syntax or Pattern Testing** | |
| Q-18 | | Mention what are the categories of defects? | |
| ANS | | * **Functional Bugs. ...** * **Logical Bugs. ...** * **Workflow Bugs. ...** * **Unit Level Bugs. ...** * **System-Level Integration Bugs. ...** * **Out of Bound Bugs. ...** * **Security Bugs.** | |
| Q-19 | | Mention what bigbang testing is? | |
| ANS | | **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.** | |
| Q-20 | | What is the purpose of exit criteria? | |
| ANS | | **End of all testing – i.e. product Go Live**  **End of phase of testing (e.g. hand over from System Test to UAT)** | |
| Q-21 | | When should "Regression Testing" be performed? | |
| ANS | | **Determination of frequency of Regression Tests, i.e., after every modification or every build update or after a bunch of bug fixes, is a challenge.** | |
| Q-22 | | What is 7 key principles? Explain in detail? | |
| ANS | | * **Testing shows the presence of defects.** * **Exhaustive testing is impossible.** * **Early testing.** * **Defect clustering.** * **Pesticide paradox.** * **Testing is context dependent.** * **Absence-of-errors fallacy**. | |
| Q-23 | | Difference between QA v/s QC v/s Tester | |
| ANS | | |  |  |  | | --- | --- | --- | | **Quality Assurance** | **Quality Control** | **Testing** | | **Activities which ensure the**  **implementation of processes,**  **procedures and standards in**  **context to verification of**  **developed software and intended**  **requirements** | **Activities which ensure the**  **verification of developed**  **software with respect to**  **documented (or not in some**  **cases) requirements.** | **Activities which ensure**  **the identification of**  **bugs/error/defects in the**  **Software.** | | **Focuses on processes and**  **procedures rather than conducting**  **actual testing on the system.** | **Focuses on actual testing by**  **executing Software with intend**  **to identify bug/defect through**  **implementation of procedures and process.** | **Focuses on actual testing.** | | **Preventive activities.** | **It is a corrective process.** | **It is a preventive process.** | | **It is a subset of Software Test Life**  **Cycle (STLC).** | **QC can be considered as the**  **subset of Quality Assurance.** | **Testing is the subset of**  **Quality Control.** | | |
| Q-24 | | Difference between Smoke and Sanity? | |
| ANS | | |  |  | | --- | --- | | **Smoke Testing** | **Sanity Testing** | | **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** | | **Smoke testing is a subset of Regression testing** | **Sanity testing is a subset of Acceptance testing** | | **This testing is performed by the developers** | **Sanity testing is usually performed by testers**  **or testers** | | |
| Q-25 | | Difference between verification and Validation | |
| ANS | | |  |  |  | | --- | --- | --- | | **Criteria** | **Verification** | **Validation** | | **Definition** | **efinition The process of evaluating work-products (not the actual final product) of a development phase to determine whether they meet the specified requirements for that phase.** | **The process of evaluating software during or at the end of the development process to determine whether it satisfies specified business requirements.** | | **Objective** | **To ensure that the product is being built according to the requirements and**  **design specifications. In other**  **words, to ensure that work**  **products meet their**  **specified requirements** | **To ensure that the product actually meets the user’s needs, and that the**  **specifications were correct in the first place.In other words, to demonstrate that the product fulfills its intended use**  **when placed in its intended environment.** | | **Evaluation item** | **Plans, Requirement Specs, Design Specs, Code, Test Cases** | **The actual product/software** | | |
| Q-26 | | Explain types of Performance testing | |
| ANS | | **Software performance testing is a means of quality assurance (QA). It involves testing software applications to ensure they will perform well under their expected workload** | |
| Q-27 | | What is Error, Defect, Bug and failure? | |
| ANS | | 1. **a human action that produces an incorrect result** 2. **A flaw in a component or system that can cause**   **the component or system to fail to perform its**  **required function**   1. **Deviation of the component or system from its**   **expected delivery, service or result**    **GENERAL DEFINATION: 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**  **failure”** | |
| Q-28 | Difference between Priority and Severity | |
| ANS | |  | |
| Q-29 | | What is Bug Life Cycle? | |
| ANS | | **“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.”** | |
| Q-30 | | Explain the difference between Functional testing and NonFunctional testing | |
| ANS | | |  |  | | --- | --- | | **Functional Testing** | **Non-Functional Testing** | | **Manual testing or automation tools can be**  **used for functional testing** | **Using tools will be effective for this testing** | | **Testing based on an analysis of the specification of the functionality of a component or system.** | **Testing the attributes of a component**  **or system that do not relate to functionality, e.g. reliability,**  **efficiency, usability, interoperability, maintainability and**  **portability** | | **Functional testing describes what the product does** | **Nonfunctional testing describes how good the**  **product works** | | |
| Q-31 | | To create HLR & TestCase of FACEBOOK | |
| ANS | | **https://github.com/MPatel004/Mihir\_Tops** | |
| Q-32 | | To create HLR & TestCase of INSTAGRAM | |
| ANS | | **https://github.com/MPatel004/Mihir\_Tops** | |
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