**Module-4 Automation Core Testing (Load Runner Up and Selenium IDE)**

**Question1 :**

**Which components have you used in Load Runner?**

Answer :

1. Virtual User Generator (VuGen) :
2. Controller
3. Analysis

**Question2 :**

**How can you set the number of Vusers in Load Runner?**

Answer :

Basic Schedule :

Schedule:

In the Performance Test Designer window, in the Groups grid, select a group, and in the Vusers column, enter the number of Vusers to allocate to that group.

**Question3 :**

**What is Correlation?**

Answer :

‘Correlation’ term refers to the handling of dynamic values coming from the server. These dynamic values are the unique values that are generated by the server for security purposes like the session ID, authorization token etc. In some cases, dynamic values also refer to the web content like values in a drop-down list, calendar date, item ID, product ID, order number etc. Through correlation, you can capture these dynamic values and pass them in the subsequent requests. This is the basic concept of ‘Correlation’ in LoadRunner.

**Question4 :**

**What is the process for developing a Vuser Script?**

Answer :

The first step in developing a new Vuser script is to create a blank script.

The contents and structure of the blank Vuser script vary slightly based on the protocol of the script. Therefore, before you create a blank Vuser script, you must know the protocol to use for the script. After you create a blank Vuser script, you are ready to perform the next step in the script creation workflow - recording user actions into the script.

**Question5 :**

**How Load Runner interacts with the application?**

Answer :

LoadRunner simulates user activity by generating messages between application components or by simulating interactions with the user interface such as key presses or mouse movements. The messages and interactions to be generated are stored in scripts.

**Question 6 :**

**How many VUsers are required for load testing?**

Answer :

Time taken for 1 user to complete 1 transaction: [a] + [b] + [c] = 6 second In 1 hour a user can do: 60\*60/6 = 600 transactions To do 280,000 transactions per hour, we need: 280,000/600 = 467 vusers After identifying the scripts and the total VUsers, plan the LoadRunner test scenario for the same.

**Question 7 :**

**What isthe relationship between Response Time and Throughput?**

Answer :

Response time and throughput are related. The response time for an average transaction tends to decrease as you increase overall throughput.

However, you can decrease the response time for a specific query, at the expense of overall throughput, by allocating a disproportionate amount of resources to that query. Conversely, you can maintain overall throughput by restricting the resources that the database allocates to a large query.

The trade-off between throughput and response time becomes evident when you try to balance the ongoing need for high transaction throughput with an immediate need to perform a large decision-support query. The more resources that you apply to the query, the fewer you have available to process transactions, and the larger the impact your query can have on transaction throughput. Conversely, the fewer resources you allow the query, the longer the query takes.

**Question 8 :**

**To test the Performance testing on “Tops Technologies website” :-** <https://www.saucedemo.com/>

1. **to Record all top level menu**
2. **to Record minimum 10 Vuser on this website**
3. **3. save all (Script,Design,Graph)**

**Question 9 :**

**create a normal script of above website with correlate using hp default website.**

Answer :

**Question 10 :**

**What is Automation Testing?**

Answer :

Test automation is the use of software to control the execution of tests, the comparison of actual outcomes to predicted outcomes, the setting up of test preconditions, and other test control and test reporting functions.

Commonly, test automation involves automating a manual process already in place that uses a formalized testing process.

Although manual tests may find many defects in a software application, it is a laborious and time consuming process.

Test automation is a process of writing a computer program to do testing that would otherwise need to be done manually.

**Question 11 :**

**Which Are The Browsers Supported By Selenium Ide?**

Answer :

The browsers supported by selenium ide :

Goole Chrome

Mozilla Firefox

Microsoft Edge

Safari

Opera

**Question 12 :**

**What are the benefits of Automation Testing?**

Answer :

Benefits of automation testing :

Saves Time

Automating the testing process helps the testing team to use less time to validate newly created features. For instance, in manual testing, there is a need to write thousand test cases for a calculator application, but automation makes the process much faster.

Productivity Improvement :

As during execution, automation tests do not require human intervention, so testing an application can be done late at night, and we can get the results next morning. Software developers and testers require less time on automation testing.

Accuracy Improve :

In manual testing, there is a chance of mistakes whether you are an experienced testing engineer. The chances of errors may increase when testing a complex use case. But Automation testing reduces the chances of errors. There is good accuracy, as we will get the same result each time on performing the same test cases.

Test Suite Reusability :

We can reuse the test scripts in automation testing, and we don't need to write the new test scripts again and again. These test cases can be used in various ways, as they are reusable. Reusability helps to reduce the cost and also eliminate the chances of human error.

Ability to test on various platform :

Automation testing allows the user to test the application on different web browsers and operating systems.

Running test 24/7 :

In automation testing, we can start the testing process from anywhere in the world and anytime we want. It can also be done remotely if we don't have many approaches or the option to purchase them.

Early Bug Detection :

By automation testing, it is easy to detect critical bugs in the initial phases of software development. It reduces the cost and helps us to spend fewer working hours to fix such problems. It increases the efficiency of the team.

Less human resources :

Automation testing requires fewer people to perform a tedious manual test. To implement the automation test script, we need a test automation engineer who can write the test scripts to automate our tests.

Reduce the expenses :

Automation testing is less expensive, as once the test scripts have been built, we can reuse them at any time without any extra cost. While manual testing is more expensive than automation, with manual monitoring, it is typical to execute experiments repeatedly.

Scalability of test cases :

In manual testing, we require the involvement of the number of people and number of hours to scale up a project. Whereas the scalability of automation testing is higher, we need adding of test executors to the testing framework.

Consistency :

Compared to manual testing, automation testing is more consistent and way faster than executing the regular monotonous tests that cannot be missed but may cause faults when tested manually.

**Question 13 :**

**What are the advantages of Selenium?**

Answer :

Advantages of selenium :

1. Selenium is pure open source, freeware and portable tool.   
2. Selenium supports variety of languages that include Java, Perl, Python, C#, Ruby, Groovy, Java Script, and VB Script. etc.   
3. Selenium supports many operating systems like Windows, Macintosh, Linux, Unix etc.   
4. Selenium supports many browsers like Internet explorer, Chrome, Firefox, Opera, Safari etc.   
5. Selenium can be integrated with ANT or Maven kind of framework for source code compilation.   
6. Selenium can be integrated with TestNG testing framework for testing our applications and generating reports.   
7. Selenium can be integrated with Jenkins or Hudson for continuous integration.   
8. Selenium can be integrated with other open source tools for supporting other features.   
9. Selenium can be used for Android, IPhone, Blackberry etc. based application testing.   
10. Selenium supports very less CPU and RAM consumption for script execution.

**Question 14 :**

**Why testers should opt for Selenium and not QTP?**

Answer :

Selenium, however, supports a wide range of programming languages. QTP/UFT test scripts run only on the Windows environment. They cannot be run across all browsers. On the other hand, selenium is os independent and allows test scripts to run across all browsers.

**Question 15 :**

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Answer :