**Software Testing Assignment Module 4 – Automation core testing(Load runner up and selenium IDE)**

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

Virtual user generator - creating vuser script  
 Controller - desing /control/monitor performance test execution  
 Analysis – load test results

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

Steps

Open load runner - virtual user generator

Select File - Create new script

Select Tools - Create controller scenario

Set number of Vusers

**3** What is Correlation ?

Correlation term refers to the handling of static and dynamic values coming from the server.

These dynamic values are the unique values which are generated by the server for security purpose

Ex.. 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 in the subsequent requests.

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

Steps

Open load runner virtual user generator

Select File and Create new script

Select record & perform recording

Select Correlation after recording

Select Action option to see generated script

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

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.

LoadRunner can generate the scripts by recording them, such as logging https requests between a client web browser and an application's web server.

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

The number of VUsers required depending on your system under testing, network configurations, hardware settings, memory, operating system, software applications objectse of a performance testing

**7**  What is the relationship between Response Time and Throughput?

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

The Throughput shows the amount of data in bytes that the Vusers received from the server in a second. When It is compared with transaction response time, throughput and response time get decreased.

**8**  What is the difference between hits/second and requests/second ?

Hits per second mean the number of hits the server receives in one second from the vuser. Request per second is the number of request the vuser will request from the server.

**12** What is Automation Testing ?

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.

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

Once tests have been automated, they can be run quickly.

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

70% faster than the manual testing  
 Wider test coverage of application features  
 Reliable in results & Ensure Consistency  
 Saves Time and Cost  
 Improves accuracy  
 Human Intervention is not required while execution  
 Increases Efficiency  
 Better speed in executing tests & Re-usable test scripts  
 Test Frequently and thoroughly

More cycle of execution can be achieved through automation  
 Early time to market

**14** What are the advantages of Selenium?

open source software  
 Selenium Supports various programming languages

Java, paython ,ruby,kotlin  
 Supports various operating systems

Windows,linux

Supports various browsers

Google Chrome, MozillaFirefox, and

Microsoft Edge

Supports parallel test execution

Uses fewer hardware resources

Test case execution time is faster

Test cases can be executed while browser window is minimized

**15** Advantages of Selenium over QTP

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| Selenium | QTP |
| Open source, free to use, and  free of charge. | Commercial  Relational database management system stores data in tabular form. Stored data are related to each other. |
| Supports mobile devices | Supports mobile devise using 3rd party software |
| Supports various operating systems | Can only be used in Windows |
| Can execute tests while the browser is minimized | Needs to have the application under test to be visible on the desktop |
| Can execute tests in parallel. | Can only execute in parallel but using Quality Center which is again a paid product. |