***Software testing Assignment***

**Module = 4 automation core testing (load runner up and Selenium IDE)**

Q.1 what Is automation testing

* Automation testing is the method of testing software products with special testing tools and frameworks to minimize human intervention and maximize quality
* 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.
* Once tests have been automated, they can be run quickly.
* This is often the most cost-effective method for software products that have a long maintenance life

Q.2 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

Q.3 which are the browsers supported by selenium IDE

* Selenium IDE is chrome browsers and Firefox browsers supported by selenium IDE

Q.4 what are the advantages of selenium

* Very easy to use and install
* No programming experience is required, through knowledge of HTML and DOM are needed
* Can export tests to formats usable in Selenium RC and WebDriver
* Has built-in help and test results reporting module
* Provides support for extensions

Q.5 why tester should opt for selenium and not QTP

* Selenium however support a wide range of programming language. QTP/UFT test scripts run only on the windows environment
* They cannot be run across all browser on the other hand
* Selenium is OS independent and allows test scripts to run across all browsers

Q.6 which components have you used in load runner

* The key components of load runner
* Load generator generates the load against the application by following scripts
* Virtual user generator for generating and editing scripts
* Controller controls launches and sequences instances of load generator specifying which script to use for how long etc.

Q.7 what is the relationship between response time and throughput

* 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

Q.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 Virtual user
* Request per second is the number of requests the Virtual user will request from the server

Q.9 how many load runner interacts with the application

* Load runner simulates user activity by generating messages between application components or by simulating interactions with the user interface such as key pressed or mouse movements
* The message and interactions to be generated are stored in scripts

Q.10 how can you set the number of Virtual user in load runner

* You can set number of Virtual user in the controller section while creating your scenario
* Many other advanced option like ramp-up ramp-down of Virtual user are also available in the controller section

Q.11 what is the process for developing a Virtual user script

* 1. recording the Virtual user script
* 2. edit the Virtual user script
* 3. runtime setting
* 4. run the Virtual user script in stand alone mode
* 5. incorporate the Virtual user script into a load runner scenario

Q.12 how many Virtual user required for load testing

* For example if you run a load test with 10,000 Virtual user each making a request every 20 seconds (3 request per minute) then you’re making 30,000 requests per minute which equals 500 requests per second