A4Q
Selenium 4
Tester Foundation

A4Q Certified Selenium 4 Tester Foundation

MOCK EXAM
Questions

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Revision History

Version	Date	Remark
Beta	23.03.2023	Initial Layout
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Table of Contents

Sample Questions

STF1-2 (K2) Understand the components of the gTAA and how to build a TAS

1. Which pseudo code is an example of a controllability property in Selenium automation tools?

A. Find WebElement by XPath (".//*[contains(@id,'login')"]

B. Clear content of WebElement described by XPath (".//*[contains(@id,'username')"]

C. Count number of WebElement described by XPath (".//*[contains(@id,'img')"]

D. Confirm if WebElement described by XPath (".//*[contains(@id,'img')"] is clickable

STF1-2 (K2) Understand the components of the gTAA and how to build a TAS

2. Which of the following statements BEST describes a Selenium based TAS?

A. A TAS that is directly derived from the gTAA that can run automation scenarios on any web-based SUT

B. A TAS that is directly derived from the TAA that can run automation scenarios on any piece of software

C. A TAS that uses Selenium libraries that are directly from the gTAA

D. A TAS that is directly based on a Selenium TAF used to run automation on any web-based SUT

STF1-3 (K1) Remember industry-wide expectations from a TAS

3. As a Test Automation Engineer, which of the following features of a TAS is of the HIGHEST priority?

A. Looping of test cases

B. Measurement of the return of investment

C. Reliable test results

D. Random generation of test data during test execution

STF1-4 (K2) Understand the relationship between manual and automated tests

4. Which of the following statements is NOT a suitable criterion to be considered before investing in an automation solution?

A. The level of complexity of the tests that are manually executed.

B. The existing tools implemented in the organization

C. The interfaces of the system under test over which the automation solution is expected to act

D. The ratio of developers to testers in the organization

STF1-5 (K2) Explain the benefits and limitations of automation testing

5. A startup company has established a test team of experienced testers for a new product recently launched on the market; the product is having a lot of quality issues. These issues need to be solved as soon as possible due to pressure from the client. There is also a lack of documentation on the product. The new test manager plans to start with manual testing on an exploratory basis then move forward with maturing the test process and then implementing automation testing.

Which of the following statements BEST describes the above strategy?

A. By adopting this strategy the test manager is adding an overhead of manual testing as the benefits of automation testing are delayed when not started upfront

B. This strategy allows manual testing and the test process to be more structured so that there will be enough test basis to analyze what to automate and how to automate

C. This strategy will attract more clients for the company and help to get enough budget to invest in automation testing

D. This strategy will not solve the quality issues of the product until automation testing is not mature

STF1-6 (K2) Understand the different test automation solution

6. Which of the following is the correct description for a keyword driven automation solution design for a webpage application?

A. An automation solution design where test scripts are coherent with the webpage designs

B. An automation solution design where the test interactions are reusable

C. An automation solution design where changes in the data used for testing will require the test automation solution to be re-compiled

D. An automation solution design in which the test cases are reusable as long as the test cases and the test data do not change

STF2-1 (K2) Understand how different web technologies co-exists together

7. Which of the following statements BEST describes the client-side functional logic processing of a web app?

A. An input element having a meaningful class name attribute

B. A rounded colored textbox displayed on the page

C. Some features of the web app are disabled based on the user rights of the logged user

D. A button is not enabled until all mandatory fields on the web form are filled with valid data

STF2-2 (K1) Remember the different locators used by Selenium

8. Which of the following is NOT a Selenium locator?

A. Hypertext

B. name

C. id

D. ClassName

STF2-3 (K3) – Use different selenium locators to find GUI elements

9. Consider the following DOM page.

```
<html>
	<body>
		<div class="A4Q_Sample_Test">
			<p class="A4Q_">Exam Content here.</p>
			<input type="submit" class="finishtest" data-test="finish-exam" id="finish-
			button" value="Finish">
		</div>
	</body>
</html>
```

Which of the following Selenium locators CANNOT be used to interact with the p element?

A. XPath

B. ClassName

C. name

D. cssSelector

STF2-4 (K2) Understand the structure of the DOM tree

10. Which of the following statements BEST describes the structure of the DOM?

A. The DOM is a stream of HTML elements which are sequentially arranged

B. The DOM is a collection of HTML elements which are hierarchically arranged

C. The DOM has the HTML tag as a root node and the rest are leaf nodes

D. The DOM is hierarchically arranged whereby each parent node has at most two children

STF2-5 (K3) Apply an XPath expression to locate elements

11. Which of the following statements is a valid reason to use relative XPath over absolute XPath?

A. Absolute XPath may not locate an element uniquely

B. Absolute XPath is too complex and too long to derive

C. Not all elements can have an absolute XPath

D. Absolute XPath requires too much maintenance effort

STF2-6 (K4) – Analyze a DOM tree to distinguish the most appropriate locator to use

12. Consider the following HTML DOM segment.

```
<form>
    <div class="checkout_info">
        <div class="form_group">
            <input class="input_error form_input" placeholder="First Name" type="text" data-test="firstName" id="first-name" name="firstName" autocorrect="off" autocapitalize="none" value="">
        </div>
        <div class="form_group">
            <input class="input_error form_input" placeholder="Last Name" type="text" data-test="lastName" id="last-name" name="lastName" autocorrect="off" autocapitalize="none" value="">
        </div>
        <div class="form_group">
            <input class="input_error form_input" placeholder="Zip/Postal Code" type="text" data-test="postalCode" id="postal-code" name="postalCode" autocorrect="off" autocapitalize="none" value=""></div>
    </div>
    <div class="checkout_buttons">
        <button class="btn btn_secondary back btn_medium cart_cancel_link" data-test="cancel" id="cancel" name="cancel"><img src="data:image/png;base64" class="back-image" alt="Go back">Cancel</button>
        <input type="submit" class="submit-button btn btn_primary cart_button btn_action" data-test="continue" id="continue" name="continue" value="Continue">
    </div>
</form>
```

What would be the <u>MOST</u> appropriate locator to use to uniquely identify all the elements in the above page source?

A. Using the ClassName locator of the div container for each element

B. Using the element ClassName

C. Using an XPath based on the element type attribute

D. Using the CSS selector ‘input.content’

STF2-7 (K3) Apply locator semantics to locate malformed locator expressions

13. Which of the following is a malformed XPath expression?

A. //div[.//a[text()='SELENIUM']]/ancestor::div

B. //div[1]/following-sibling:div

C. //*[@id='rt-feature']

D. //label[starts-with(@id,'message')]

STF2-8 (K3) Apply best practices to increase reliability of locator expression

14. Consider the following segment of an HTML document:

Why would the below XPaths NOT be advisable to use to locate the above element?

//*[class = '0000123e4567-e89b-12d3']

A. Because it is too long, and Selenium automation tool may not handle it correctly
B. Because '-' symbol is not allowed inside XPath
C. Because it makes maintenance more difficult
D. Because the leading zeros in the ClassName is not read by Selenium automation tool

STF2-9 (K2) Understand how to use a CSS selector to search for a node

15. Consider the following element in the HTML document:

<input id="email" class ="inputtext" type="text">

What would be the corresponding CSS selector for selecting the above element?

A. input.id
B. id.email
C. input.inputtext
D. input.class

STF2-10 (K3) Execute a CSS selector expression to search for an HTML node(s)

16. Which of the following options BEST describes the element selected by the below CSS selector?

font:contains("sans-serif")

A. It selects all the HTML elements having the tag "font" with inner text "sans-serif"
B. It selects the first HTML element having the tag "font" with inner text "sans-serif"
C. It selects all the HTML elements having the font defined as "sans-serif"
D. It selects the first HTML elements having the font defined as "sans-serif"

STF3-1 (K1) Remember the different Selenium frameworks and the supported languages

17. Which of the below pairs of TAS and its supported programming languages is correct?

A. WebDriverIO supports Java programming
B. Helium supports Ruby programming
C. QAF supports JavaScript programming
D. Selenide supports Java programming

STF3-2 (K2) Understand the function of the Selenium IDE, Selenium WebDriver, and Selenium Grid

18. Which of the following options matches the Selenium automation tool from Group X with the tool description in Group Y from the table below?

Group X		Group Y	
1)	Selenium IDE	i)	is used to create a TAS
2)	Selenium WebDriver	ii)	is a web browser add-on
3)	Selenium Grid	iii)	is used to scale up the test execution concurrency

A. 1 and ii; 2 and i; 3 and iii
B. 1 and iii; 2 and i; 3 and ii
C. 1 and i; 2 and ii; 3 and iii
D. 1 and ii; 2 and i; 3 and iii

STF3-3 (K2) Understand the architecture on which Selenium WebDriver 4 is built

19. Which of the below statements is <u>NOT</u> true about the Selenium 4 architecture?

A. Selenium 4 has a bi-directional communication mechanism between the browser drivers and the web browsers
B. The language binding and Selenium client collectively form the client side of the Selenium architecture
C. EdgeDriver is part of the language binding in Selenium 4
D. Selenium 4 is based on a client-server architecture

STF3-4 (K2) Understand the concept and uses of headless automation

20. Which of the following is <u>TRUE</u> for headless test automation in Selenium?

A. Headless test automation is used to keep the resource consumption of test execution low
B. Headless test automation is used to keep sensitive information secured
C. Headless test automation in Selenium does not need any browser to be installed on the machine
D. Headless test automation can only be used on operating system not having a user interface

STF3-5 (K4) Distinguish the optimum parameters for Selenium automation tools given a scenario

21. Which of the following options <u>BEST</u> matches the Selenium automation tool and parameters, from Group X, with the situation where the tool could be used in Group Y in the table below?

Group X		Group Y	
1)	Selenium IDE	i)	There is a need to test a webpage's functionality on different browsers with different operating systems with the lowest test execution time.
2)	Selenium WebDriver	ii)	A functional test will be required to be done repeatedly over only one test cycle.
3)	Selenium Headless Execution	iii)	Building a data driven TAS so that test engineers can use make test data maintenance.
4)	Selenium Grid	iv)	There is a one-off test required in which the webpage page title is to be captured for 50,000 webpages.

A. 1 and ii; 2 and iii; 3 and iv; 4 and i
B. 1 and ii; 2 and iii; 3 and iv; 4 and i
C. 1 and ii; 2 and iii; 3 and iv; 4 and i
D. 1 and ii; 2 and iii; 3 and iv; 4 and i

STF3-6 (K3) Use appropriate browser controller command in the correct sequence given a scenario

22. Which of the following statements differentiates between driver.close; and driver.quit; commands?

A. driver.close takes the page URL as argument to search and close the browser opened by Selenium on that URL while driver.quit simply closes all the browser windows opened by Selenium
B. driver.quit takes the page URL as argument to search and close the browser opened by Selenium on that URL while driver.close simply closes all the browser windows opened by Selenium
C. driver.close takes no argument and closes the current browser opened by Selenium while driver.quit simply closes all the browser windows opened by Selenium
D. driver.quit takes no argument and closes the current browser opened by Selenium while driver.close simply closes all the browser windows opened by Selenium.

STF3-7 (K2) Understand the new features of Selenium 4

23. Which of the following features is NOT a feature of Selenium IDE based on the Selenium 4 updates?

A. Selenium IDE tests can be executed on Selenium Grid
B. Selenium IDE can export recorded tests to PHP
C. Selenium IDE can iterate over a recorded test case
D. Selenium IDE keeps a backup locator for each web element

STF3-8 (K3) Apply the correct feature of Selenium 4 given a scenario

24. In which of the following scenarios is it MOST likely that the use of friendly locators will NOT be effective?

A. In the situation where the webpage elements are loaded in a dynamic sequence and asynchronously
B. In the situation where relative XPath does not work
C. In the situation where the element's parent has more than 1 child node
D. In the situation where tests are programmed are to run in headless mode

STF4-1 (K2) Understand the different libraries available for Selenium in Python and / or Java

25. Which of the following is NOT a language binding library for Selenium?

A. Ruby language binding
B. JavaScript language binding
C. SQL language binding
D. PHP language binding

STF4-2 (K2) Know how Selenium WebDriver is initialized, executed, assertions made and terminated

26. You are required to write an automated test case for a login scenario in Selenium. After the page with title 'Login Page' loads, you are required to enter a valid username and a valid password, to click on login, to verify if user is redirected to the page having title 'Home' and then to end the automation session.

Which of the below Selenium methods and interactions will be required for the above scenario?

i. click method
ii. switch to method
iii. get method
iv. send keys method
v. get page source method
vi. quit method
vii. close method
viii. get title method

A. i, ii, iv, vi, viii
B. i, iii, iv, vii, viii
C. i, iv, v, vi, viii,
D. i, iii, iv, vi, viii

STF4-3 (K1) Remember the important information needed on a test automation report

27. Which of the following information is <u>NOT</u> expected to be found on a Selenium automation report?

A. Machine identification on which the test was executed
B. Browser version on which the test was executed
C. The actual result if a failed step
D. If the failed step is a false positive

STF4-4 (K2) Understand the different common interactions possible with Selenium automation tool

28. Which of the statements below describes the difference between the findElement and findElements methods in Selenium?

A. findelement take one locator as argument while findelements can take one or more locators as argument
B. findelement returns the first element if found while findelements may return one or more web elements if found
C. findelement is used to search web elements in one webpage that is opened under the control of the Selenium TAS while findelements is used to search web elements in all webpages that are opened and under the control of the Selenium TAS
D. findelement always return exactly one web element while findelements always return more than one web elements

STF4-5 (K2) Understand the concept of parallelism of tests and how it can be used for performance testing

29. Which of the statements below describes the probe effect applied to performance testing using Selenium automation tool?

A. The use of the machine resources by multiple test instances by the Selenium automation tool directly affects the performance metrics captured
B. The execution of multiple Selenium automation sessions directly impacts the functionality of the system under test
C. The execution of multiple Selenium automation sessions may bring the test environment down
D. The performance metrics define the number of concurrent Selenium automation sessions that may be executed

STF4-6 (K2) Know how machine learning can help in reducing false positives and maintenance effort

30. Which of the statements below is correct in relation to self-healing tests and test maintenance?

A. Test maintenance is no longer required as self-healing tests will correct the brittle locators
B. When self-healing tests are in place, test maintenance is still required on locators that were both corrected and not corrected
C. Test maintenance is still required but needs to be done only on the locators that were not corrected by the self-healing framework
D. Test maintenance is optional when self-healing tests are in place

STF4-7 (K3) Use the best practices in test automation given a scenario

31. A Selenium based TAS is in place in an IT company. The regression tests are executed daily after office hours and the TAS is integrated into the continuous deployment pipeline whereby for each deployment of the SUT on the test environment, smoke tests are executed. Before any deployment to production, the team ensures that all failures in the automation reports are investigated and fixed. Nevertheless, there are still defects raised by clients in the production environment even after all these tests. Which of the following reasons could explain the above situation?

A. The automation tests are using absolute XPath instead of relative XPath and this is falsifying the test reports
B. The automation test execution happens in headless mode and there does not reflect the real quality aspect of the SUT
C. The automation tests are executed using a self-healing framework which hides failure in the system
D. There are not enough verifications done in the automated tests case

STF4-8 (K3) Use appropriate strategy to handle different Selenium exceptions

32. Which of the following is <u>NOT</u> the correct way to avoid / handle the given Selenium exception error?

A. Avoiding 'InvalidSelectorException' by increasing the waiting time in the TAS
B. Avoiding 'NoSuchSessionException' by reviewing where the quit() method is invoked in the TAS
C. Handling 'NoSuchElementException' by using a healed locator
D. Avoiding 'ElementNotSelectableException' by checking the attributes of the web element before attempting an action on it

STF4-9 (K3) Apply an appropriate strategy to achieve test parallelism on Selenium tools

33. What is the correct sequence of actions for applying test parallelism using Selenium tools?

i. Ensure that a machine cluster is set up to run the tests

ii. Ensure that the test can be executed in headless mode

iii. Ensure that the locators used in the tests are strong enough

iv. Ensure that there are enough test engineers to analyze the report

v. Ensure that the tests suites to be executed are independent

A. iv → i → iii → v → ii
B. v → iii → ii → iv → i
C. v → iv → ii → iii → i
D. iii → i → ii → iv → v

STF4-10 (K3) Apply appropriate test assertions given a test scenario

34. Consider a login scenario whereby an unauthenticated user is required to enter an email address as user name and a password and then click on a login button to gain access to the system if the user name and password are both matching to the credentials details stored in the database. The above scenario is automated using a Selenium based TAS. The test engineers are now working on assertions of the test case.

Which of the below assertions can cause a security issue if <u>NOT</u> done?

A. Assert that the username field is visible and enabled
B. Assert that the password information is not displayed when typed in
C. Assert that the username is same as the password
D. Assert that the username field is blank when the page is loaded

STF4-11 (K4) Analyze a test scenario to distinguish best sequence of Selenium interactions

35. Consider the following scenario:

A test engineer is required to script an automated test using Selenium WebDriver. The test should first open a website, then click on an item on the page header, fill in a text box on the webpage, exit the browser, open the website in a new browser and then navigate to the website again and click on another item on the page header and then end the test.

Below are some of the main Selenium interactions that will be required by the test engineer. Which of the below option shows the **BEST** sequence of the use of the interactions as per the above scenario?

i. close()
ii. findElement()
iii. sendKeys()
iv. click()
v. get()
vi. quit()

A. v → ii → iv → ii → iii → vi → v → ii → iv → i
B. ii → iv → ii → iii → vi → v → ii → iv → i → v
C. v → ii → iv → ii → iii → i → v → ii → iv → vi
D. ii → iv → ii → iii → ii → v → iv → ii → i → v

STF5-1 (K1) Remember the factors to consider for implementing the test automation in an organization

36. Which of the following is NOT a factor to consider when identifying a test to be automated?

A. The frequency of execution of the manual test
B. The number of verification points in the manual test
C. The manual effort required to execute the test
D. The frequency of changes done to the features by the test

STF5-2 (K2) Understand how the evaluation of a TAS can be done

37. When gathering requirements for evaluating an automation tool, which of the following is NOT a valid question to ask?

A. Which issues will the tool solve?
B. What technological requirements must the tool meet to work in the environment?
C. What are the expected gains and benefits from the TAS?
D. What are the lessons learned with the use of the tool?

STF6-1 (K2) Understand how dynamic variables can help with test automation

38. Which of the following statements describes the advantage of having dynamic variables?

A. Dynamic variables make locators stronger
B. Dynamic variables allow cross-browser functionality
C. Dynamic variables cut down the execution time of automated tests
D. Dynamic variables cut down the test data maintenance effort

STF6-2 (K2) Understand why custom actions may be needed in test automation

39. Which of the following statements about custom actions in automation is correct?

A. Custom actions are made up of simpler actions to allow simplicity when writing automated tests
B. Custom actions are mandatory when making use of Selenium WebDriver
C. Custom actions ensure that the test execution happens faster
D. Custom actions ensure that the tests are independent of each other

STF6-3 (K2) Understand what additional verification checks can be undertaken by a Selenium based TAS

40. Which of the following verifications CANNOT be done by Selenium based TAS?

A. Verify if a webpage is loaded.
B. Verify the attributes of web elements on the page.
C. Verify if the fonts of a page are readable.
D. Verify if a webpage page has hyperlinks connecting to other webpages.