

**ASTQB Certified Tester  
Test Automation Strategy  
Sample Exam Questions**



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American Software Testing Qualifications Board

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**49 points possible. 32 points to pass. 60 minutes.**

**1. If you want to create test automation that will interact with the software the user sees and interacts with, what should be your target?**

- a. The APIs
- b. The libraries of the SUT
- c. The protocols used by the SUT
- d. The GUI

**2. Which of the following is required for testing APIs?**

- a. They must have complete error recovery
- b. They must work with a standard interface and be fully documented
- c. They must be exposed to the public
- d. They must be able to handle any combination of data

**3. Why is it important to have a stable test environment and test data when executing automated tests?**

- a. This enables the environment and data to be shared with manual testing
- b. The test results are reliable and repeatable
- c. The false positives are minimized
- d. It's better to have instability in the environment and data as that expands test coverage

- 4. When creating a full test automation solution for a SUT, how much test automation code should be expected to be needed?**
- a. None as this is not possible because full automation solutions don't exist
  - b. As much as or more than the SUT
  - c. Slightly less than the SUT
  - d. Normally 20-35% as much as the SUT code
- 5. Which of the following is the most important to have in place before preparing to start a large automation project?**
- a. Implementing a tool to use for the automation implementation
  - b. An accepted ROI
  - c. Clearly defined and accurate test cases
  - d. A test plan

- 6. Your organization would like to get some test automation developed for a mobile application. They don't have the technical people to do the work and are reluctant to invest in tools, but they acknowledge the need for test automation for this particular application. Which of the following is the best solution to pursue?**
- a. Vendor-based
  - b. Outsourced
  - c. In-house
  - d. Tools-based
- 7. You have a team of 10 test automation engineers, but only five of them will be using the tool at any one time. You are paying for 10 licenses. What type of model are you using?**
- a. Open source
  - b. Per machine/user
  - c. Floating
  - d. Runtime

- 8. In what way is the test management system a consideration in the test automation budget?**
- a. It isn't a factor
  - b. Since the test management system will create the defect reports for defects found by the test automation, the defect fields must be clearly defined and that will take time and effort
  - c. The test management system dashboards and reporting will have to be updated to provide a real-time risk mitigation status to the test automation
  - d. The test management system will have an interface with the test automation tools to provide updates for test execution
- 9. On the automation team, who is expected to have programming and technical architecture knowledge?**
- a. The SME
  - b. The test manager
  - c. The test analyst
  - d. The test automation engineer
- 10. In the umbrella test model, what is the primary focus of the test automation?**
- a. UI testing
  - b. Services testing
  - c. Unit testing
  - d. Integration testing

- 11. You are testing the UI level of a banking application. You are finding that it works fine on most transactions, but anytime an address is used, there are errors regarding expected format even though the format being entered is correct per the requirements. What level of testing was probably missed which has resulted in these errors occurring?**
- a. Unit
  - b. API
  - c. Contract
  - d. UI
- 12. If there is a major focus on building test automation that can be executed in the production or pre-production environments to provide end-to-end testing on the completed system, what approach is being used?**
- a. Shift left
  - b. Shift right
  - c. Shift up
  - d. Shift down
- 13. Which of the following is a true statement regarding test automation in a V-model project?**
- a. Test automation starts later than in an Agile project
  - b. Test automation starts earlier than in an Agile project
  - c. Test automation is not possible due to the long development cycles
  - d. Test automation will result in a higher ROI than in an Agile project

**14. In the ideal Agile software development project, when should the automated test cases for a sprint be integrated into the CI/CD pipeline?**

- a. At the beginning of the sprint
- b. Before the end of the sprint
- c. Immediately before SIT begins
- d. Immediately after UAT

**15. Your team is developing a new mobile application. This will be the first time the organization has attempted to implement a DevOps approach. The product is being developed by three Agile teams, one doing the front end, one doing the web services, and one handling the database transactions. The web services developers have developed the automated unit tests which they are running on their own machines prior to deployment. What do they need to do to comply with best practices?**

- a. They need to ensure another developer has reviewed and can execute the tests
- b. They need to deploy the tests into the DevOps pipeline and ensure they are executed in the deployment environment each time code is deployed
- c. They need to deploy the tests into the DevOps pipeline and ensure the tests are executed in the test environment each time new code is deployed and built
- d. They need to implement infrastructure as code to create the test environment, then deploy the tests into the DevOps pipeline and ensure the tests are executed in the newly build test environment each time new or changed code is deployed and built

**16. Which of the following tests is the best candidate for automation?**

- a. Error recovery test for a mobile app that requires frequent restarts of the phone
- b. UI test that validates that the navigation is suitable to various classes of users
- c. Critical workflow test that requires multiple users to provide approvals during the workflow
- d. Mortgage calculation test that requires input from multiple tables of data to determine the proper rate

**17. Your team is working with a CI/CD pipeline. Up until now, all testing has been done manually with the integrated code being deployed to a test environment. If you want to implement automation, how could this change to incorporate best practices?**

- a. The test automation could be included in the pipeline and executed there for the early tests (unit, component integration)
- b. The test automation could replace the manual end-to-end testing and can be conducted in the test environments
- c. Automate some of the easier tests, but keep the cross-browser tests for manual testing
- d. Minimize test execution in the pipeline and concentrate on running the test automation in the near-production environment



- 18. You are automating a new web application. One of the test scenarios is to test the timeout function that times out the login if the application has been idle for more than one hour. Can this test be automated?**
- a. No, it requires too much time to wait for the timeout
  - b. No, test automation can't do timing related tests
  - c. Yes, but it will require manual intervention to time the timeout and then restart the automation to verify the outcome
  - d. Yes, but you should check to be sure other tests can run efficiently while this one is waiting for the timeout
- 19. If there is an urgent need for a product to get to market as soon as possible, how can test automation help?**
- a. By shifting the testing to the left
  - b. By shifting the testing to the right
  - c. By minimizing the number of tests to be executed
  - d. By limiting the test data that is exercised by the tests
- 20. What is an automated test called when it is used to test that a defect has been fixed and stays fixed?**
- a. Regression test
  - b. Confirmation test
  - c. Defect test
  - d. Targeted test

**21. DevOps assumes involvement of the development and operations teams in the creation of a product. Which of the following tests is of particular interest to the operations team?**

- a. Unit testing
- b. Confirmation testing
- c. Installation testing
- d. System testing

**22. How does test tool licensing affect the strategic selection of the test automation tool?**

- a. Cost
- b. ROI
- c. Access from multiple test environments
- d. Number of licenses that will be available to the developers

**23. Why is it necessary to track versions of the test automation software?**

- a. Because different versions may be needed for different configurations of the test environment
- b. Because you may need to roll back to a previous version when a defect in the SUT is discovered
- c. Because it's easier to track the productivity of the automation engineers when all changes are versioned
- d. Because the developers will be able to see what changes are being made to the automation and will know what defects will be detected by a particular version

**24. You have developed test automation for a big Enterprise Resource Planning (ERP) system. This is a Software as a Service (SaaS) cloud product that will be updated by the vendor at regular intervals. Which of the following is a risk with the test automation software for this system?**

- a. It may not migrate cleanly to a new test environment
- b. The test data cannot be created prior to the deployment
- c. It may be too hard to decipher the test results because it is a cloud implementation
- d. It may be difficult to maintain the test engineers who know the system to make future updates

**25. What is the primary purpose of running the test automations suite to regression test a new release of the SUT?**

- a. To detect if anything has changed
- b. To detect if anything that used to work is not working
- c. To verify defect fixes and to update the TAS as needed
- d. To get practice with running the test automations suite

**26. What is the purpose of a test automation suite?**

- a. It is a way of logically grouping related test cases together
- b. It is a required component of the TAF
- c. It is a collection of output files created by the test automation scripts
- d. It is a risk traceability matrix used specifically for test automation

**27. Which of the following is a consideration when multiple machines will be executing the tests automation in parallel to simulate realistic user scenarios?**

- a. Real users will need to log into each machine prior to execution
- b. Gathering the test results will be difficult
- c. The machines will need to be on the same network and may need to be able to communicate with each other
- d. The machines will need to be configured identically so as not to skew the test results due to some machines having more memory, etc.

**28. Some test automation scripts verify the data by directly accessing the database and verifying the values there. Is this a good practice?**

- a. No, it will tend to introduce false negatives due to scripting errors
- b. No, it is an unrealistic access of the data
- c. Yes, it allows verification of the expected data changes
- d. Yes, it's a good practice for the test automation engineers to understand the database structure and this will make that understanding a requirement

**29. You have calculated the following expected savings from the test automation:**

Time to run a test case manually	20 minutes
Time to run an automated test cases	5 minutes
Number of test cases	200
Number of test runs	10

**Given these numbers which of the following is the correct expected savings (in minutes)?**

- a. 3,000,000 minutes
- b. 300,000 minutes
- c. 30,000 minutes
- d. 30 minutes

**30. You are calculating the expected investment for a test automation project. You have acquired the following data:**

Time to set up the test automation	2400 minutes
Time to implement a test	60 minutes
Number of tests to be implemented	50
Average maintenance time per test	10 minutes
Time to run an automated test	30
Percentage of failed tests	10%
Number of tests defined	50
Number of test runs	50

**Given this information, what is the investment cost for the test automation?**

- a. 3,240,000 minutes
- b. 324,000 minutes
- c. 32,400 minutes
- d. 3,240 minutes

**31. If you have just run you test automation suite and it reported 50 failures when it normally reports 1 or 2, what should you do?**

- a. Write a defect report for each failure so the developer sorts it out
- b. Write a defect report for each failure so the automation engineer can fix the automation in all the appropriate places
- c. Look for a cascading defect where one issue has caused multiple failures
- d. Verify that the screen shots are all valid and that there wasn't an internal failure of the test automation

- 32. You are working in an organization that always prefers to use commercial test automation tools. The previous project implemented a very expensive tool, but the team wasn't able to get much automation implemented due to issues with the tool being inflexible. The project was abandoned, and the team quit. You are now picking a tool for your project. What should you do?**
- a. Avoid using that tool
  - b. Investigate the technical issues with the tool to see if there were feasible implementation alternatives that the team didn't consider
  - c. Ensure your project has adequate time for a tool failure and time to learn a new tool in case the first one doesn't work
  - d. Go with an open-source tool that will give you better flexibility and control over implementation
- 33. You are working on a test automation project for an immigration system. There are already a large number of manual test cases that have been used for several years. The coverage of these test cases has been determined to be very good and the test cases are prioritized in terms of criticality to the system and the users. Given just this information, what should be your first priority for test automation?**
- a. To automate the end-to-end user flows
  - b. To automate the existing manual tests, in priority order
  - c. To train your team regarding immigration practices and rules
  - d. To train the business users in how to generate test automation code from the requirements

**34. You are creating a test automation strategy for a new flagship product for your company. You know that management is reluctant to commit to an automation effort. What must you present to them to convince them to back a new automation effort?**

- a. The backgrounds and experience of the proposed test automation team
- b. The business value of the test automation
- c. The cost of the automation effort compared to the development effort, including tools
- d. The comparison of the current product with competitor products

**35. How can test automation reporting indicate that there is a need to shift the testing more to the left?**

- a. By finding significant issues that are occurring at the functional component level
- b. By finding significant issues that are occurring in the integration of individual components
- c. By finding significant issues that are occurring when testing user transactions
- d. By finding significant issues that are occurring in end-to-end workflows



- 36. How does creating re-usable components help the test automation effort?**
- a. It slows it down, allowing more time for analysis
  - b. It employs automation architects to define the test automation solution
  - c. It allows components to be created and maintained in one place, but used in many
  - d. It supports a distributed execution environment which can allow more automation agents to run concurrently
- 37. What happens to manual testers when a test automation suite has automated most of the testing they have historically done?**
- a. They need to find new jobs
  - b. They need to become test automation engineers
  - c. They now have time to broaden the test coverage
  - d. They now have time to create more test data
- 38. What should be done prior to deploying a new set of tests into the TAS in a continuous testing environment?**
- a. The existing tests should be regression tested
  - b. The new tests should be tested
  - c. The new tests should undergo performance and security testing
  - d. The pipeline should be extended to capture test metrics and defect information

**39. Your test automation is failing during execution. You have done root cause analysis and have determined that the problems are almost always due to data. In particular, the data is either not there or it is not in the right state. For example, you have a test that is supposed to find and delete unused user accounts, but there are no unused accounts available to delete. What do you need to do to fix this issue?**

- a. Programmatically create the pre-conditions required by the tests
- b. Manually alter the data before you execute the tests
- c. Get the database people to search and provide you with a list of valid test data
- d. Skip this test until data is available

**40. Your automation team has been adding automated tests into the CI/CD pipeline as new features are developed. The developers are now complaining that the pipeline is being slowed by the tests. They think there are too many tests being run. What should you do?**

- a. Ignore the developers, the tests are needed
- b. Conduct performance testing for the tests to see if they are as efficient as possible
- c. Review the tests being executed and include only the critical ones in the pipeline and run the rest as a regression test suite overnight
- d. Implement batch execution where all the tests are divided into three sets and have only one set at a time be executed for a deployment