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Exam : **CTAL-TAE_V2**

Title : ISTQB Certified Tester Advanced Level - Test Automation Engineering CTAL-TAE (Syllabus v2.0)

Version : DEMO

1.A new TAS allows the implementation of automated data-driven test scripts. All the tasks planned for the initial deployment of this TAS, aimed at installing and configuring the TAS components and provisioning the infrastructure, will be performed manually by a dedicated, specialized team. This TAS is expected to be deployed in the future in other similar environments. As a TAE, you see a risk that the correct and reproducible deployment of the TAS cannot be guaranteed.
Which of the following options is BEST suited for mitigating this risk?
A. Nothing needs to be done, because the team that will manually perform the specified tasks, as they are specialized, will not make mistakes and will therefore be able to ensure a correct and reproducible deployment
B. Partition the data tables containing test data used by data-driven test scripts into smaller data tables, using an appropriate logical criterion, to make them more manageable
C. Review data-driven test scripts to better organize test libraries by adding test functions containing identical sequences of actions commonly implemented in a relevant number of scripts
D. Try to automate most of the tasks related to the installation and configuration of the TAS components and those related to the provisioning of the infrastructure
Answer: D
Explanation:
TAE guidance treats repeatable, reliable deployment of the Test Automation Solution as a foundational requirement, especially when the TAS will be rolled out to multiple environments. Manual installation and provisioning are error-prone and difficult to reproduce consistently, even with skilled teams, due to small variations in steps, configuration drift, and undocumented assumptions. The recommended mitigation is to automate deployment activities using repeatable mechanisms (e.g., scripted installation, configuration management, Infrastructure as Code, versioned environment definitions). This supports traceability (what changed and when), repeatability (same inputs produce same environment), and rapid recovery (rebuild environments quickly after failure).
Option A is explicitly unsafe because human processes are never guaranteed error-free and do not scale well across environments.
Options B and C focus on test data and library organization, which can improve test maintainability, but they do not address the stated risk: inconsistent and non-reproducible TAS deployment. By automating installation/configuration and infrastructure provisioning, the organization reduces deployment variance and ensures that future deployments of the TAS can be performed reliably, consistently, and auditable across similar environments, aligning directly with TAE best practices for sustaining automation at scale.

2.You have agreed with your organization's managers to conduct a pilot project to introduce test automation. Managers' expectations about the benefits of automation are too optimistic.
Which of the following is LEAST relevant when deciding the scope of the pilot project's objectives?
A. Evaluate the suitability of different test automation tools based on the technology stack used by the applications for which the automated tests will be developed
B. Evaluate the potential cost savings and benefits (e.g., faster test execution, better test coverage) of using automated testing versus manual testing
C. Evaluate the knowledge and skills of people who will be involved in automating test cases for applicable test automation frameworks and technologies
D. Evaluate the performance of an organization's network infrastructure in terms of factors such as availability, bandwidth, latency, packet loss, and jitter

Answer: D
Explanation:
TAE positions pilot projects as a controlled way to validate feasibility, calibrate expectations, and reduce adoption risk. Pilot objectives typically include assessing tool fit (technical compatibility, integration, reporting, maintainability), estimating realistic benefits and costs (execution speed, regression efficiency, coverage improvements, maintenance overhead), and assessing team readiness (skills, training needs, required roles). Those align directly with options A, B, and C. Network performance characteristics can matter for distributed test execution or remote environments, but evaluating enterprise network infrastructure at a deep level (availability, jitter, packet loss) is generally not a primary objective for a test automation pilot—especially when the central concern is overly optimistic expectations about automation benefits. A pilot should focus on demonstrating what can be automated, at what cost, with what stability and maintainability, and what process changes are needed. Infrastructure constraints may be observed as risks during the pilot, but a full network performance evaluation is more characteristic of IT operations or performance engineering initiatives, not a test automation introduction pilot scope. Therefore, option D is the least relevant when defining the pilot's objectives in a TAE-aligned approach.

3.In which way would a feature toggle configuration be used?
A. To identify which test suites to execute
B. To identify the test data sets needed for a test suite
C. To identify a test environment configuration
D. To identify which oracle to use for verification
Answer: A
Explanation:
A feature toggle configuration can be defined for each SUT release or test environment to indicate which features are active. The automated test ware can associate specific test cases and test suites with those features and then use the toggle configuration to determine which suites should execute for the applicable release or environment. This prevents automated tests for inactive functionality from being executed unnecessarily or producing misleading failures. Feature toggles therefore support test-selection and release-configuration management. They do not primarily determine which data sets are needed, define the test environment itself, or choose the test oracle used for verification. The CTAL-TAE syllabus explicitly identifies selection of the appropriate test suites as the test automation use of feature toggle configurations. (https://www.istqb.org/wp-content/uploads/2024/11/ISTQB_CTAL-TAE_Syllabus_v2.0.pdf)

4.A CI/CD pipeline consists of two phases: build and deployment. The build phase, among other activities, runs automated test cases at the following test levels: Component Testing (CT) and Component Integration Testing (CIT). If the build phase is successful, the deployment phase is started. The deployment phase first provisions the test environment infrastructure needed to deploy the SUT, then deploys the SUT to this environment, and finally triggers another separate pipeline that runs automated test cases at the following test levels: System Testing (ST) and Acceptance Testing (AT). Which of the following statements is TRUE?
A. Both automated test cases for CT-CIT and ST-AT can act as quality gates
B. Automated test cases for CT-CIT can act as quality gates, while automated test cases for ST-AT cannot act as quality gates

C. Automated test cases for CT-CIT cannot act as quality gates, while automated test cases for ST-AT can act as quality gates
D. Neither automated test cases for CT-CIT nor automated test cases for ST-AT can act as quality gates
Answer: A
Explanation:
TAE describes quality gates as defined checkpoints in pipelines where objective criteria determine whether the pipeline may proceed (e.g., thresholds, pass/fail rules, coverage, or risk-based acceptance). Automated tests at multiple levels can serve as such gates. In the build phase, CT and CIT are commonly used as strong, fast quality gates because they provide quick feedback on code correctness and integration of closely related components; failures typically block promotion. In the deployment phase, after provisioning and deploying into a test environment, automated System Testing and Acceptance Testing can also serve as quality gates for promoting a build to later stages or release candidates, especially when the organization relies on automated regression and automated acceptance criteria for release decisions. While ST/AT may take longer and may be more prone to environmental factors, TAE still supports using them as gates when they are sufficiently stable, relevant, and aligned with release risk. The scenario explicitly places ST/AT in a separate triggered pipeline, which still qualifies as a gating mechanism if downstream promotion depends on its outcome. Therefore, both CT-CIT and ST-AT can act as quality gates.

5.You are working for a clothing retailer that has big stores in many cities. Your TAS, for the first time, has just been used for reliability and stress testing of the overnight batch processing that collects sales transactions from the stores and adds them to a data warehouse; functional suitability tests have been reused for these runs.
All tests have finished normally but their results have not been satisfactory, and it has been difficult to understand the nature of the defect or defects that have been causing the failures.
What data, if added to the test logs, would MOST likely help with debugging in this situation?
a) Dynamic data about the status of the test platforms
b) Screenshots taken during test execution
c) Crash dumps and stack traces
d) Values of randomly generated test input data
e) Counts of the quantity of test cases executed during each run
A. c and d
B. a and e
C. a and d
D. b and c
Answer: B
Explanation:
For reliability and stress testing, CTAL-TAE specifically recommends capturing dynamic information about the SUT and recording execution counters. Dynamic platform information can expose conditions such as resource utilization, memory leaks, or other runtime degradation that may explain failures occurring during intensive overnight processing. The syllabus also states that when reliability or stress testing involves numerous test cycles, a counter should be logged so investigators can determine how many times the test cases were executed and correlate failures with prolonged execution. Crash dumps and stack traces are particularly relevant when the SUT crashes, but the scenario explicitly states that

the tests finished normally. Random input values are important only when randomized testing is used, which is not stated. Screenshots provide little diagnostic value for backend overnight batch reliability testing. Therefore, a and e are the most useful data. (https://www.istqb.org/wp-content/uploads/2024/11/ISTQB_CTAL-TAE_Syllabus_v2.0.pdf)