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Certified Tester Quality in DevOps (CT-QDO) Sample Exam – Questions

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v1.0

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Compatible with Syllabus v1.0

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International Software Testing Qualifications Board

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28 The ISTQB® Examination Working Group is responsible for this document.

29 This document is maintained by a core team from ISTQB® consisting of the Syllabus Working Group and

30 Exam Working Group.

Acknowledgements

31

32 This document was produced by a core team from ISTQB®: Tamás Horváth (Vice-Chair Specialist
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35 The following persons participated in the reviewing, commenting, and balloting of this sample exam: Laura
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38 Horst Pohlmann, Nishan Portoyan, Adam Roman, Jan Sabak, Márton Siska, Mattijs Kemmink, Klaus
39 Skafté, Michael Stahl, Lucjan Stapp, Darvay Tamás Béla, Reifa Tangon, Linda Vreeswijk

40 The core team thanks the Exam Working Group review team, the Syllabus Working Group and Member
41 Boards for their suggestions and inputs.

Revision History

42

Version	Date	Remarks
v1.0	2026/02/13	Release
v0.4	2026/01/15	Technical Editing after Beta Release
v0.3	2025/08/25	Beta Release version with 40 + 8 questions.
v0.2	2025/07/15	TechnicalEditing version with 40 + 8 questions.
v0.1	2025/03/20	Alpha version of Sample Exam with 40 + 4 questions.

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Questions

Question #1 (1 Point)

Which of the following is a core principle of DevOps?

- a) To create software through the individual effort of professionals
- b) To promote collaboration, communication, and continuous improvement among teams
- c) To ensure that one team works on the entire software development lifecycle (SDLC)
- d) To prioritize business goals over customer needs

Select ONE answer.

Question #2 (1 Point)

Which of the following ways may DevOps use to break down the wall of confusion between development (Dev) and operations (Ops) teams?

- a) Creating a separate team responsible for quality assurance (QA)
- b) Integrating teams to work together and increase communication
- c) Automating everything the team could automate
- d) Defining clear roles to improve collaboration and prevent the blame game

Select ONE answer.

Question #3 (1 Point)

A DevOps team wants to improve their efficiency and reduce delays in successful deployment to production.

Which metric is MOST suitable to achieve these goals?

- a) Failed deployment recovery time
- b) Deployment frequency
- c) Change fail percentage
- d) Change lead time

Select ONE answer.

Question #4 (1 Point)

Match each CALMS framework element (1-4) to its appropriate example (A-D):

1. Culture
2. Automation
3. Lean
4. Measurement

- A. Pipeline stages for all types of tests are created in a continuous integration/continuous delivery (CI/CD) pipeline.
- B. Various test reports for different test types are consolidated to provide insights on specific aspects of product quality.
- C. A cross-functional team delivers the fully tested feature to extend product potential for customers.
- D. Shift left is performed to prevent release delays caused by late regression testing.

- a) 1B, 2A, 3C, 4D
- b) 1C, 2B, 3D, 4A
- c) 1D, 2C, 3A, 4B
- d) 1C, 2A, 3D, 4B

Select ONE answer.

Question #5 (1 Point)

How can QA contribute to the principles in "three ways of DevOps"?

- a) QA should focus on detailed documentation, a separate test phase, and post-release defect analysis.
- b) QA can enhance flow with a test-first approach, enable getting faster feedback by automating tests, and foster learning by implementing quality hunting.
- c) QA's role is to ensure all code meets requirements via manual testing, which improves flow, gives feedback after development, and learns from defects found in operation.
- d) QA can contribute to flow with automated testing, provide feedback through static analysis, and learn from continuous regression testing.
- e) QA supports flow by minimizing the number of tests, providing fast feedback by relying on tests done by a developer, and promoting learning by collecting user feedback after release.

Select TWO answers.

Question #6 (1 Point)

Which of the following statements about the benefits, risks, and pitfalls of DevOps are true?

- i. DevOps culture is implemented as an extension to Agile software development.
- ii. DevOps may create silos of self-organized teams throughout the software development lifecycle (SDLC).
- iii. DevOps can lead to faster recovery from failures in production.
- iv. Focusing only on CI/CD pipeline tools may lead to neglecting the DevOps cultural change.
- v. The goal of DevOps is to define a flow transferring the product from the development team to the operations team.

- a) i, iii, and v
- b) i, iii, and iv
- c) ii, iii, and iv
- d) i, ii, and iv

Select ONE answer.

Question #7 (1 Point)

Which of the following describes how a cross-functional DevOps team minimizes the impact of a temporarily unavailable team member?

- a) Assigning tasks that require specialized skills to a platform team
- b) Sharing knowledge and skills among team members
- c) Documenting all tasks in an internal task management tool
- d) Assigning specialized tasks to specific team members

Select ONE answer.

Question #8 (1 Point)

Which activity exemplifies how site reliability engineering (SRE) contributes to a DevOps team?

- a) The team dedicates a sprint to improving the system aesthetics to be more appealing to users.
- b) The team prioritizes exploratory testing over automation in CI/CD pipelines.
- c) The team creates an automated feedback loop of the system's behaviour in production.
- d) The team replaces DevOps practices with new ones.

Select ONE answer.

Question #9 (2 Points)

You are a tester in a DevOps team that plans to follow a test-first approach in a new project, thus leveraging a CI/CD pipeline for frequent deployments. Analyzing the retrospectives from a previous project, the team identifies inefficiencies in providing built-in quality and consistent quality reports. Which TWO actions should you prioritize to effectively implement quality assurance (QA) activities in this DevOps environment?

- a) Align with the organizational quality policy and test policy that includes automated testing, static testing, and collaborative practices like pair programming.
- b) Perform exploratory testing in production environments to identify and fix critical defects that will impact user experience (UX).
- c) Set up a dashboard to monitor CI/CD pipeline runtimes, build durations, and resource utilization to support continuous improvement.
- d) Rely on testing in production to measure system quality and determine software reliability after production releases.
- e) Implement integrated monitoring, reporting, and alerting for indicators related to business value and software quality.

Select TWO answers.

Question #10 (1 Point)

Which statement correctly compares the test objectives in DevOps, Agile software development, and sequential development models?

- a) Sequential development models use exploratory testing to detect late phase defects, while Agile and DevOps focus exclusively on automated test execution.
- b) DevOps focuses on automating testing in production, while Agile and sequential development models prioritize manual regression testing.
- c) In Agile and DevOps, testing is integrated throughout software development cycles, while testing in sequential models is performed in separate test levels.
- d) Testing in DevOps requires manual effort to adapt to deployment needs, whereas Agile and sequential models rely entirely on automated tests for quality.

Select ONE answer.

Question #11 (1 Point)

A DevOps team is adopting continuous testing to improve software quality and increase delivery speed.

Which of the following BEST describes the concept of continuous testing in this context?

- a) An activity focused on monitoring systems for defects in production
- b) The ongoing execution of regression test suites during the development process
- c) An approach that embeds testing across all phases to provide continuous quality feedback
- d) A practice of running automated tests during the build stage of the CI/CD pipeline

Select ONE answer.

Question #12 (1 Point)

What is the primary role of a pull request (PR) in maintaining quality in a DevOps workflow?

- a) To prevent junior developers from making changes to the codebase without senior approval
- b) To enforce pre-merge quality checks through collaborative code reviews and automated testing
- c) To speed up deployments by reducing code reviews and relying on testing in production
- d) To enforce testers to manually review the code changes before merging them into the main branch

Select ONE answer.

Question #13 (1 Point)

How does continuous discovery help support alignment with customer needs and business goals?

- a) By discussing new features with the stakeholders and developing UX prototypes.
- b) By requiring acceptance criteria to be finalized before idea exploration.
- c) By focusing test efforts on the technical feasibility of features.
- d) By focusing on validating functional requirements during the design phase.

Select ONE answer.

Question #14 (1 Point)

Which of the following does NOT align with continuous integration (CI) practices?

- a) Including the necessary work product assets in configuration management to support consistency
- b) Automating build and test steps in the CI/CD pipeline to enable auditing in case of failures
- c) Running manual build verification steps before triggering automated tests in the CI/CD pipeline
- d) Committing small, incremental code changes and stopping to fix defects when tests fail

Select ONE answer.

Question #15 (1 Point)

Which of the following does NOT help achieve quality in continuous delivery (CD)?

- a) Using deployment automation tools to ensure consistency and provide an audit trail for compliance
- b) Maintaining a standardized test environment and test data to support reliable and repeatable testing
- c) Implementing infrastructure as code (IaC) to standardize configurations for consistency and repeatability
- d) Allowing deployment processes to vary slightly for different environments to meet specific requirements

Select ONE answer.

Question #16 (1 Point)

Match each testing term (1-4) to its BEST matching description (A-D):

1. Dark launch
 2. Blue-green deployment
 3. Canary release
 4. A/B testing
- A. A small subset of users is exposed to a software change to validate quality before expanding to the entire user base.
 - B. Two identical environments - "current live" and "new version" - are used to minimize downtime and risk, allowing additional testing on the "new version" while the "current live" remains live.
 - C. A new feature runs in production alongside existing functionalities, enabling monitoring, testing, and system impact analysis without exposing it to users.
 - D. Variants of a feature are presented to different user segments to compare performance metrics and determine the most effective version to keep.

- a) 1C, 2B, 3A, 4D
- b) 1A, 2C, 3B, 4D
- c) 1D, 2B, 3C, 4A
- d) 1C, 2D, 3A, 4B

Select ONE answer.

Question #17 (2 Points)

You are reviewing a CI/CD pipeline where the build, test, and deployment processes are automated. When the build and test pipeline ends, deployment is triggered. Developers are reporting frequent failures in the test environment due to missing configurations and inconsistent data.

Which action should you recommend for improving the reliability of the test environment?

- a) Add a manual verification step after each deployment
- b) Extend automation to provide consistent setup and test data
- c) Configure the pipeline to skip deployments when tests failed
- d) Increase the frequency of deployments to catch defects earlier

Select ONE answer.

Question #18 (1 Point)

Match each single source of truth system (1-4) to the benefit (A-D) it provides for DevOps teams.

1. Information management system
 2. Version control system
 3. Artifact management system
 4. Observability system
-
- A. Supports controlled change management for source code, test automation code, and CI/CD pipeline definitions.
 - B. Provides lifecycle management for backlog items, such as requirements and defect reports.
 - C. Enables traceability and access management for monitoring, traces, and logs.
 - D. Facilitates the reusability of built executables, dependencies, and test data.

- a) 1D, 2B, 3C, 4A
- b) 1A, 2C, 3B, 4D
- c) 1B, 2A, 3D, 4C
- d) 1A, 2B, 3D, 4C

Select ONE answer.

Question #19 (1 Point)

Which of the following explains how automation supports traceability between the test basis and testware in a DevOps environment?

- a) Automation tools reduce the need for traceability effort by generating test cases and linking them to requirements.
- b) Automation improves traceability by providing accurate, up-to-date links between work products.
- c) Automation transfers the responsibility for maintaining traceability to developers.
- d) Automation simplifies communication, making collaboration between teams less important.

Select ONE answer.

Question #20 (2 Points)

A DevOps team has implemented an automated quality reporting system in the CI/CD pipeline. However, stakeholders have reported that the dashboard is frequently outdated, missing manual test results, and does not provide a complete view of software quality.

What should be the NEXT steps to improve the reporting process?

- a) Ensure automated scripts collect data from all CI/CD stages, integrate test results from manual test execution immediately, and enable the dashboard's real-time updates.
- b) Reconfigure the dashboard to focus on key deployment metrics while collecting manual test results separately in a different system to avoid delays.
- c) Focus on automated test results, as manual test data is difficult to track in real-time, and use production monitoring tools for quality assessment instead.
- d) Rely on static reports instead of a CI/CD pipeline dashboard to provide quality insights at scheduled intervals, so that stakeholders receive structured updates.

Select ONE answer.

Question #21 (1 Point)

Which of the following is NOT a benefit of test data management automation?

- a) It reduces storage needs and accelerates test data provisioning by selecting a smaller, representative subset of production data.
- b) It improves coverage by generating diverse sets of data, including valid and invalid data, edge cases, and boundary values.
- c) It organizes and stores test data in a structured way in version control, making it available on demand within the CI/CD pipeline or for manual testing.
- d) It eliminates security concerns by masking test data and protect the identity and personal details of individuals.

Select ONE answer.

Question #22 (1 Point)

Which of the following is NOT a benefit of statistical analysis in software testing?

- a) It helps identify trends in software quality by analyzing the current state and predicting potential future defects.
- b) It automates test results analysis, removing the need for human interpretation and reviews of test results.
- c) It supports decision-making by providing key metrics like defect density, code coverage, and mean time between failures (MTBF).
- d) It provides a broader picture of software quality, including insights into processes and team performance.

Select ONE answer.

Question #23 (1 Point)

Which approach is the BEST to utilize resources in a controlled test environment?

- a) Resources are kept allocated at all times so that test environments are always available when needed.
- b) A fixed amount of resources is assigned to all test environments to maintain consistency across different test cases.
- c) Resources are provisioned dynamically based on actual testing needs, preventing both over- and under-provisioning.
- d) The maximum available resources are allocated to every test environment to avoid potential performance issues.

Select ONE answer.

Question #24 (1 Point)

Which of the following is THE BEST example of integrating regression tests into the CI/CD pipeline?

- a) All tests are regression tests after their first use as tests that cover new functionality, and all tests are run in every CI/CD pipeline.
- b) Regression testing scope is set dynamically based on the file changes in a feature branch, but risk-based selection of regression tests are run before the release.
- c) Regression tests are excluded from the feature branch CI/CD pipelines due to complexity, but they are run before every release.
- d) CI/CD pipelines primarily rely on feature specific tests, and there is no need to run regression tests when newly added code is well tested.

Select ONE answer.

Question #25 (2 Points)

You are joining a DevOps team that is preparing to test a third-party payment API. The team wants to avoid production failures caused by mismatched expectations between the third-party application's API and your application.

Which of the following steps would help you prepare for this test effort?

- a) Set up performance benchmarks to measure API response times under load.
- b) Define and validate a contract that specifies expected request and response formats.
- c) Focus on acceptance testing to simulate user interactions with the payment system.
- d) Use integration testing to verify the API behavior after connecting all components.

Select ONE answer.

Question #26 (1 Point)

Which of the following statements about test automation are specific to Agile software development, and which to sequential development models?

- i. Test automation, beyond unit testing, provides a limited feedback loop between development and testing
 - ii. Test automation, beyond unit testing, requires detailed planning in earlier phases before actual test implementation
 - iii. Tests, beyond unit testing, are designed and implemented as a collaboration of developers, testers, and product owners
 - iv. Automated testing is done in a distinct test phase of the software development lifecycle (SDLC)
 - v. Automated tests have broader coverage on lower test levels
- a) i, iv, v are specific to sequential; ii, iii are specific to Agile
 - b) ii, iii are specific to sequential; i, iv, v, v are specific to Agile
 - c) i, ii, iv are specific to sequential; iii, v are specific to Agile
 - d) iv, v are specific to sequential; i, ii iii are specific to Agile

Select ONE answer.

Question #27 (1 Point)

Which of the following manual tests gives the LEAST value of information for stakeholders on the overall quality of the software?

- a) Manually reproducing automated tests during acceptance testing to increase validation scope.
- b) Exploratory testing on specific features before the release to increase confidence in quality.
- c) Code reviews on pull requests (PRs) to assess code quality and design defects.
- d) Accessibility testing validating fulfillment of desired standards and requirements.

Select ONE answer.

Question #28 (1 Point)

Which statement is TRUE regarding exploratory testing in the CI/CD pipeline?

- a) Exploratory tests are not part of the CI/CD pipeline.
- b) Exploratory tests are executed only in test environments where the software is fully deployed.
- c) Exploratory tests allow the use of tools to support test execution and test reporting.
- d) Exploratory tests have their design, execution, and evaluation spread across different SDLC phases.

Select ONE answer.

Question #29 (1 Point)

What feedback on quality can crowd testing bring to the DevOps team?

- a) Information obtained during acceptance testing and requirements coverage by automated tests
- b) The security level of a product's component and its compliance with required security standards
- c) Adoption rate of the beta release version across users who are part of the beta program.
- d) Product compatibility with different versions of the operating system in real-world usage.

Select ONE answer.

Question #30 (2 Points)

You are about to organize a quality hunting event.

What is the BEST way to implement a good quality hunting event?

- a) Stakeholders are assigned different test conditions to gain personal experience with the test object while competing for the best assessment of the test object's quality level from a business perspective.
- b) Small teams of various roles using fresh test approaches assess the test object's quality level while competing to bring the most valuable quality insights for stakeholders.
- c) A group of testers executes automated and manual tests to confirm the test results and assess the scope of the tests according to the business requirements that are important to the stakeholders.
- d) Teams of internal and external people use innovative ways to find as many defects in the software as possible in the pre-release or beta version of the software, and the best team is awarded.

Select ONE answer.

Question #31 (1 Point)

What capability does a build artifact management tools provide?

- a) Test data generation
- b) Scanning for vulnerabilities
- c) Automated build pipelines
- d) Project document sharing

Select ONE answer.

Question #32 (1 Point)

Match each tool type (1-4) to its corresponding quality assurance (QA) and testing function (A-D).

1. Static analysis tools
 2. Continuous testing tools
 3. Configuration management tools
 4. Continuous monitoring tools
- A. Detect defects early by enabling automated testing at every SDLC phase and test level
 - B. Ensure consistent environments across development, testing, and production
 - C. Identify deviations from coding standards, vulnerabilities, and potential defects before test execution
 - D. Provide real-time feedback on system health and user behavior

- a) 1C, 2A, 3B, 4D
- b) 1A, 2D, 3C, 4B
- c) 1C, 2A, 3D, 4B
- d) 1D, 2B, 3A, 4C

Select ONE answer.

Question #33 (1 Point)

Which activities in a CI/CD pipeline support developers to effectively manage feature development and code integration with minimal risks?

- a) Source code management
- b) Branching and merging
- c) Monitoring and feedback
- d) Release management

Select ONE answer.

Question #34 (1 Point)

Match following DevOps release strategies (1-4) to its correct descriptions (A–D).

1. Rolling release
 2. Hotfix deployment
 3. Dark launching
 4. Phased rollout
-
- A. Features are deployed but inaccessible to users.
 - B. Gradually replaces system instances with updated versions.
 - C. Urgent release to resolve critical defects.
 - D. Updates are deployed incrementally by region or user group.

- a) 1B, 2C, 3D, 4A
- b) 1C, 2B, 3D, 4A
- c) 1A, 2D, 3C, 4B
- d) 1B, 2C, 3A, 4D

Select ONE answer.

Question #35 (1 Point)

Which of the following are key principles of infrastructure as code (IaC)?

- a) Idempotency ensures a consistent environment when a product is deployed repeatedly.
- b) IaC primarily relies on graphical user interfaces to configure infrastructure efficiently.
- c) Declarative and imperative approaches define the state of the infrastructure and steps to achieve it.
- d) IaC depends on manual configuration to support infrastructure stability over time.
- e) IaC eliminates the need for version control in infrastructure management.

Select TWO answers.

Question #36 (1 Point)

Which of the following BEST describes feature toggles?

- a) A technique to modify system behavior by changing code dynamically
- b) A method to manage features by permanently enabling or disabling them in production
- c) An approach that allows teams to modify system behavior without changing code
- d) A strategy that replaces the need for branching in version control

Select ONE answer.

Question #37 (1 Point)

Match each DevOps term (1-4) to its correct description (A–D):

- 1. Trunk-based development
- 2. Feature branches
- 3. Pull request
- 4. Merge conflict

- A. Used to merge code changes from one branch to any other branch, while providing feedback on code changes by other team members.
- B. When the same section of the code is modified in both branches.
- C. Every code change is pushed directly to the main branch after successful tests during the commit stage.
- D. Code changes are developed on branches created specifically for these changes and deleted after merging.

- a) 1C, 2D, 3A, 4B
- b) 1A, 2C, 3D, 4B
- c) 1C, 2D, 3B, 4A
- d) 1B, 2A, 3D, 4C

Select ONE answer.

Question #38 (1 Point)

Which TWO of the following describe aspects of chaos engineering?

- a) A method for optimizing cloud usage
- b) A practice that does not require a reliable CI/CD pipeline
- c) A practice to determine fault tolerance and reliability
- d) A way to experiment without triggering real failures
- e) A technique to uncover hidden defects

Select TWO answers.

Question #39 (1 Point)

What information is required by the software bill of materials (SBoM)?

- a) Licensing information for the whole system
- b) CPU and memory usage statistics for production environments
- c) Deployment automation configurations and rollback mechanisms
- d) Component dependencies on other components

Select ONE answer.

Question #40 (1 Point)

Which of the following is a benefit of using containerization in software development?

- a) It eliminates the need for security measures when using third-party components.
- b) It support consistent environments across all development phases and test levels.
- c) It replaces traditional virtualization technologies.
- d) It guarantees zero resource usage when containers are inactive.

Select ONE answer.

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Appendix A – Additional Questions

Question #A1 (1 Point)

Assign the following specified measurements (1-4) to ONE of the metric groups (A-B) while not leaving any group empty.

1. Time between a failed deployment back to a working environment
 2. Frequency of deployment to production
 3. Percentage of unsuccessful deployments to production
 4. Time between a code commit and a successful deployment to production
- A) Velocity of making code changes
B) Quality of code changes delivered

Question #A2 (1 Point)

A development team builds features without engaging with the operations team. Developers define "done" as completing the code, leaving the deployment and maintenance tasks entirely to Ops. At the same time, another department has created a separate DevOps team solely focused on implementing CI/CD pipelines, without coordination between the Dev and Ops teams.

Which of the following are anti-patterns present in this situation?

- a) DevOps as a tools team
- b) Dev does not need Ops
- c) Fully shared Ops responsibilities
- d) site reliability engineering (SRE) team
- e) Dev and Ops silos

Select TWO answers.

Question #A3 (1 Point)

Which of the following practices BEST aligns with the principles of release on demand?

- a) Deploying all features to production immediately and making them visible to all users upon deployment.
- b) Decoupling architectural components to allow independent release strategies and different release frequencies.
- c) Releasing features to users only after manual approval of all supporting documentation and marketing materials.
- d) Using fixed release cycles to provide consistent delivery schedules regardless of market conditions.

Select ONE answer.

Question #A4 (2 Points)

Sort the following activities in chronological order to simulate an incremental approach to implementing a CI/CD pipeline for a software development project. The list of activities is not complete, but each represents a step in the CI/CD pipeline implementation.

- a) Implement feature toggles to manage stakeholders' decisions on release
- b) Define contract testing for microservices as they talk to each other
- c) Define the flow of information and materials for the CI/CD pipeline
- d) Implement reproducible provisioning of the pre-production environment
- e) Include performance testing to validate the system's behavior

Question #A5 (1 Point)

Assign each test automation characteristic (1-5) to the respective software development lifecycles (SDLC) models (A-B), while not leaving any model group empty.

1. Test automation, beyond unit testing, provides a limited feedback loop between development and testing.
 2. Test automation, beyond unit testing, requires detailed planning in earlier phases before actual test implementation.
 3. Tests, beyond unit testing, are designed and implemented as a collaboration of developers, testers, and product owners.
 4. Automated testing is done in a distinct test level of the SDLC.
 5. Automated tests have good coverage in lower test levels.
- A. Agile software development
B. Sequential development models

Question #A6 (1 Point)

What is an example of crowd testing?

- a) The DevOps team executes tests triggered from the CI/CD pipeline before the release to validate the main user scenarios.
- b) Several independent teams test specific aspects of the quality in a limited time frame.
- c) A large group of independent testers tests the software in a time-boxed session with no test case definition.
- d) Automated API tests are implemented for the CI/CD pipeline by an independent test team.

Select ONE answer.

Question #A7 (1 Point)

A development team is facing multiple issues, including inconsistent configurations between development, testing, and production environments. These inconsistencies often lead to deployment failures, extended debugging times, and delays in delivery.

Considering the different DevOps tool capabilities, what should the team prioritize to address this challenge effectively?

- a) Use a centralized repository to store build artifacts and dependencies for easy retrieval and distribution.
- b) Automate the creation of environments, standardize configuration files, and use infrastructure as code (IaC) tools.
- c) Set up automated CI/CD pipelines to integrate code changes into a shared repository and run tests automatically.
- d) Perform load testing and simulate high-traffic scenarios to assess system performance under stress.

Select ONE answer.

Question #A8 (1 Point)

What is the role of telemetry in the context of continuous monitoring?

- a) It collects log data and uses machine learning to detect anomalies.
- b) It gathers measurements of functional and non-functional quality characteristics.
- c) It automates the initiation of control actions when quality is not progressing as expected.
- d) It provides a view of the software quality by using logging, tracing, and metrics of the system's behavior.

Select ONE answer.