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

v1.0

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International Software Testing Qualifications Board

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Revision History

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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Question Number (#)	Correct Answer	Learning Objective (LO)	K-Level	Number of Points
27	a	QDO-3.3.1	K2	1
28	c	QDO-3.3.2	K2	1
29	d	QDO-3.3.3	K2	1
30	b	QDO-3.3.4	K3	2
31	b	QDO-4.1.1	K1	1
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39	d	QDO-4.2.8	K1	1
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Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
1	b	a) Incorrect. While individual effort is a part of software development, DevOps emphasizes teamwork and collaboration. b) Correct. This statement accurately reflects the core principles of DevOps, which prioritize collaboration, communication, and continuous improvement among teams. c) Incorrect. DevOps encourages cross-functional autonomous teams, but it does not emphasize that only one team works on the entire software development lifecycle (SDLC). d) Incorrect. While customer needs are indeed a crucial aspect of DevOps, prioritizing them is not its primary focus.	QDO-1.1.1	K1	1
2	b	a) Incorrect. DevOps aims to integrate teams, not create separate ones for quality assurance (QA). b) Correct. The syllabus states that DevOps breaks down the wall of confusion by integrating teams to work together and increase communication. c) Incorrect. While automation is important in DevOps, the wall of confusion is broken down through integration and communication, not just automation. d) Incorrect. While defining clear roles is important, the primary way DevOps aims to make testing a key factor in breaking down the wall of confusion, is by integrating teams and improving communication.	QDO-1.1.2	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
3	d	a) Incorrect. Failed deployment recovery time measures the time it takes to recover from a failed deployment, indicating the fault tolerance and responsiveness of the software. b) Incorrect. Deployment frequency is the frequency of software changes deployed to production, reflecting the agility and responsiveness of the delivery process. c) Incorrect. Change fail percentage indicates the reliability of the delivery process by measuring the percentage of deployments that cause failures in production. d) Correct. Change lead time measures the duration from a code commit to a successful deployment to production, reflecting the efficiency of the delivery pipeline.	QDO-1.1.3	K2	1
4	d	The DevOps culture is about teams having the autonomy to deliver value to customers but keeping the ownership of quality, so testing is not done outside of the DevOps team. Therefore, 1C. Automation refers to automating as much as possible in the continuous integration/continuous delivery (CI/CD) pipeline. Therefore, 2A. Lean means streamlining processes and removing waste (e.g., removing bottlenecks in test activities). Therefore, 3D. Measurement provides data for decisions related to how software is used and how the software development lifecycle works. Therefore, 4B.	QDO-1.1.4	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
5	b, d	a) Incorrect. This option suggests a sequential development model, which does not reflect the continuous and integrated nature of QA in DevOps. b) Correct. This option accurately describes how QA supports the three ways of DevOps: **Flow**: A test-first approach contributes to a smooth and efficient process. **Feedback loop**: Automated testing within the CI/CD pipeline supports rapid feedback loops. **Continuous learning**: Quality hunting encourages teams to explore new ways to test and improve software. c) Incorrect. While manual testing is relevant in DevOps, manual testing cannot cover all code, and because of that, this statement is wrong. d) Correct. This option accurately describes how QA supports the three ways of DevOps: **Flow**: By focusing on automated testing, QA supports predictable value delivery. **Feedback loop**: By using static analysis, QA provides early feedback about the code quality. **Continuous learning**: Continuous regression testing provides assurance of the system's quality. e) Incorrect. This option incorrectly suggests that minimizing testing is part of the flow and that relying solely on tests done by a developer is sufficient.	QDO-1.1.5	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
6	b	i is true. The syllabus says that there is a risk that DevOps will replace Agile software development instead of extending it. ii is false. DevOps enhances collaboration within teams throughout the software development lifecycle (SDLC). iii is true, as per the list of benefits in the syllabus. iv is true. Implementing CI/CD pipeline tools is not enough to make a change. A cultural change is needed. v is false. The primary goal of DevOps is to unify development (Dev) and operations (Ops), not to maintain strict separation.	QDO-1.1.6	K2	1
7	b	a) Incorrect. Cross-functional teams have all the knowledge and skills needed to perform any task that is common for DevOps teams. Some specialized tasks beyond team skills can be assigned to specialized teams within the organization. b) Correct. Knowledge and responsibilities are shared to ensure that no part of the knowledge and skills should be with just one team member. c) Incorrect. Internal documentation may support task tracking but is not sufficient to fully minimize the impact of an inavailable team member. d) Incorrect. Members of a cross-functional DevOps team may have multiple roles simultaneously and can take on any task for which they have the knowledge.	QDO-1.2.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
8	c	a) Incorrect. Improving system aesthetics is not a goal of site reliability engineering (SRE). b) Incorrect. SRE emphasizes automation and continuous monitoring rather than prioritizing exploratory testing. c) Correct. SRE contributes to DevOps by implementing automated feedback loops to optimize efficiency. d) Incorrect. SRE complements DevOps by bridging the gap between development and operations. It does not replace DevOps practices.	QDO-1.2.2	K2	1
9	a, e	a) Correct. A quality policy and test policy are the major work products to promote consistent implementation of preventive measures like static testing, automation, and pair programming to achieve built-in quality. b) Incorrect. Relying on exploratory testing in production delays defect detection and contradicts the DevOps focus on early testing. c) Incorrect. While useful for tracking CI/CD pipeline performance, this option does not directly address embedding quality assurance (QA) or improving built-in quality. It only provides the build with artifacts and data to produce quality reports. d) Incorrect. Testing in production focuses on reactive quality tests, whereas DevOps emphasizes proactive test activities earlier in the software development lifecycle (SDLC). e) Correct. Integrated monitoring and reporting provide visibility into key quality and business metrics, ensuring consistent quality reports and supporting continuous improvement in line with DevOps principles.	QDO-2.1.1	K3	2

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
10	c	a) Incorrect. There is no correlation between a software development lifecycle (SDLC) and the use of either exploratory testing or automation. b) Incorrect. DevOps emphasizes continuous testing during development, not just post-deployment. Agile software development also integrates testing throughout sprints. Sequential development models do not prioritize manual regression testing early on. c) Correct. In DevOps, testing is integrated into every phase of development and deployment, emphasizing continuous feedback and quality. Agile software development similarly incorporates testing throughout the software development cycle and values early and continuous feedback. Sequential development models, however, organize testing in distinct test levels. Testing is handled by specialized teams. d) Incorrect. DevOps leverages extensive automation to support CI/CD pipelines while also allowing for manual testing in specific scenarios. Agile software development does not rely only on automated tests.	QDO-2.1.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
11	c	a) Incorrect. This describes only the production monitoring aspect of continuous testing. While observability is part of the approach, continuous testing spans the entire SDLC, not just in production. b) Incorrect. This is partially true. The syllabus emphasizes that continuous testing includes regression testing but also involves early testing, collaboration, adaptive improvement, and production monitoring. It is not limited to regression testing. c) Correct. This directly reflects the syllabus: "Continuous testing integrates test activities throughout the SDLC … verifying and validating the software at every phase." d) Incorrect. The answer is incomplete, as integrating automated tests into the CI/CD pipeline is only one of the aspects of continuous testing. Continuous testing spans planning, coding, deployment, and production.	QDO-2.1.3	K2	1
12	b	a) Incorrect. A pull request (PR) is not about restricting contributions based on seniority; they provide consistent quality through structured reviews and automated tests for all developers. b) Correct. A PR enforces pre-merge quality checks by enabling collaborative reviews, triggering automated tests, and incorporating feedback before integrating code changes. c) Incorrect. A PR aims to prevent low-quality code from being merged by enforcing tests, not by reducing reviews or relying on testing in production. d) Incorrect. A PR does not rely exclusively on manual reviews by a tester. It involves team collaboration and automation to provide efficiency and scalability.	QDO-2.1.4	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
13	a	a) Correct. Continuous discovery focuses on communicating with the stakeholders to get a shared understanding of new features. User experience (UX) prototypes help clarify stakeholder needs. b) Incorrect. Finalizing acceptance criteria before idea exploration contradicts continuous discovery principles. This practice is iterative and dynamic, allowing for adjustments based on experiments and feedback during the exploration process. c) Incorrect. Continuous discovery does not focus just on technical feasibility. It also evaluates customer value, usability, and business alignment, ensuring that solutions meet broader goals beyond technical implementation. d) Incorrect. Continuous discovery involves validating a wide range of assumptions, including non-functional requirements, customer value, and business impact, not just functional requirements, during the design phase. This provides a more comprehensive alignment with goals.	QDO-2.2.1	K2	1
14	c	a) Incorrect. Per syllabus section 2.2.2: 'Include everything in configuration management (e.g., automated test scripts, automated deployment scripts, test data, and environment configurations). b) Incorrect. Per syllabus section 2.2.2: 'The automation scripts for the build steps or test steps in the CI/CD pipeline should facilitate investigation in case of build failures'. c) Correct. Tests should automatically trigger on a commit to the shared codebase. Requiring manual approval before running tests creates an unnecessary bottleneck and contradicts CI practices of rapid feedback and automation. d) Incorrect. Per syllabus section 2.2.2: 'DevOps teams check in small, incremental code changes, and wait for the tests to pass or follow a stop-and-fix approach if any test failed'.	QDO-2.2.2	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
15	d	a) Incorrect. Per syllabus section 2.2.3: quality is achieved by "deployment automation using automation tools for consistency, compliance, and to provide an audit trail". b) Incorrect. Per syllabus section 2.2.3: quality is achieved by "standardized test environment and test data management". c) Incorrect. Per syllabus section 2.2.3: quality is achieved by infrastructure as code (IaC) "to manage infrastructure configuration using code for consistency and repeatability". d) Correct. Allowing deployment processes to vary introduces inconsistencies and risks, contradicting Continuous Delivery's (CD) emphasis on automation, repeatability, and standardization across environments.	QDO-2.2.3	K2	1
16	a	Dark launch: A new feature runs in production alongside existing functionalities, enabling monitoring, testing, and system impact analysis without exposing it to users. Therefore, 1C. Blue-green deployment: 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" remains live. Therefore, 2B. Canary release: A small subset of users is exposed to a software change to validate quality before expanding to the entire user base. Therefore, 3A. A/B testing: Variants of a feature are presented to different user segments to compare performance metrics and determine the most effective version to keep. Therefore, 4D.	QDO-2.2.4	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
17	b	a) Incorrect: While this might help in the short term, it introduces manual steps that reduce the speed, consistency, and scalability of the CI/CD pipeline. It goes against the principle of full automation in modern DevOps practices. b) Correct. This option directly addresses the root cause - inconsistent environments and test data - by recommending an enhancement to the existing automation. It aligns with CI/CD best practices, where automated, reproducible environments and test data provisioning are essential for reliability and quality assurance (QA). c) Incorrect. This is a good safeguard, but it does not address the underlying issue of environment instability. Skipping deployments on test failure is reactive. It does not prevent the failures caused by misconfigured or inconsistent environments. d) Incorrect. Deployment is connected to the build. Running a deployment more often will re-deploy the same build artifacts without actually building the source code, which is not helpful in this situation. Running builds and deployments more often will not solve the issue either, as the defect lies in the configuration and test data of the deployed environment.	QDO-2.2.6	K3	2
18	c	Information management system: Provides lifecycle management for backlog items such as requirements and defect reports. Therefore, 1B. Version control system: Supports controlled change management for source code, test automation code, and CI/CD pipeline definitions. Therefore, 2A. Artifact management system: Facilitates the reusability of build artifacts, dependencies, and test data. Therefore, 3D. Observability system: Enables traceability and access management for monitoring, traces, and logs. Therefore, 4C.	QDO-3.1.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
19	b	a) Incorrect. Test case generation is not part of traceability and does not substitute for the maintenance of traceable links between the test basis and testware. b) Correct. Automation helps maintain accurate and current relationships between requirements, code, and testware, which is essential for traceability. c) Incorrect. Traceability is a shared responsibility across DevOps roles, not just developers. Automation of traceability does not change the responsibility in any way. d) Incorrect. Automation enhances collaboration by making relationships between work products transparent and auditable.	QDO-3.1.2	K2	1
20	a	a) Correct: The dashboard must integrate automated and manual test results to provide a complete quality view. Automating data gathering and providing real-time updates improve visibility and decision-making. b) Incorrect: Per syllabus section 3.1.3: "Create a single source of truth by combining the metrics information from various sources into a single, accessible location". Storing manual test results separately fragments quality reporting and reduces transparency. c) Incorrect: Per syllabus section 3.1: "Quality reporting integrated with the CI/CD pipeline provides real-time insights through dashboards, combining automated and manual test results for comprehensive analysis and alerting". Automated tests alone do not completely capture software quality. Using only production monitoring tools is insufficient, as multiple tools must be integrated for complete reporting. d) Incorrect: Static reports lack real-time updates, making them ineffective for tracking trends in the CI/CD pipeline. Dashboards enable continuous monitoring and better alignment across teams.	QDO-3.1.3	K3	2

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
21	d	a) Incorrect: Per syllabus section 3.1.4: "Test data subsetting: Select a smaller, representative subset of production data for testing, while keeping references between data items, to reduce storage needs and accelerate test data provisioning." b) Incorrect: Per syllabus section 3.1.4: "Data generation: Create or update test data to ensure comprehensive coverage and a variety of inputs (e.g., valid and invalid data, edge cases, and boundary values)." c) Incorrect: Per syllabus section 3.1.4: "Data organization: Organize and store test data in a structured way in a VCS and make it available on demand within the CI/CD pipeline or for manual testing." d) Correct: While test data masking reduces risk, it does not completely eliminate the risk of security breaches. Improper masking can still expose sensitive data.	QDO-3.1.4	K2	1
22	b	a) Incorrect. Statistical analysis helps identify trends and patterns in software quality and residual risks. Additionally, AI-based tools can predict future test results. b) Correct. While statistical test results analysis enhances automation, human interpretation remains necessary to validate findings, assess software behavior, and detect issues such as defective tests and process inefficiencies. c) Incorrect. Metrics such as defect density, code coverage, and mean time between failures (MTBF) help stakeholders establish confidence in the business value of the software, ensuring better risk assessment and decision-making. d) Incorrect. Statistical analysis provides information that gives a broader picture of the quality of the software, but also of the processes applied and the people involved.	QDO-3.1.5	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
23	c	a) Incorrect. Keeping resources allocated at all times leads to unnecessary consumption and higher costs, whereas controlled environments use resources only when needed. b) Incorrect. Assigning a fixed amount of resources to all environments is inefficient, as different tests have varying requirements, leading to a waste of resources or performance issues. c) Correct. Controlled test environments allocate resources dynamically, ensuring that each test gets exactly what it needs, optimizing costs and performance. d) Incorrect. Allocating the maximum available resources to every test is wasteful, as controlled environments optimize resource usage based on specific testing requirements.	QDO-3.1.6	K2	1
24	b	a) Incorrect. Although feature specific tests become regression tests, running all regression tests for every CI/CD pipeline is wasteful. Regression tests should be optimized for scope based on code changes and risks. b) Correct. Regression tests are a crucial part of a CI/CD pipeline, and their scope should be optimized for file changes and risks. Ideally, all regression tests should be run before a release, but many times it would be bad for business viability and sustainability as it consumes unnecessary resources, so risk-based selection of regression tests is run instead. c) Incorrect. Regression tests should follow tests of a specific feature to confirm no new defects are introduced into the software. d) Incorrect. Regression tests are a crucial part of a CI/CD pipeline. Testing only new code will not reveal its impact on the existing code.	QDO-3.2.1	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
25	b	a) Incorrect. Performance testing is non-functional testing, which does not validate API contracts but builds on them, assuming they work correctly. b) Correct. Contract testing determines that both the provider and consumer adhere to a defined API structure, format, and set of expectations for request and response payloads, headers, status codes, and data types. It can be done without deploying the components. c) Incorrect. Acceptance testing, which validates high-level requirements late in the process, does not prevent defects in the API. d) Incorrect. Integration testing is useful, but it occurs later in the software development lifecycle. It does not provide the early, isolated validation that contract testing offers, which is essential for preventing defects before full integration.	QDO-3.2.2	K3	2
26	c	iii and v are specific to Agile software development, where tests are developed throughout the SDLC phases, allowing it to be close to development and focus on lower-level unit tests and component integration tests. i, ii, and iv are specific to sequential development models, where automated testing is done in a test phase after the development is done; it provides limited feedback and requires upfront planning.	QDO-3.2.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
27	a	a) Correct. Manually reproducing automated test scripts is the least valuable since exploratory testing can achieve greater validation with less effort. b) Incorrect. Exploratory testing can significantly extend coverage and increase the overall confidence in the software. c) Incorrect. Code reviews are part of static testing and are an important type of manual testing to prevent defects in the product. d) Incorrect. Accessibility testing can be done automatically only to a limited extent, so manual testing is required most of the time.	QDO-3.3.1	K2	1
28	c	a) Incorrect. Although exploratory tests are manually executed, they can be triggered from the CI/CD pipeline. b) Incorrect. Exploratory tests can be executed in any test environment. c) Correct. Tools can support exploratory testing in designing test charters, recording test results, reporting defects, and storing test artifacts. d) Incorrect. Exploratory tests are designed, executed, and evaluated in one test session, except for planning and preparing the test charter beforehand.	QDO-3.3.2	K2	1
29	d	a) Incorrect. This is a benefit provided by test automation and traceability, not crowd testing. b) Incorrect. This is a benefit provided by security testing, not crowd testing, because its focus is on low-level testing. c) Incorrect. This is a part of release management and quality monitoring, not crowd testing. d) Correct. Crowd testing is focused on breadth first (e.g., used in beta testing after a canary release), to collect feedback from production, and in real-world device testing.	QDO-3.3.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
30	b	a) Incorrect. Although stakeholders derive the most benefits from a quality hunting event, a wider variety of roles participate, extending beyond business requirements. b) Correct. Quality hunting is an event where teams, about half the size of an Agile team, compete to give the most valuable assessment of their test object's quality level. These teams are challenged to create fresh and innovative approaches to assess quality. Stakeholders benefit from getting many ideas about and new angles for relevant quality aspects of the software product. c) Incorrect. It is not only testers but also other stakeholders who participate and extend the information obtained from testing using innovative approaches. d) Incorrect. Quality hunting, unlike bug hunting, is about finding defects and assessing the overall test object's quality.	QDO-3.3.4	K3	2
31	b	a) Incorrect. Test data generation is a capability of test data and test management tools. Test data can be stored in build artifact management tools, but they cannot generate test data. b) Correct. Scanning for vulnerabilities is a key capability of build artifact management tools. c) Incorrect. Automated build pipelines are the capability of CI or CD tools. Outputs of CI/CD pipelines can be uploaded to the build artifact management tool. d) Incorrect. Document sharing is a capability of collaboration and communication tools. Build artifact management tools primarily involves handling build executables, libraries, and other deliverables rather than project documents.	QDO-4.1.1	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
32	a	Static code analysis and code quality tools evaluate source code without execution, helping to enforce coding standards, detect potential defects, and identify code smells or security vulnerabilities. Therefore, 1C. Continuous testing tools enable automated tests at every SDLC phase and test level, catching defects early and minimizing disruptions. Therefore, 2A. Configuration management tools provide consistent environments across development, testing, and production by automating configuration provisioning and management. Therefore, 3B. Continuous monitoring tools provide real-time insights into system health and user behavior, so that defects are quickly identified and resolved. Therefore, 4D.	QDO-4.1.2	K2	1
33	b	a) Incorrect. Although source code management organizes code commits and version control, it does not directly support managing feature development and minimizing code integration risks. b) Correct. Branching and merging support efficient management of feature development and code integration by using feature branches and code reviews for specific code changes related to a feature, which helps reduce code integration and other potential issues later. c) Incorrect. Monitoring and feedback focus on observing application health and performance in production, not on managing feature development or code integration processes. d) Incorrect. While release management manages release coordination and deployment strategies, it is not specifically about minimizing code integration defects during feature development.	QDO-4.2.1	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
34	d	Rolling releases gradually replace system instances with updated versions, supporting continuous service availability. Therefore, 1B. Hotfix deployment is an urgent release to resolve critical defects in production, prioritizing speed over thorough testing. Therefore, 2C. Dark launching deploys features to the production environment, but they are inaccessible to users. This allows teams to test and monitor performance without affecting UX. Therefore, 3A. Phased rollout deploys updates incrementally by region, user group, or other segmentation criteria. Therefore, 4D.	QDO-4.2.2	K2	1
35	a, c	a) Correct. Idempotency ensures that IaC scripts produce the same results even when applied multiple times, preventing configuration deviations. b) Incorrect. IaC is managed through code, not graphical user interfaces. IaC is done using a descriptive model, leveraging the same version control practices that DevOps teams use. c) Correct. IaC uses declarative and imperative approaches. The declarative approach focuses on the desired state, while the imperative approach specifies the steps to achieve it. d) Incorrect. IaC reduces the need for manual intervention by automating infrastructure changes. IaC eliminates the need for repetitive manual tasks, ensuring consistency and reducing human error. e) Incorrect. IaC does not eliminate version control. It integrates seamlessly with configuration management systems, allowing teams to track changes, collaborate efficiently, and roll back to earlier configurations if needed.	QDO-4.2.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
36	c	a) Incorrect. Feature toggles allow the modification of system behavior without changing code. b) Incorrect. Feature toggles provide temporary control rather than permanent feature enablement. c) Correct. Feature toggles are an approach that allows teams to modify system behavior without changing code. d) Incorrect. Feature toggles do not replace branching strategies.	QDO-4.2.4	K1	1
37	a	Trunk-based development means that every code change is pushed directly to the main branch after successful tests during the commit stage. Therefore, 1C. Feature branches are created for specific code changes and deleted after merging. Therefore, 2D. A pull request (PR) merges code changes from one branch to another and allows DevOps teams or peers to provide feedback on the code changes. Therefore, 3A. A merge conflict happens when the same part of the code in both branches is to be changed during merging. Therefore, 4B.	QDO-4.2.5	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
38	c, e	a) Incorrect. Chaos engineering focuses on fault tolerance, not cloud efficiency. b) Incorrect. Chaos engineering is made possible by a reliable CI/CD pipeline, which supports deploying changes to production and rollback painlessly. c) Correct. Chaos engineering is crucial for determining fault tolerance and reliability of software systems by intentionally injecting failures and observing how the system responds. d) Incorrect. Chaos engineering involves intentionally injecting failures and observing how the system responds. e) Correct. DevOps teams use chaos engineering to uncover hidden defects that may not be apparent during normal operation or when testing in a test environment.	QDO-4.2.6	K1	1
39	d	a) Incorrect. A software bill of materials (SBoM) includes details of components' licensing conditions, not licensing for the whole software system. b) Incorrect. CPU and memory usage statistics pertain to telemetry for monitoring the production environment, not to the SBoM. c) Incorrect. Deployment automation and rollback mechanisms are part of continuous delivery and continuous deployment activities, not SBoM. d) Correct. SBoM requires the dependencies of the component on other components.	QDO-4.2.8	K1	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
40	b	a) Incorrect. Containerization does not eliminate the need for security measures; diligent dependency management is still necessary when using third-party components. b) Correct. Containerization allows for consistent environments across development, testing, and production, thereby solving issues like "it works on my machine." c) Incorrect. Containerization does not entirely replace traditional virtualization technologies; it is a lightweight alternative used in specific conditions. d) Incorrect. While containers are efficient and can be removed after use, they do not guarantee zero resource usage when inactive.	QDO-4.2.9	K1	1

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Appendix A – Additional Answer Key

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Question Number (#)	Correct Answer	Learning Objective (LO)	K-Level	Number of Points
A1		QDO-1.1.3	K2	1
A2	a, e	QDO-1.2.3	K2	1
A3	b	QDO-2.2.5	K2	1
A4		QDO-2.2.6	K3	2
A5		QDO-3.2.3	K2	1
A6	c	QDO-3.3.3	K2	1
A7	b	QDO-4.1.1	K1	1
A8	b	QDO-4.2.7	K1	1

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Appendix B – Additional Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A1		1. The time between a failed deployment back toa working environment is known as the failed deployment recovery time. 2. The percentage of unsuccessful deployments to production is known as the change fail percentage. Both measurements are related to the quality of changes delivered, which is known as stability. 3. The frequency of deployment to production is known as deployment frequency. 4. The duration from a code commit to a successful deployment to production is known as the change lead time. Both measurements are related to the velocity of making changes, which is known as throughput. Therefore, 1 & 3 match B) and 2 & 4 match A).	QDO-1.1.3	K2	1
A2	a, e	a) Correct. The DevOps as a tools team demonstrates a separate team working on the tooling needed for DevOps. b) Incorrect. Dev does not need Ops is not mentioned in this scenario. Developers are still relying on Ops by leaving the deployment and maintenance tasks entirely to them. c) Incorrect. Fully shared Ops responsibilities promotes cooperation between the Dev and Ops teams, which is not an anti-pattern. d) Incorrect. The SRE team is a valid collaboration model, not an anti-pattern, and is not present in this case. e) Correct. Dev and Ops silos are present as development and operations are functioning in isolation without direct collaboration.	QDO-1.2.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A3	b	a) Incorrect. In release on demand, features deployed to production are not automatically visible to all users. Controlled release mechanisms, such as feature management tools, allow selective visibility based on business needs. b) Correct. Decoupling architectural components allow different components to be released independently and at different frequencies, reducing risk and supporting the flexibility of release on demand. c) Incorrect. While non-software work products like user manuals and marketing materials are part of the release, manual approval of all such work products is not mandatory before releasing features. The emphasis is on agility and delivering value incrementally. d) Incorrect. Release on demand focuses on aligning releases with business and customer needs, such as market timing, rather than adhering to fixed schedules.	QDO-2.2.5	K2	1
A4		As per syllabus section 2.2.6: C - The flow of information and materials definition is part of modelling Value Stream Mapping as step #1 in CI/CD pipeline implementation. See definition of 'value stream'. D - Reproducible provisioning of environments is part of build and deployment automation as step #2 in the CI/CD pipeline implementation. B - Contract testing is part of the commit stage as step #3 in the CI/CD pipeline implementation. E - Performance testing for validating systems's behavior could be part of the acceptance stage automation as step #4 in the CI/CD pipeline implementation. A - Feature toggles are part of release automation as step #5 in the CI/CD pipeline implementation.	QDO-2.2.6	K3	2

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A5		1, 2, and 4 are specific to sequential development models, where automated testing is done in a test phase after the development is done; it provides limited feedback and requires upfront planning. 3 and 5 are specific to Agile software development, where tests are developed throughout the SDLC phases, allowing them to be closer to development and focus on lower-level unit test and component integration tests.	QDO-3.2.3	K2	1
A6	c	a) Incorrect. Crowd testing is manual testing by a group of people (crowd testers), usually external to a development organization. b) Incorrect. Crowd testing focuses on a wider scope of testing. This definition refers to a quality hunting event. c) Correct. Crowd testing refers to a session where a group of people (crowd testers), usually external to the development organization and possibly geographically distributed, use a test charter to guide their testing without preparing detailed test cases upfront. d) Incorrect. Crowd testing is a manual test activity. It does not necessarily involve automated tests.	QDO-3.3.3	K2	1

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
A7	b	a) Incorrect. While storing build artifacts and dependencies can improve consistency, it does not address the root cause of inconsistent configurations across environments. b) Correct. Automating environment creation, standardizing configurations, and using IaC tools addresses the problem of inconsistent environments, supoorts a consistent setup across development, testing, and production stages. c) Incorrect. Setting up automated CI/CD pipelines focuses on code integration and defect detection rather than solving environment configuration defect. d) Incorrect. Performing load testing is useful for assessing system performance, but it does not resolve the configuration inconsistencies across environments.	QDO-4.1.1	K1	1
A8	b	a) Incorrect. Applying machine learning to detect anomalies is part of monitoring, not telemetry itself. b) Correct. Telemetry specifically focuses on collecting measurements of both functional and non-functional quality characteristics to provide insights into software performance and user interaction. c) Incorrect. Initiating control actions is related to continuous monitoring as a whole, not specifically to telemetry. d) Incorrect. This describes observability, which uses logging, tracing, and metrics of the system's behavior to provide an overview of the software quality.	QDO-4.2.7	K1	1