



**AT\*SQA**

**DevOps Testing**

**AT\*DevOps**

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# **SAMPLE EXAM**

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**AT\*SQA**

ASSOCIATION FOR TESTING &  
SOFTWARE QUALITY ASSURANCE  
*Global Certification Body for ISTQB and ASTQB*

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# AT\*SQA DevOps — Sample Exam

Each question is worth 1 point.

## #1. Where do product owners and network engineers fit in DevOps projects?

- a. In the Dev category
- b. In the Ops category
- c. Network engineers are Dev, product owners are Ops
- d. Product owners are Dev, network engineers are Ops

## #2. If you are working with a methodology that is concentrating on identifying bottlenecks and improving the flow of work for the team, which methodology are you following?

- a. Kata
- b. Kaizen
- c. Agile
- d. Theory of Constraints

## #3. In what way did Agile drive the need for DevOps?

- a. The working model of Agile required the developer and operator teams to work together to increase velocity of releases
- b. The small increments of code being frequently released caused the need for faster and more reliable testing and delivery
- c. Agile standups require the presence of the operations and support teams to ensure the product is deliverable in the required timeframe
- d. It did not - DevOps actually drove the need for Agile

## #4. Which of the following is true regarding the Ops team in a DevOps environment?

- a. They remain a separate entity, providing traditional services to the other teams as needed after the product is developed
- b. They are absorbed into the Dev team and the role is dissolved
- c. The role remains but they work together with the Dev team and are engaged early in the project
- d. The Ops team normally absorbs the Dev team and is the primary driver in scheduling for releases

## #5. When is quality assessed in a DevOps lifecycle?

- a. Only at every stage of development and deployment
- b. Only at every stage of deployment
- c. Only at every stage of development
- d. Only at the conclusion of testing when the exit criteria are verified

**#6. For the DevOps core value of “sharing”, what is shared?**

- a. Code across the different development teams
- b. Operational responsibilities
- c. Information across the team
- d. Communal office spaces so the testers have better access to the developers

**#7. You are working on implementing DevOps and are working on the continuous deployment aspect. Which of the core values is most important to support this implementation?**

- a. Culture
- b. Automation
- c. Measurement
- d. Sharing

**#8. What is the benefit of the “Third Way” in Three-Way Thinking?**

- a. The focus is on building quality into the whole system
- b. The focus is on removing constraints
- c. The focus is on getting rapid feedback from right-to-left
- d. The focus is on creating a culture of continuous learning

**#9. Which activity of the continuous lifecycle is missing from the following list?**

- **Continuous integration**
- **Continuous testing**
- **Continuous deployment**
- **Continuous monitoring**
- **Continuous feedback**
- **Continuous improvement**
- **Continuous innovation**

- a. Continuous development
- b. Continuous delivery
- c. Continuous implementation
- d. Continuous automation

**#10. Which of the following activities in the continuous lifecycle are dependent on the success of continuous testing?**

- a. Continuous development and delivery
- b. Continuous delivery and deployment
- c. Continuous integration and monitoring
- d. Continuous feedback and innovation

**#11. You have found that although your DevOps implementation is working for the development team, the support team is very**

**unhappy. This is news to you as you had not previously heard that there were any issues. What is missing in the DevOps lifecycle that would help assess the problem and allow the team to work on improvements?**

- a. Continuous deployment
- b. Continuous support
- c. Continuous feedback
- d. Continuous instruction

**#12. Which stage is missing from the following DevOps pipeline?  
Plan -> Code -> Build -> Deploy**

- a. Prepare
- b. Test
- c. Stage
- d. Develop

**#13. Three groups of items for testing have been assessed for risk. One has been assigned as high-risk, one as medium-risk and one as low-risk. What is the proper order for testing these items?**

- a. High-risk first, then medium-risk and low-risk mixed together to improve efficiency of testing
- b. Medium-risk first as that will allow better progress, then high-risk, then low-risk as time allows
- c. High-risk first, then medium-risk in order of efficiency, then low-risk as time allows
- d. Low-risk first to quickly remove it from the list, then medium-risk, then high-risk because high-risk will require the most time

**#14. Your developers have created a number of web services, each handling a large set of functions that are not necessarily related. In testing, you are finding that changes to one area of functionality tend to break other areas. Which of the following technologies would be worth pursuing to improve the separation of the functions?**

- a. Cloud computing
- b. Service virtualization
- c. Microservices
- d. Virtualization in the cloud

**#15. What is the biggest saving usually gained from virtualization?**

- a. Removes the need for system operators
- b. Reduces the need for hardware and improves the utilization of the existing hardware
- c. Removes the need for software developers
- d. Reduces the need for individual services and the use of the cloud

**#16. How do the acceptance criteria of a user story help the tester?**

- a. The tester knows how to test the story
- b. The tester knows what techniques to use to test the story
- c. The tester knows what outcomes are expected from the tests

d. The tester knows the order in which to test the stories

**#17. Which of the following is the correct order of steps in TDD?**

- a. Write code, write test, execute test, refactor until test passes
- b. Write code, release code, execute test suite, refactor until all tests pass
- c. Write the failing test, fix the test, write the code, run the test
- d. Write the failing test, write the code, run the test, refactor the code until the test passes

**#18. Which of the following is the most efficient way to test for memory leaks?**

- a. Performance and stress testing
- b. Static analysis
- c. Test automation
- d. Repeated manual testing

**#19. In the iterative Red-Green-Refactor cycle, what is the purpose of the Red step?**

- a. To test that errors are handled correctly
- b. To ensure that failures that occur during execution are logged
- c. To write tests that will fail because the code is not yet implemented
- d. To improve the design and structure of the production and test code

**#20. For this TDD test:**

```
start test
set model = c
set features = 1
call priceCompute (model, features)
if price = 31,000
print price, "Success"
else
print price, "was wrong, should have been 31,000"
endif
end test
```

**Which of the following sets of pseudocode would run correctly?**

- a.  
Start module priceCompute  
Input model, features  
  if model = A or C  
    price = 20,000  
  else  
    price = 30,000  
  endif

```
    if features = 1 or 2
      price = price + 1000
    elseif features = 3 or 4
      price = price + 2000
    elseif features = 5
      price = price + 3000
    endif
  Print price
End module
```

b.

```
Start module priceCompute
Input model, features
  if model = A or B
    price = 20,000
  else
    price = 30,000
  endif
  if features < 5
    price = price + 3000
  endif
Print price
End module
```

c.

```
Start module priceCompute
Input model, features
  if model = A or B
    price = 20,000
  else
    price = 30,000
  endif
  if features = 1 or 2
    price = price + 1000
  elseif features = 3 or 4
    price = price + 2000
  elseif features = 5
    price = price + 3000
  endif
Print price
End module
```

d.

```
Start module priceCompute
Input model, features
  if model = A or B
    price = 20,000
  else
    price = 30,000
  endif
```

Print price  
End module

**#21. You have been given the following requirement for a product that will return the price of a car. The price is determined on the model base price and several special feature packages that can be added to the car. Which of the following is the correct BDD statement for this requirement?**

a.  
Given that I want to buy a car  
When I select the model and features I want  
Then I should be given the correct price

b.  
Given that I select features  
When I buy a car  
Then I want to get the best price

c.  
Given a set of models and features  
I should get the right price  
So I can buy the car

d.  
Given the correct price  
When I want to buy a car  
Then I can buy it

**#22. When security testing is integrated into the DevOps lifecycle, what is it usually called?**

- a. Security testing
- b. SecDev
- c. DevSecOps
- d. SecOps

**#23. Which of the following is a reason for the low maintenance cost of automating deployment testing?**

- a. It is frequently used
- b. The target system and the software stability are known
- c. The new functionality is guaranteed to work
- d. No manual intervention is required

**#24. What type of testing allows the tester to vary the next test based on what they found in the previous test?**

- a. Functional
- b. Exploratory
- c. Integration

d. Usability

**#25. If defects are found and resolved as early as possible, which of the following is reduced?**

- a. Quality debt
- b. Team size
- c. Bonuses
- d. The need for automation

**#26. In addition to automating the testing, what else is automated in a DevOps environment?**

- a. Coding
- b. Requirements reviews
- c. DevOps toolchain
- d. Deployment

**#27. At what testing level should test automation start?**

- a. Unit
- b. Integration
- c. System
- d. Acceptance

**#28. In addition to managing the environments, what else does Infrastructure as Code do?**

- a. It procures the environments
- b. It provisions the environments
- c. It purchases the environments
- d. It protects the environments

**#29. In addition to tracking the functional and physical characteristics of an item, what else is normally tracked by configuration management?**

- a. Changes to the item
- b. Usage of the item
- c. Test results for the item
- d. Automation for the item

**#30. Which features of configuration management support the successful implementation of Infrastructure as Code?**

- a. Centralized storage
- b. Unrestricted access
- c. Ease of changes
- d. Verification and validation

**#31. The developers have been doing nightly builds in a rotation. The testing team has noticed that there is inconsistency in the build**



**results depending on who is doing the build. What should be done to help fix this problem?**

- a. Ensure the build script is under configuration management
- b. Ensure only one developer is responsible for all the builds
- c. Ensure the automated test scripts run after each build
- d. Move the build responsibility to a member of the test team

**#32. What is the DevOps toolchain?**

- a. A set of processes
- b. A manifesto
- c. A combination of tools
- d. A chain of custody for all DevOps artifacts

**#33. If source code scanning tools are used for security testing as the code is being build, should they be included in the DevOps toolchain?**

- a. Yes, because they are a necessary part of building good code
- b. Yes, because once they are in the toolchain, the whole team will be able to access the results
- c. No, because they are only used during development rather than throughout the lifecycle
- d. No, because they require special licenses and should have restricted access

**#34. You are working in a company where team collaboration is relatively new. In the past, individuals worked on separate tasks and expertise was developed in these separate areas of ownership. What can management do to encourage a more collaborative environment?**

- a. Show individuals that their contribution is valued, but reward success on a team level
- b. Reward individuals for their contribution and promote those with the highest level of expertise
- c. Bring in specialists for the areas where the team is weak or lacking in skills
- d. Distribute the work geographically to encourage the use of video conferencing

**#35. When building a DevOps team, what is normally the best mix of skills?**

- a. All specialists
- b. All generalists
- c. Generalists with some specialist knowledge
- d. Specialists with some generalist knowledge

**#36. What is the primary management challenge around budgeting when changing to a DevOps environment?**

- a. Tooling and training
- b. Administration and planning
- c. Bonuses and annual increases
- d. Mindset changes

**#37. You are working in a company that has followed the V-model for many years. Testers have clearly defined roles and responsibilities**

**and take pride in their work. The testing team has weekly contests for “best bug found” and frequently post their bug finding charts in the test lab. The company is going to change to a DevOps lifecycle. The developers are thrilled with the new approach and the operations team is happy to be included early in the development phases. The testers, however, are reluctant to change to the new approach for fear that they will lose their identity and their primary role.**

**What type of a challenge is this and how should management adapt to the challenge?**

- a. Reporting structure – management needs to clarify who will report to whom and how advancements and compensation will be handled as well as how self-management will work
- b. Training – management needs to arrange for the proper training for the testing team so they can quickly learn the automation skills they will be needing and will be able to build the necessary automation frameworks quickly
- c. Tooling – the developers and testers need to agree on the tools that will be used for test automation and deployment
- d. Reward system – management needs to emphasize that rewards of individual testing (finding bugs) will be outweighed by the rewards of releasing a quality product as a team

**#38. Which of the following is a common barrier to a DevOps implementation?**

- a. Lack of requirements
- b. High numbers of critical defects
- c. Territorial battles
- d. Smooth handoffs

**#39. You are developing a plan for a DevOps implementation. You are looking at ensuring good team engagement. Right now, you have defined the roles, created an efficient environment and everyone has agreed to these. What else do you need to do to ensure team engagement?**

- a. Establish a bonus pay policy
- b. Define the success measures
- c. Select the appropriate tools
- d. Identify who will be specialists

**#40. What is an important result of a clearly defined goal?**

- a. Failure is unlikely
- b. Success can be measured
- c. Stakeholders understand the cost
- d. People will be less nervous about losing their roles