AT*SQA

DevOps Testing

AT*DevOps

SAMPLE EXAM
ANSWERS

Version 2020

AT*SQA DevOps — Sample Exam Answer Key

40 possible points. 26 required to pass (65%).

Question	Answer	Rationale	Learning Objective (LO)	Number of Points
1	D	D is correct. Product owners are associated with creating the product and the network engineers are associated with the production deployment and maintenance.	LO-1.1.a	1
2	D	D is correct. This is the primary focus of the Theory of Constraints. The others may identify and eliminate bottlenecks as a side effect of other activities but that isn't the primary goal.	LO-1.2.a	1
3	B	B is correct. It was the need to quickly and safely release code that required control and cooperation with the operations team to procure the needed support for deployment and environment creation.	LO-1.2.b	1
4	C	C is correct. The Ops team still does operations stuff, but they work together with the dev team from the beginning of the project to plan automation of deployments, etc. A is not correct because they are involved much earlier in DevOps. B is not correct because the role remains. D is not correct because Dev remains a separate role as well.	LO-1.3.a	1
5	A	A is correct. Quality is assessed at every stage throughout development and deployment.	LO-1.4.a	1
6	C	C is correct. It's the sharing of all information in an open and transparent way, across the entire team.	LO-2.1.a	1
7	B	B is correct. Automation is the key aspect to making continuous deployment possible in the	LO-2.1.b	1

Question	Answer	Rationale	Learning Objective (LO)	Number of Points
		DevOps environment.		
8	D	D is correct. This is a benefit from the Third Way. A and B are focuses of the First Way. C is the focus of the Second Way.	LO-2.2.a	1
9	B	B is correct. Continuous delivery is missing from the list (between build integration and testing). The others are not part of the continuous lifecycle.	LO-2.3.a	1
10	B	B is correct. Continuous delivery and deployment will only work if the software is tested and is working. All areas are affected by the continuous testing, but only B will fail if it's not done correctly.	LO-2.3.b	1
11	C	C is correct. Continuous feedback, including improvement and innovation, is needed to get the information regarding the problems and to fix them.	LO-2.3.c	1
12	C	C is correct. Stage is missing and should come between Build and Deploy.	LO-2.4.a	1
13	C	C is correct. High risk items should be tested first. Then medium items, and these can be ordered in any way. Then low.	LO-2.5.a	1
14	C	C is correct. Dividing the larger services into smaller, more focused services would likely improve the issue with breaking unrelated functions and would allow faster and more accurate deployment.	LO-2.6.a	1
15	B	B is correct. Virtualization, either on premise or in the cloud, reduces the need for more hardware and improves the efficiency and usage of the existing hardware.	LO-2.6.b	1
16	C	C is correct. Well-defined acceptance criteria help the tester to know what to test and how to verify if the outcome is aligned with the expected outcome. A and B are not correct because the acceptance criteria don't explain how to test the story. D is not correct because	LO-3.2.a	1

Question	Answer	Rationale	Learning Objective (LO)	Number of Points
		prioritization of the testing would be based on the risk assessment and not the acceptance criteria.		
17	D	D is correct. The goal of TDD is to write a test that will fail, then write the code to make the test pass.	LO-3.3.c	1
18	B	B is correct. Static analysis tools such as linters are commonly used to check for memory leaks and can help isolate the cause. This is the more efficient way to find these leaks because it can be conducted early. A, C and D could all find memory leaks, but these will not help with isolating the cause and are usually a biproduct of other testing.	LO-3.3.b	1
19	C	C is correct. This is the Red step in the process.	LO-3.3.d	1
20	C	C is correct. This computes the correct amount per the test.	LO-3.3.e	1
21	A	A is the correct interpretation of the requirement into the given/when/then format.	LO-3.3.f	1
22	C	C is correct. When security testing is fully integrated, it is called DevSecOps.	LO-3.4.a	1
23	B	B is correct. With DevOps deployments, the target system and configuration should be known and the software should be stable because it has been tested throughout its lifecycle. A is not a factor in determining the maintenance cost. C is sadly not true since new functionality could break – shouldn't, but code. Knowing the software stability also means knowing what is not working. D is not correct because this is not a factor in the maintenance costs of the automation (definitely a factor in the maintenance of the deployment though).	LO-3.5.a	1
24	B	B is correct. This is a description of what happens during exploratory testing.	LO-3.6.a	1

Question	Answer	Rationale	Learning Objective (LO)	Number of Points
25	A	A is correct. Quality debt is reduced in this way. B should not be affected but the team members will have more time for new features and will need less time to chase defects. C should be increased! D is not correct as the need for automation is always there.	LO-3.7.a	1
26	D	D is correct. The deployment is automated in a DevOps environment. A may have some areas of automated code generation, but this is not a requirement of DevOps and tends to be language/tool related. B is a form of static testing and is unlikely to be automated. C is the overall toolchain which contains test automation tools but is not, in itself, automated.	LO-4.1.a	1
27	A	A is correct. Test automation should start as early as possible and that would be with the unit testing.	LO-4.2.a	1
28	B	B is correct. IaC provisions and manages the environments.	LO-4.3.a	1
29	A	A is correct. Changes to the item are also controlled, documented and tracked.	LO-4.4.a	1
30	A	A is correct. The centralized storage of the configuration information keeps it all in one place where it can be made accessible for those with a need and the rights to make a change. This provides one single source of truth.	LO-4.4.b	1
31	A	A is the first step because this scenario sounds like the developers are not using the same build script. Putting it under configuration management will make it version controlled and will require checkout/checkin when any changes are made, making those changes visible to the team. B, C and D might help the situation, but don't fix the core problem.	LO-4.4.c	1
32	C	C is correct.	LO-4.5.a	1

Question	Answer	Rationale	Learning Objective (LO)	Number of Points
33	A	A is correct. Security scanning tools, just like build automation tools, are important for building good quality code. The DevOps toolchain does not require continuous usage.	LO-4.5.b	1
34	A	A is correct. Individuals still need to feel valued, but the success should be judged at the team level rather than an individual level. B is not correct because this will be counter-productive to getting good collaboration. C is not correct because this will not encourage the team to build their own skills. D is not correct because geographical distribution adds more complications to collaboration.	LO-5.1.a	1
35	C	C is normally the best mix. This way there are people who understand the entire process, but also have some specific knowledge in a specialty area. This may not be sufficient if complex testing is needed (such as security architecture testing), but it is a good start to building a strong team.	LO-5.1.b	1
36	A	A is correct. There is likely to be a significant outlay for the new tools and the training for those tools when the DevOps implementation occurs. B and C should not be significantly changed. D is a factor, but not a budgeting consideration.	LO-5.2.a	1
37	D	D is correct. The team's reward system is changing. They need to think about the big picture of releasing a strong product rather than just the number of bugs they find as individuals	LO-5.2.b	1
38	C	C is correct. This is a common barrier that is unique to DevOps implementations rather than generic software projects which may have A and B as problem areas. D is a benefit rather than a barrier.	LO-5.3.a	1
39	B	B is correct. The missing factor in this set is defining the success measures for the team. Once the success measures are understood and accepted, the team will become more	LO-5.4.a	1

Question	Answer	Rationale	Learning Objective (LO)	Number of Points
		engaged.		
40	**B**	B is correct. When a goal is clearly defined, achievement toward that goal can be measured.	LO-5.4.b	1