Sample Exam – Answers

Sample Exam set A Version 2.0

ISTQB[®] Agile Test Leadership at Scale Syllabus

Compatible with Syllabus version 2.0 and Body of Knowledge version 2.0

International Software Testing Qualifications Board



Version 2.0 Released 29/09/2023



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Acknowledgements

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



Revision History

Version	Date	Remarks
v2.0	2023/09/29	Added questions 16-40.
		Updated the following questions from v1.0:
		5, 6, 8, 9, 10, 12
		Updated points for all K4 questions to 3 points.
V1.0	2022/05/13	Release version



Table of Contents

Copyright Notice	2
Document Responsibility	2
Acknowledgements	
Revision History	
Table of Contents	
Introduction	
Purpose of this document	
Instructions	
Answer Key	
Answers	



Introduction

Purpose of this document

The example questions and answers and associated justifications in this sample exam have been created by a team of subject matter experts and experienced question writers with the aim of:

- Assisting ISTQB[®] Member Boards and Exam Boards in their question writing activities
- Providing training providers and exam candidates with examples of exam questions

These questions cannot be used as-is in any official examination.

Note, that real exams may include a wide variety of questions, and this sample exam *is not* intended to include examples of all possible question types, styles or lengths, also this sample exam may both be more difficult or less difficult than any official exam.

Instructions

In this document you may find:

- Answer Key table, including for each correct answer:
 - K-level, Learning Objective, and Point value
- Answer sets, including for all questions:
 - Correct answer
 - Justification for each response (answer) option
 - K-level, Learning Objective, and Point value
- Additional answer sets, including for all questions [does not apply to all sample exams]:
 - Correct answer
 - Justification for each response (answer) option
 - K-level, Learning Objective, and Point value
- Questions are contained in a separate document



Answer Key

Question Number (#)	Correct Answer	LO	K-Level	Points
1	d	ATLaS-1.1.1	K2	1
2	а	ATLaS-1.2.1	K2	1
3	С	ATLaS-2.1.1	K2	1
4	С	ATLaS-2.1.2	K3	2
5	d	ATLaS-2.2.1	K4	3
6	d	ATLaS-3.1.1	K3	2
7	d	ATLaS-3.1.2	K2	1
8	d	ATLaS-3.2.1	K2	1
9	b, c	ATLaS-3.2.2	K3	2
10	а	ATLaS-1.2.1	K2	1
11	b	ATLaS-2.1.2	K3	2
12	b, e	ATLaS-2.2.1	K4	3
13	d	ATLaS-3.1.1	K3	2
14	а	ATLaS-3.2.1	K2	1
15	a, d	ATLaS-3.2.2	K3	2
16	а	ATLaS-4.1.1	K2	1
17	d	ATLaS-4.1.2	K2	1
18	а	ATLaS-4.1.3	K3	2
19	b, c	ATLaS-4.2.1	K4	3
20	d	ATLaS-5.1.1	K2	1

Question Number (#)	Correct Answer	LO	K-Level	Points
21	b	ATLaS-5.1.2	K2	1
22	С	ATLaS-5.1.3	K2	1
23	c, d	ATLaS-5.1.4	K4	3
24	b	ATLaS-5.1.5	K4	3
25	d	ATLaS-1.1.1	K2	1
26	а	ATLaS-2.1.1	K2	1
27	С	ATLaS-4.1.1	K2	1
28	а	ATLaS-4.1.1	K2	1
29	а	ATLaS-4.1.2	K2	1
30	d	ATLaS-4.1.3	K3	2
31	b	ATLaS-4.1.3	K3	2
32	b	ATLaS-4.2.1	K4	3
33	b, d	ATLaS-4.2.1	K4	3
34	а	ATLaS-5.1.1	K2	1
35	b	ATLaS-5.1.2	K2	1
36	d	ATLaS-5.1.3	K2	1
37	С	ATLaS-5.1.4	K4	3
38	d	ATLaS-5.1.4	K4	3
39	a, d	ATLaS-5.1.5	K4	3
40	d	ATLaS-5.1.5	K4	3



Answers

Question Number (#)	Correct Answer	Explanation / Rationale	Learning Objective (LO)	K-Level	Number of Points
1	d	 a. Incorrect. This is not the BEST example. Quality assistance has a broader scope and is shifting the focus from defect detection to defect prevention. b. Incorrect. Quality assistance is enabling the agile teams to do system testing in collaboration and is breaking down testing silos. c. Incorrect. More in line with traditional test management, where a test manager is responsible for test planning. d. Correct. Broader focus than testing and making quality everyone's responsibility. 	ATLaS-1.1.1	K2	1
2	а	 a. Correct. Quality coaching is an important part of a quality assistance approach, which fosters business agility. b. Incorrect. Test managers can benefit from a collaborative quality approach, but having responsibility for quality and testing as a way to minimize the workload on test managers is not the reason why quality coaching is an important skill. c. Incorrect. Quality coaching is not the same as negotiation. d. Incorrect. While testers coaching developers is certainly one of the behaviors that often provides value, it is not mandatory that dedicated tester roles provide the needed coaching, nor that all builtin quality efforts require tester involvement. 	ATLaS-1.2.1	K2	1



3	С	a. Incorrect. The scenario states that the integration between the teams is a problem. Each team focusing on its own process probably would not help, although minimizing delays that stop teams from integrating each other's work can be a long-term solution.	ATLaS-2.1.1	K2	1
		b. Incorrect. Having system teams, test teams, or integration teams can be necessary or helpful, depending on context. It is not clear, though, that this is the solution in the scenario and a current state value stream should be mapped first.			
		c. Correct. If integration creates problems, teams need to focus on that. As an additional focus, teams should use their time to improve on integration issues, but it is still important to troubleshoot if the current state of a value stream has quality problems.			
		d. Incorrect. The working steps described are part of a development value stream and not an operational value stream.			
4	С	 Incorrect. Defining the product or service group to which a value stream belongs is usually done before creating the current situation map. 	ATLaS-2.1.2	K3	2
		b. Incorrect. The value stream should be analyzed in the current state before setting improvement goals.			
		c. Correct. The current state needs to be analyzed to ensure no steps are missing.			
		d. Incorrect. There is no indication that seeing the working steps of development value streams would make the current state map of the operational value stream any clearer.			



5	d	Incorrect. The times stated do not indicate a lot of wait time, considering the processing that the tester does.	ATLaS-2.2.1	K4	2
		b. Incorrect. The tester has not experienced a failure that could indicate defects that unnecessarily need correction.			
		c. Incorrect. There is no indication of non- utilized talent.			
		d. Correct. Scrolling down a list several times could indicate excessive motion.			
6	d	Incorrect. It is important that the expected outcomes are met before proceeding to the Act step and not to simply use the best result obtained in the Do step.	ATLaS-3.1.1	K3	2
		b. Incorrect. This may still not provide an optimal solution, depending on the expected outcomes.			
		c. Incorrect. This could indeed be a valid option, but there could also be a more effective solution covered in the Do step.			
		d. Correct. The expected outcomes should always be the determining factor when deciding the next action in the Check step. An optimal solution might be obtained through a complete replan or by simply selecting a different approach.			



7	d	Incorrect. Holding repositories locally is generally an obstacle for collaborative learning.	ATLaS-3.1.2	K2	1
		 Incorrect. Singling out a specific business goal like cost cutting or market expansion is not likely to promote organizational learning in a broad sense. 			
		c. Incorrect. Financial awards can generate negative impacts on the goal of creating safe, transparent environments that foster improvement.			
		d. Correct. Using improvement boards at different levels of the organization can help make ongoing improvements more visible, thereby fostering collaboration on organization-wide learning.			
8	d	a. Incorrect. Root cause analysis is a useful technique for understanding and solving a problem and you start by figuring out what negative events are occurring. Understanding technical systems is important in systems thinking.	ATLaS-3.2.1	K2	1
		b. Incorrect. Five Whys is a problem-solving method that explores the underlying cause and effect of particular problems. The primary goal is to determine the root cause of a defect or a problem by successively asking the question "Why?".			
		c. Incorrect. Basic root cause analysis techniques in lean include Five Whys, Pareto charts, and fishbone diagrams.			
		d. Correct. To establish new test environments before even knowing what the problem is can be seen as waste.			



9	b,c	 a. Incorrect. Adding number of complaints for a certain month will not improve the diagram. b. Correct. It is unclear why "random coverage" should raise "product quality." c. Correct. It is helpful to choose nouns in the more positive sense, so that the concept of decreasing or raising the variable is clearer. d. Incorrect. That good product quality helps to avoid customer complaints is causal. e. Incorrect. Loops with an even number of minus signs are reinforcing loops. 	ATLaS- 3.2.2	К3	2
10	а	 a. Correct. Coaching leaders can help identify structural problems which is the responsibility of leaders to handle. It is therefore a good example of a skill required for quality assistance across the organization. b. Incorrect. Delivery optimization from a retrospective is at the team level not the organizational level. Plus, facilitation is not a key skill for culture and mindset change across the organization. c. Incorrect. Pairing within teams is not an organizational change, but training at team level. d. Incorrect. Eliminating waste once is probably not going to result in a change in mindset and culture. It would need to be done continuously over a period of time. 	ATLaS- 1.2.1	K2	1



11	b	 a. Incorrect. There is no indication that orders requested by management impact collaboration between the operational and development value streams which is the reason for the value stream mapping exercise. b. Correct. Knowing the numbers of open requests per working step might indicate bottlenecks for the operational value stream and where the agile test team can improve their support. c. Incorrect. The non-value adding step is not directly related to how the agile test team is supporting their colleagues. d. Incorrect. Most likely details regarding the build process of the development value stream are irrelevant for the operational value stream. 	ATLaS- 2.1.2	K3	2
12	b,e	 a. Incorrect. Recommending a factor for all steps does not consider where the problems are located. Furthermore, decreasing processing time by 30% may be very hard to achieve in some of the working steps and it will probably result in a lower improvement of the flow efficiency than several of the other options. b. Correct. This will result in a significant decrease in the lead time because the security department is no longer a bottleneck and the processing time related to approvals is not really value-adding from a customer perspective. c. Incorrect. They are different kinds of activities in different test environments with different people performing the steps, so they cannot just be combined. d. Incorrect. Although increasing the quality of the work performed is normally a good thing, because this is a non-value-adding but needed activity at best and the goal of the increase is insignificant compared to some of the other goals, it would be better to find a way to remove the step. e. Correct. If the testing team could start build verification test (BVT) earlier then that would improve the flow efficiency. 	ATLaS- 2.2.1	K4	3



13	d	 a. Incorrect. The group is jumping to the Do step (solution execution) without having validated their understanding of the problem with the people who are supposed to not have understood the needs. b. Incorrect. Updating current processes is part of the Act step and is performed after the Do and Check steps. c. Incorrect. This has nothing to do with process improvement to avoid the same problem in the future. It is preparation for addressing the current sales problem. d. Correct. The Plan step is not completed because the people who are supposedly part of the problem have not been involved in identifying and discussing what the real problem is. 	ATLaS- 3.1.1	K3	2
14	а	 a. Correct. Systems thinking can help to identify test management practices that are only locally optimized. b. Incorrect. It is expected that an agile test leader has the authority to help solve such problems. If the agile test leader is not able to help, or if the problem justifies it, it is also okay to escalate problems to senior/top management. c. Incorrect. While the Five Whys can help understand core problems with test automation, it is not the best technique for determining the number of developers needed to support test automation. d. Incorrect. Systems thinking can address technical systems, and quality assistance as an approach includes technical solutions. 	ATLaS- 3.2.1	K2	1



			T		1
15	a,d	 a. Correct. The causal relationships in the diagram show that if the tasks of improving reliability decrease because they are implemented, the product quality will increase and result in an increase in customer satisfaction. b. Incorrect. If there is a causal relationship between the variables, they should be analyzed together in the same CLD to give a broader view of the system. c. Incorrect. Proper planning is necessary. Technical tasks to improve reliability also take time. The development team will not be able to do two types of tasks at the same time (business and technical) as shown in the CLD. The CLD shows that the more overtime, the fewer available employees and hence fewer improving reliability tasks that get completed. d. Correct. There is a delay indicator between the overtime and available employees which shows it is an effect that will happen after some time. e. Incorrect. The reinforcing loop is incorrect as it is not a loop. 	ATLaS- 3.2.2	K3	2
16	а	 i) Correct. DevOps offers new ways of testing in production while mitigating the risks. One benefit is that it presents an opportunity for the development team to do some testing themselves in production environments. ii) Correct. DevOps system environments are built for resilience. Chaos engineering is one way to foster resilience. If environments are resilient more testing in production can be possible. iii) Incorrect. Shifting of testing responsibility to the operations team who might not have testing competencies is not a wise decision and goes against the agile principles of shared responsibility. iv) Incorrect. The purpose of value stream mapping is not to analyze the state of the DevOps pipeline. v) Incorrect. Although this could be the case this is not necessarily an advantage that organizations experience. 	ATLaS-4.1.1	K2	1



17 d	Incorrect. The concept in regression-averse test strategy is to manage the risk of regression using various techniques including automated regression tests at different levels. Thorough regression tests at the component level are helpful but cannot substitute systematic regression tests at the system level.	ATLaS-4.1.2	K2	1
	 b. Incorrect. Model-based testing provides a variety of company stakeholders with advantages. Decisions on creating and evolving a test strategy for model-based testing should not only be based on a subset of testers but should include a variety of stakeholders. c. Incorrect. The executive management team should set the direction and goal for the organizational test strategy but not define it and then ask agile test leaders for input. d. Correct. It is important that the organizational test strategy is created in a cross-functional collaboration, so it is not just a strategy which testers implement but that everyone in the organization takes ownership of it. 			



18	а	 i. Correct. This is also the responsibility of an agile test leader. To make it clear, it is given as a correct option in this sample question. ii. Incorrect. This used to be the responsibility of a test manager, but now an agile test leader facilitates and coaches teams to build quality in. iii. Correct. Everyone is responsible for quality and as the agile test leader it is important to involve various roles and functions along the entire value stream. iv. Correct. How test activities are organized in different types of teams is often described in the organizational strategy. An agile test leader does not mandate the organizational test strategy alone but is responsible for ensuring others are involved in the development and implementation of an organizational test strategy. v. Incorrect. These are traditional test management tasks for which the teams are now responsible. 	ATLaS-4.1.3	К3	2
19	b,c,	 a. Incorrect. This would typically be performed by a multi-team facilitator. However, the agile test leader could be involved or do it in the case that there is nobody else. b. Correct. An agile test leader focus on organizational level and help ensure the organizational test strategy is aligned with the business strategy. This could include funding of strategic initiatives. c. Correct. Value stream mapping is used on an organizational level to understand how the organization creates and delivers value to customers. One type of waste is rework which can be caused by defects. d. Incorrect. These activities are on an operational level. e. Incorrect. This would be done by business and architectural roles in collaboration. 	ATLaS-4.2.1	K4	2



20	d	 a. Incorrect. Moving responsibility for end-to-end testing will most likely require that the scrum teams are trained and the knowledge is transferred from the dedicated test team. Therefore, setting a strict deadline is not advisable. b. Incorrect. Even if user stories start in a negotiable format, mock-ups can make good sense as a refinement result. Prototypes might even be more necessary in the context of scaled agile product development, because they can enable early testing. c. Incorrect. Specialized teams are more often focusing on non-functional requirements. It is more effective that functional requirements are covered by the teams developing the functionality. d. Correct. When agile teams' quality messages are unclear, agile test leaders and agile test team leaders must strive for transparency. 	ATLaS-5.1.1	K2	1
21	b	 a. Incorrect. While it can be a good idea to have shared product backlogs even with vendors, it is not done in order to verify that the delivery is exactly the thing that was ordered. b. Correct. Meetings in large groups where agile team members are highly approachable and roadmap forecasts are made transparent can help with alignment when technology does not - or does not yet - allow agile teams to work independently. c. Incorrect. Good intention to collaborate is not sufficient to effectively coordinate. It requires an understanding of each party's ways of working. Although one goal is for agile teams to be able to work without having to understand the internals of the other teams, the technical and organizational maturity level cannot be expected to reach that level of maturity in all cases. d. Incorrect. Impediment or risk boards are instruments to visualize issues hindering or jeopardizing the value delivery of agile teams. Sharing impediment or risk boards between teams is helpful in a situation where several teams are affected by the same technical issues, because there will be synergies if different teams tackle these issues in a joint effort or if teams reuse solutions found by other teams. 	ATLaS-5.1.2	K2	1



22	C	 a. Incorrect. Early feedback from customers using MVPs is a great help in the development process. Because product owners are well prepared to know what keeps customers from using software versions, they should help make these reasons transparent. b. Incorrect In this scenario, business value feedback from customers is a very lagging indicator because MVPs are not being used. It is not always the best idea to rely on lagging indicators. c. Correct. If the adoption of MVPs is at stake, the retention and adoption rates can be a way to track flow in order to help improve DevOps practices. d. Incorrect. Metrics that help organizations accelerate delivery and performance are not focusing on business success, but on deployment frequency, lead time for changes, change failure rate, time spent to 	ATLaS-5.1.3	K2	1
		restore a service and reliability.			
23	c, d	 a. Incorrect: Deferring E2E tests to a later phase would weaken the Definitions of Done (DoDs) because the collective output of each iteration would not represent an integrated and releasable solution. b. Incorrect: Delegating E2E tests to a separate test team is likely to decrease flow and reduce the agile teams' sense of responsibility for delivering an integrated solution. c. Correct: Slicing small and independent backlog items reduces the dependencies between teams and enables more tests to be performed locally before the E2E tests. d. Correct: Decoupling the system components increases the flexibility for testing and releasing different configurations which is helpful if individual teams cannot fully implement and test the intended scope. e. Incorrect: Although stopping a rollout in the case of inadequate E2E testing can be a last resort to prevent an interruption of business, the real challenge is to prevent inadequate E2E testing in the first place. 	ATLaS-5.1.4	K4	3



24	b	 a. Incorrect. Exploratory testing events with people outside the stream aligned teams can be helpful, and enabling teams could facilitate such events. These kinds of events, though, would not help to avoid finding deviations from the accessibility standard early. b. Correct. If stream-aligned teams gain knowledge of the accessibility standard, they have the opportunity to conduct technical reviews early on, perhaps as part of a CI pipeline. c. Incorrect. There is no indication that a standard for accessibility is knowledge that could not be integrated into stream-aligned teams. d. Incorrect. There is a risk that accessibility testing cannot be conducted early by the centralized team due to lack of knowledge which the stream-aligned teams have. To avoid relying on knowledge sharing between the teams it would be a better solution that the centralized team behave like an enablement team and help the stream-aligned teams perform some accessibility testing early. This supports a built-in quality mindset and is probably a better long-term solution. 	ATLaS-5.1.5	K4	2
25	d	 a. Incorrect. The focus here is on improving coverage (belongs to quality control (QC)), which may not necessarily improve system quality. Also, it is at task/project level and not concerning overall quality. b. Incorrect. This action is to make individuals, not all, responsible for quality. It is silo-based and not an organizational approach. c. Incorrect. The intention here is to control things and not to assist teams to improve quality practices. d. Correct. This is customer-focused and done to help team members to learn and use relevant quality improvement methods across the entire organization. 	ATLaS-1.1.1	K2	1



26	а	 a. Correct. An agile test leader can contribute knowledge regarding quality and testing when analyzing the working steps in a value stream. b. Incorrect. In some cases, the operational and development value streams can be the same. An agile test leader can also participate in analyzing both kinds. c. Incorrect. There is no limit for an agile test leader to only work with static data. An agile test leader can work with current state and also create ideas about the future state too. d. Incorrect. An agile test leader should work with all working steps in a 	ATLaS-2.1.1	K2	1
27	С	 value stream. a. Incorrect. It is acceptable to ask probing questions to understand if the activities performed are needed in a staged approach. b. Incorrect. It is acceptable to look for re-usage of tools where relevant. c. Correct. It is not good practice to add things to another team's backlog as a means of communication. It should be discussed with the other team first, so they take ownership. Minimizing dependencies if technically and organizationally practical is also something to pursue. d. Incorrect. It is fine to explore communication channels and get a deeper understanding of their area of work. 	ATLaS-4.1.1	K2	1
28	а	 a. Correct. It is important to support the testing of business hypotheses and hypotheses testing capabilities might need strengthening. b. Incorrect. This is not part of the exploration stage but later stages. c. Incorrect. Again, part of later stages. Test-first is here seen as used in coding. It is not meant as early testing of business needs. d. Incorrect. The focus on technical tools which are part of later stages. 	ATLaS-4.1.1	K2	1



29	а	 a. Correct. The teams share a minimum definition and then build on that based on what is useful. This could have been a definition of done. b. Incorrect. Although the agile test leader is using a CoP as a forum, the behavior follows a tailoring-down approach. The teams have to justify why they are deviating from the strategy. c. Incorrect. There is no organizational test strategy because each team just has its own. Furthermore, the agile test leader takes the responsibility for circulating good ideas which means the teams are not sharing that responsibility. d. Incorrect. Although there are representatives from the entire organization it is this group who creates the organizational test strategy and asks the teams to implement some of the generated ideas. This resembles a tailoring-down approach. 	ATLaS-4.1.2	K2	1
30	d	 a. Incorrect. Because the goal is to improve how it discovers and acts on market trends, it is not a good idea to only involve leaders in the assessment. Therefore, this answer is not the best option. b. Incorrect. This is a VSM exercise where the focus is on reducing wait times. VSM is not a way to assess the agile maturity of the organization and by focusing on wait time there is a high risk that other important aspects will not be covered in the maturity assessment. c. Incorrect. This way of conducting assessments has a tendency to disengage people in the organization. As the goal is to improve the organization's ability to sense the market it is important that people who are close to the products and the market are engaged. d. Correct. Involving the full value stream is important as it is not just about sensing the market trends but also reducing lead time. Furthermore, the suggestion is to take a holistic perspective and not just to focus on wait times. 	ATLaS-4.1.3	K3	2



				1.40	
31	b	a. Incorrect. By conducting interviews separately with each leader, the agile test leader is the only one who sees the collective picture, which is	ATLaS-4.1.3	K3	2
		not the point of self-assessment in a group.			
		b. Correct. This answer contains one or more steps from planning self-			
		assessment, conducting self-assessment and concluding self-			
		assessment in a realistic sequence.			
		c. Incorrect. The suggested steps in BOK include the step "agree when to			
		conduct the next self-assessment" towards the end in concluding self-			
		assessment.			
		d. Incorrect. Starting with deciding what to improve before doing the			
		assessment will influence the assessment. Furthermore, it is not a self-			
		assessment, but an assessment performed by an external facilitator.	171 0 10 1	164	
32	b	a. Incorrect. Participatory budgeting happens on the organizational level	ATLaS-4.2.1	K4	3
		and is not meant to finance specific activities such as risk assessments.			
		b. Correct. Practice leadership is typical at the product level and CoPs can			
		help to distribute practices. c. Incorrect. It is not evident why there should be a rise in transparency, or			
		why promoting effort estimation, which is a responsibility of the team in			
		agile software development, necessitates support at the organizational			
		level.			
		d. Incorrect. A management improvement service is neither on the			
		operational level nor is it meant to regularly facilitate everyday work.			
33	b,d	a. Incorrect. While it can help to integrate testing capabilities and freedom	ATLaS-4.2.1	K4	3
		to choose appropriate tools into stream aligned teams at the operational			
		level, at the product level there is often a need for alignment between			
		teams.			
		b. Correct. Relevant agile scaling frameworks go beyond viewing DoD as			
		purely a team responsibility.			
		c. Incorrect. This would not be a good long-term solution as it focuses on			
		local optimization of the system test. d. Correct. Strengthening coaching skills can be helpful.			
		e. Incorrect. This is not an appropriate use case for value stream mapping.			
		e. incorrect. This is not an appropriate use case for value stream mapping.			



34	а	 a. Correct. A frequent challenge when it is necessary to conduct performance testing by an agile team or a separate specialized team. b. Incorrect. Checking the functionality with private consumers may not give the desired load and the performance problems that arise when replicating the functionality for a large number of users/clients will not be checked. c. Incorrect, Non-functional performance requirements are part of the definition of done. d. Incorrect. This challenge is not specific to agile at scale but is a general challenge which can apply to a single team. 	ATLaS-5.1.1	K2	1
35	b	 a. Incorrect. An agile test leader does not have the technical knowledge and skills to create a training course in development practices. b. Correct. Having a shared view of what the teams need to deliver together supports a discussion of the work that needs to be done during various planning events. c. Incorrect. Although major investments in removing technical debt would need to be part of the technology strategy, it is not helping the teams here and now with coordinating the test activities. d. Incorrect. Visualizing where the most technical debt is does not necessarily help coordinate testing activities across agile and non-agile teams in the same manner that a shared backlog would. 	ATLaS-5.1.2	K2	1



36	d	 a. Incorrect. The percentage of missed defects in the production is not a metric for outcomes in terms of business value. Lead time for changes provide a metric for outputs in terms of delivery and performance rather than maturity. b. Incorrect. When talking about outcomes in terms of business value, importance is placed on lead time for customer value. The number of releases using canary deployment of these metrics are primarily the metrics of the production process (and how well the DevOps processes are built). c. Incorrect. Percentage coverage of the new and all code - first of all, a metric that relates to the production process and how developers (but not the whole team, the metrics of the whole team is important here) relate to code coverage. d. Correct. The metrics are outcomes in terms of business value: Customer Satisfaction, Lead time for Customer Value. Maturity metrics for teams: Adoption rate of agile processes, Team happiness, Maturity model level. For more details you can check LO 5.1.3 in the body of knowledge (BOK) 	ATLaS-5.1.3	K2	1
37	С	 a. Incorrect. Shifting left does not solve the issues of planning the testing between the two organizations. b. Incorrect. Postponing integration testing will delay early identification of misalignment as well as defects in the development. c. Correct. Conducting a big room planning will help identify constraints and dependencies for development and the test. d. Incorrect. Adaptation of Agile software development should be decided on an organizational level and the implementation of such an organizational change will take time. 	ATLaS-5.1.4	K4	3



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38	d	 a. Incorrect: Having a centralized team would most likely cause a struggle to obtain the needed knowledge to perform end-to-end testing. b. Incorrect: Skipping earlier tests does not make it easier to handle end-to-end testing. c. Incorrect. The logic that only non-functional testing remains is flawed. Even if each service has been tested in isolation it does not ensure that the solution as a whole provides the intended value. d. Correct. This ensures that problems are detected earlier. Furthermore, knowledge is shared between the parties which will make end-to-end testing easier. 	ATLaS-5.1.4	K4	3
39	a, d	 a. Correct. It is not an option to hire additional manual testers. Therefore having developers increase coverage seems like a good option to reduce the number of defects. b. Incorrect. It could probably lead to fewer defects in production by having fewer releases, however it does not help the teams to improve quality while retaining time-to-market. c. Incorrect. In this case there is not enough DevOps engineers to do this. d. Correct. It helps stream-aligned teams to increase the number of automatic implementations. e. Incorrect. It is not enough to reduce the number of defects. Although100% coverage of component tests may result in high confidence; it does not mean that the number of defects will decrease. In addition to component tests, it is necessary to increase the coverage of API tests, contract test, and integration test for services. 	ATLaS-5.1.5	K4	3



40	d	a. Incorrect. Does not align with the goal. Introducing a new test automation framework looks like a possible option but it is not enough to fix stability and reliability problems in 6 months.	ATLaS-5.1.5	K4	3
		b. Incorrect. It seems like a possible option but in this example the organization only has 6 months to implement change. Raising expertise in teams where there may not be the right specialists is therefore not the best recommendation.			
		c. Incorrect. The platform team does not create services for testing reliability and stability.			
		d. Correct. Reduce over-processing and overproduction issues for the complicated sub-system team, because the complicated sub system team can focus on high risk areas. In addition, the stream aligned teams start performing load testing as expected. These two improvements are likely to result in more reliability and stability defects being identified.			