Sample Exam – Questions

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

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Document Responsibility

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

This document is maintained by a core team from ISTQB® consisting of the ATLaS Task Force and Exam Working Group.

Acknowledgements

This document v2.0 was produced by a core team from ISTQB®: Mette Bruhn-Pedersen (Product Owner), Ilia Kulakov, Michael Heller, Thomas Harms, Line Ebdrup and Georg Sehl.

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Revision History

Version	Date	Remarks
v2.0	2023/09/29	Added questions 16-40. Updated the following questions from v1.0: 1, 3, 5, 6, 7, 8, 9, 10, 13, 14, 15 Updated points for all K4 questions to 3 points.
v1.0	2022/05/13	Release version

Table of Contents

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:

- Questions[1], including for each question:
  - Any scenario needed by the question stem
  - Point value
  - Response (answer) option set
- Additional questions, including for each question [does not apply to all sample exams]:
  - Any scenario needed by the question stem
  - Point value
  - Response (answer) option set

- Answers, including justification are contained in a separate document

[1] In this sample exam the questions are sorted by the LO they target; this cannot be expected of a live exam.

Questions

Question #1 (1 Point)

Which of the following is the best example of test management at scale with a quality assistance approach?

a) Test process improvement activities that continuously focus on the number of defects found in software systems.
b) System testing is conducted manually by a separate team.
c) Tests spanning multiple teams are planned by a test department.
d) A group of people in different roles in the organization who collaborate to identify and solve quality related problems.

Select ONE option.

Question #2 (1 Point)

Why is quality coaching an important skill?

a) It supports an organization's transformation toward business agility.
b) It reduces the burden on the individual in the test management role.
c) It helps negotiate funding at the executive level to increase the head count in a test department.
d) Developers will not succeed with built-in quality if testers do not coach them.

Select ONE option.

Question #3 (1 Point)

Five teams responsible for the same solution have experienced numerous delays due to defects being identified during the period in which the last two teams are finishing their user stories and are starting to integrate them. In most cases the three other teams started development ahead of the two other teams, but needed to wait for the other two teams to catch up. Each team is implementing a part of the same epic.

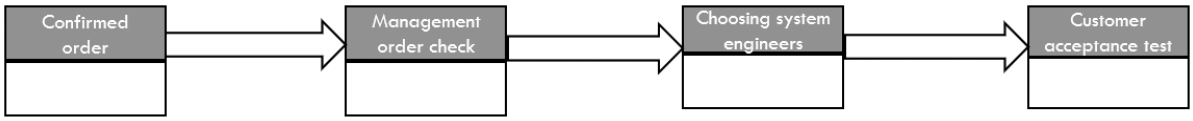
Which of the following statements BEST describes the teams' situation as part of a value stream?

a) Each team needs to investigate and improve its own processes to minimize the delays.
b) The teams would like to add another team to conduct testing after each integration.
c) The teams can allocate more time between each integration for troubleshooting and resolving integration defects.
d) The problems experienced by the teams are part of the working steps in an operational value stream and cannot be resolved by the teams.]

Select ONE option.

Question #4 (2 Points)

A company uses system engineers to install and customize a complex software product at several different customer sites. An important checkpoint for the company is an acceptance test conducted at the customer site, after which billing can start. After an initial workshop, a draft operational value stream map was produced, see below:



What would be the next step in the value stream mapping process?

a) Agree on what service group the installation process belongs to.
b) Set a goal for improving the value stream.
c) Check that all relevant steps are included in the map.
d) Add the development value streams.

Select ONE option.

Question #5 (3 Points)

You are observing one tester at work. She is verifying a web application that displays clients' information using specific colors, depending on their credit score.

She has two screens. On screen 1, she scrolls several times through an extensive list of clients. She goes through 23 of them to find one who has the profile she wants to verify. It takes 6 minutes. Then, on screen 2, knowing the client's first and last name, she researches that client on the web application, clicks on a button to load the client's profile, and verifies visually the display of the information with the correct colors. It takes 1 minute.

Which of the following types of waste can be found in the scenario?

a) Waiting
b) Correction
c) Non-utilized talent
d) Motion

Select ONE option.

Question #6 (2 Points)

While conducting a pilot project to assess the implementation of a new approach to improve the design process of new software components for a commercial website, members of the agile team complete the Check step, but do not achieve the planned results.

Which of the following should be chosen as the next step in the PDCA cycle?

a) Choose the approach providing the best result and proceed to the Act step.
b) Choose another approach and repeat the Do and Check steps.
c) Go back to the Plan step and create a strategy based on a new hypothesis.
d) Select options b or c, depending on the relative success of the Do step.

Select ONE option.

Question #7 (1 Point)

Which of the following shows how organizational learning can be promoted?

a) Documenting the result of an experiment in a local team repository.
b) Changing the organizational business strategy from cutting costs to market expansion.
c) Giving financial awards for the number of improvement ideas raised per month.
d) Making improvement ideas visible at an organizational level in a Kanban board to encourage discussions and experiments on how to improve across the organization.

Select ONE option.

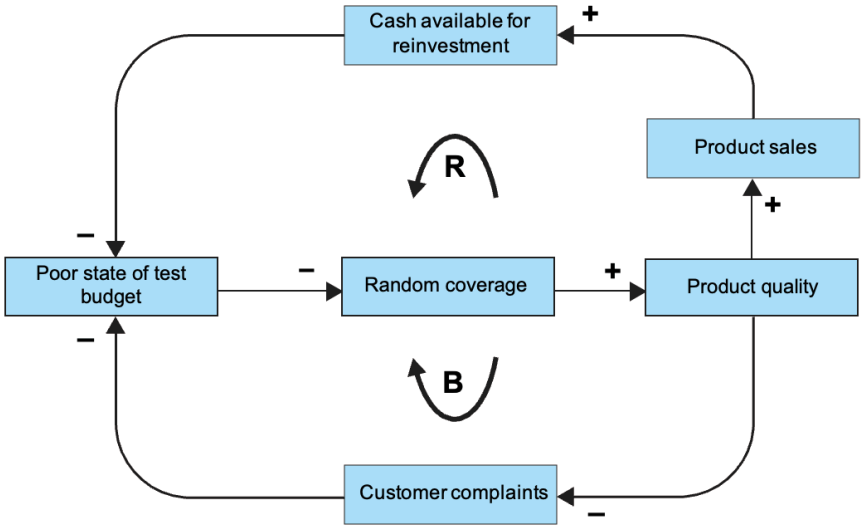
Question #8 (1 Point)

You are in an organization where multiple agile teams have been working to deliver a system that will provide an online banking system for an investment bank. A problem arises whereby if a single team tries to alleviate a problem, the solution most often causes new or recurrent problems for other teams. The organization management has now requested that the team ensures that root cause analysis is included within problem solving in QA and testing in order to prevent waste. Which of the following would NOT likely be performed during this problem-solving approach aimed at preventing waste?

a) Figure out what negative events are occurring. Then find out how technical systems are contributing to key points of failure.
b) Utilize the Five Whys to explore the underlying cause and effect of particular problems.
c) Make use of Pareto charts and fishbone diagrams.
d) Set up isolated test environments for each team to ensure they cannot interfere.

Select ONE option.

Question #9 (2 Points)



Read the suggestions for how to improve the causal loop diagram and evaluate each of the suggestions individually.

Which TWO suggestions would improve the causal loop diagram (CLD) the most?

a) Customer complaints should be enhanced with the number of last month's complaints.
b) Change "random coverage" to "risk-based coverage."
c) Rename the variable "poor state of test budget" to "test budget" and change causal links from – to + accordingly to make the diagram easier to understand.
d) The negative link between "product quality" and "customer complaints" is not a genuine causal relationship and should be further explained with additional variables.
e) The R loop should be a balancing loop because it contains two minus paths.

Select TWO options.

Question #10 (1 Point)

An organization wants to shift to a quality culture and mindset.

Which of the following activities shows how skills supporting a quality assistance approach can BEST be applied by an agile test leader to help the organization change?

a) Coaching sessions with leaders to explore what they believe prevents continuous improvement of quality.
b) Facilitating delivery optimization discussions within a retrospective.
c) Organizing pairing sessions so that the team members learn new techniques from each other.
d) Helping a group who recently experienced a serious problem in the performance of a core process to identify where, within that process, they could eliminate waste.

Select ONE option.

Question #11 (2 Points)

The sales, manufacturing, help desk, and agile test teams are discussing an operational value stream which the agile test team supports in their role as 3rd line support. The agile test teams working mainly for the development value stream also collaborate with the help desk to understand the operational value stream they support. The four groups draw a map of the operational value stream with the following three working steps:

- Pre-order: Selling team pre-order consulting
- Implementation: Product implementation with dedicated manufacturing consultants
- Maintenance contract: Product usage phase with user help desk acting as main customer contact

In each of the working steps, help requests for technical information or support can arise for the agile test teams.

The group wants to understand how well the agile test teams support their colleagues in the three working steps.

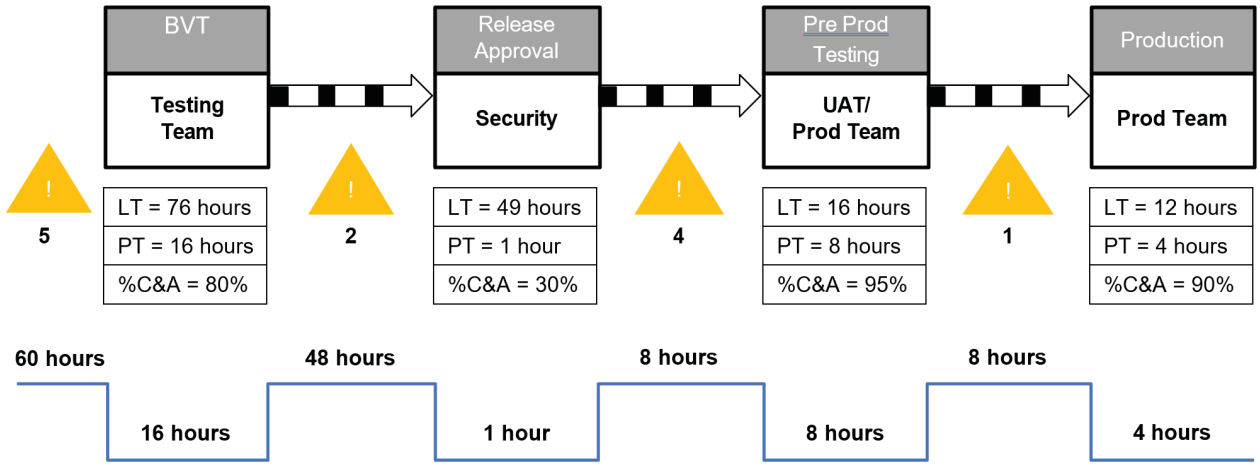
Which of the following activities could help them gain insights and improve the current state map above?

a) Visualize an additional order type for orders requested by management and add lead time information for each working step and the total lead time.
b) Add the number of open help requests as inventory for each working step in the operational value stream.
c) Add identified non-value-adding working step to make bottlenecks more visible.
d) Make sure all relevant reports from the continuous integration pipeline are visible in the value stream map.

Select ONE option.

Question #12 (3 Points)

You have been appointed to review part of a development value stream to help the teams optimize the flow efficiency.



Based on the above current state map which shows the last part of the value stream, which TWO of the following improvement goals would you recommend?

a) Decrease the processing time of all steps by 30%.
b) Incorporate security checks as part of the development earlier in the value stream and remove the “Release Approval” step.
c) Combine “Build Verification Test (BVT)” and “Pre Prod Testing” into one step.
d) Increase the percent complete and accurate (%C&A) of the “Release Approval” step by 5%.
e) Decrease the wait time of the “BVT” step by 50%.

Select TWO options.

Question #13 (2 Points)

A company offering software-as-a-service (SaaS) is struggling to sell its software to large companies because its SaaS solutions do not meet customer expectations for security. The product manager wants to run a PDCA cycle to avoid a similar situation in the future. The product manager holds a meeting with relevant salespeople, the enterprise architect, the compliance officer, and the data protection officer. They discuss what the reasons could be for not having anticipated the need for technical security and how they close this gap. They conclude that the teams in the development value stream have not properly understood the need, despite the many checklists and guidelines on technical security. According to a normal PDCA cycle, what would be the next step?

a) The product manager and enterprise architect start to talk with the teams to explain the importance and urgency of developing features that address the gap.
b) The data protection officer reviews the checklists to see if something is missing.
c) The salespeople start updating their sales material so it is ready once the agreed security improvements have been implemented by the teams.
d) The product manager calls for another meeting with people from the relevant teams to better understand the problem and decide how to improve.

Select ONE option.

Question #14 (1 Point)

Which of the following is an example of how systems thinking supports a quality assistance approach?

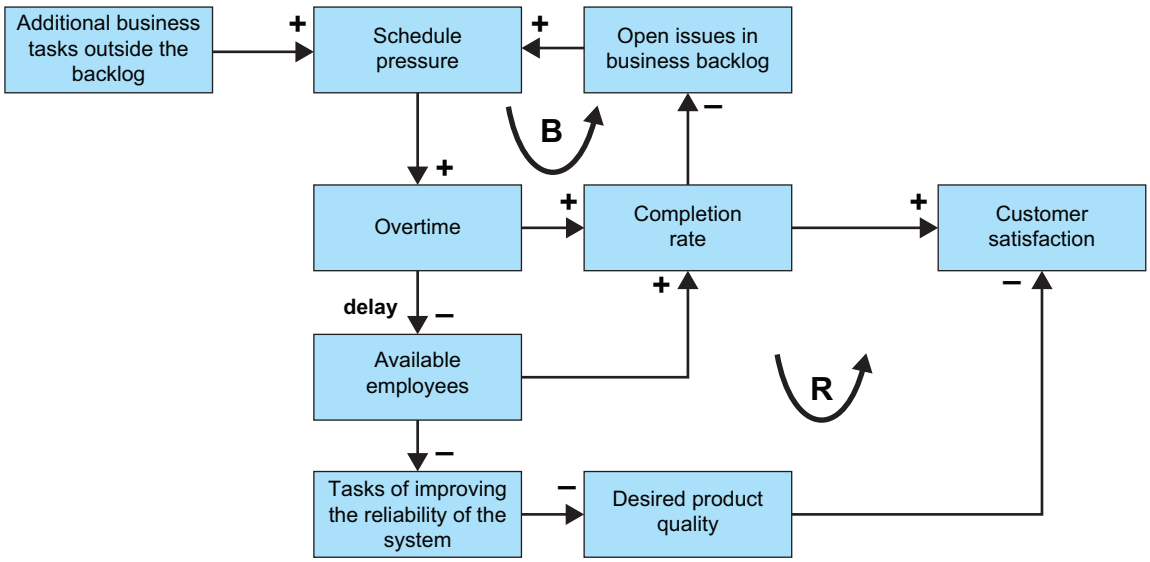
a) Analyzing in a systemic way can help to find test management practices that are a burden to the organization.
b) An agile test leader escalates problems spanning multiple agile teams to senior management because the agile test leader does not have the authority to solve systemic problems.
c) Using the Five Whys technique to identify the number of developers needed to support test automation.
d) By analyzing an organization as a system, quality assistance avoids dealing with the technical systems which are often too complex to change.

Select ONE option.

Question #15 (2 Points)

A company has several agile teams working on its popular online store. The product manager and product owners (together called product management) are constantly bringing new items to the product backlog to add new functionality, ignoring tasks the software development teams had marked as important enablers. This includes tasks needed to improve reliability.

During the last multi-team retrospective, the following causal loop diagram (CLD) was created to understand the consequences of product management continuing to prioritize the business tasks.



Which TWO conclusions would you choose after studying the diagram?

a) Some tasks to improve the reliability of the system must be prioritized and completed to increase customer satisfaction.
b) The business tasks and the reliability tasks should be analyzed in separate causal loop diagrams.
c) If the development team works additional overtime, they can also do reliability tasks in parallel with the business tasks outside of the backlog.
d) The continuous addition of prioritized business tasks results in more team overtime. In the long run, this will decrease the number of employees available to do business tasks.
e) The reinforcing loop shows how an increase in reliability tasks results in increased customer satisfaction and more available employees.

Select TWO options.

Question #16 (1 Point)

Including DevOps practices in the organizational test strategy offers several advantages. Which of the following statements are correct and which are incorrect?

i) DevOps allows tests to be executed in an operations environment while minimizing the risk of disrupting the business.
ii) DevOps offers practices such as chaos engineering to test and improve system resilience.
iii) In DevOps the responsibility for testing in production shifts from QC to the operations team.
iv) DevOps can provide an analysis of the current state of a CI/CD pipeline using Value Stream Mapping.
v) Organizations incorporating DevOps practices have more engaged employees due to the higher level of test automation

a) i and ii are correct, iii, iv and v are incorrect.
b) i, iv are correct, ii, iii and v are incorrect.
c) ii, iv, and v are correct, i and iii are incorrect.
d) iii and v are correct, ii, i and iv are incorrect.

Select ONE option.

Question #17 (1 Point)

Which of the following is the BEST example of how an organizational test strategy is created and evolved in a value-driven organization?

a) Since regression averse test strategies naturally come with high component testing coverage, a tester community of practice can vote with dot stickers to reduce functional regression testing on the system testing level.
b) A company using model-based testing interviews testers to reduce dependency on models because models are a heavyweight form of documentation that is not necessary in agile development.
c) An executive management team creates the organizational test strategy to which several agile test leaders provide input.
d) A group of people representing relevant functions and organizational units create the organizational test strategy facilitated by an agile test leader.

Select ONE option.

Question #18 (2 Points)

A company starts a transition to establish business agility based on an agile scaling framework. To support this transition, the company will look for a new and agile test leader with experience at the organizational level.

Consider the following statements about responsibilities of an agile test leader.

An agile test leader should be able to:

i) speak up in the case of dysfunctions.
ii) assign testing tasks.
iii) involve various disciplines along the entire value stream.
iv) facilitate the decision of which test activities should be consolidated and centralized in a system team.
v) schedule tests and report progress to stakeholders.

Which one of the following combinations of responsibilities is correct?

a) i, iii, iv are correct.
b) ii, iii, iv and v are correct.
c) i, ii and v are correct.
d) ii and iii are correct.

Select ONE option.

Question #19 (3 Points)

You are an agile test leader working at the organizational level of an organization introducing an agile scaling framework.

Which of following activities will fit your role, the level and to the introduction of an agile scaling framework?

a) Facilitate multi-team retrospectives and process improvement.
b) Help analyze trade-offs related to quality and testing by participating in the organizational budgeting process.
c) Help teams to identify waste using value stream mapping.
d) Support integration of automated tests into the continuous delivery pipeline.
e) Balance and optimize the introduction of new software, hardware and shelf ware to leverage business agility.

Select TWO options.

Question #20 (1 Point)

You have recently been appointed to take up a role as an agile test leader at a company that intends to scale agile across the organization.

Which of the following statements best exemplifies a response to the challenges you will face as you take on your role and drive agile scaling?

a) Make sure that end-to-end testing in dedicated test teams stops within a period of 6 months in order to avoid it being a bottleneck in favor of testing in the scrum teams.
b) Eliminate the use of mock-ups and prototypes as techniques for exploring business requirements, as they will no longer be necessary.
c) Introduce specialized teams to test functional requirements based on actual user stories to enhance improvement of overall quality.
d) Expect to spend time with teams to find ways to align their metrics on product quality if relevant stakeholders feel that the messages coming from agile teams are unclear.

Select ONE option.

Question #21 (1 Point)

You are in a public organization that has contracted an external software development company to deliver an enterprise-wide test automation framework that is used by multiple agile teams.

Which of the following statements is helpful in showing how test efforts can be coordinated across teams in both organizations?

a. Cross-team refinement in a shared product backlog that is accessible by the agile teams and the vendor would be a good way to decompose the backlog and reduce cross-team dependencies, as the external provider is tasked with delivering exactly what is ordered by the teams.
b. The vendor could be invited to quarterly release planning meetings, to align the product roadmap of the test automation framework with the needs of the agile teams that are using the solution.
c. It is NOT necessary for the teams in the public organization to understand the external party's ways of working as long as all teams agree to collaborate.
d. Visualizing technical debt across teams with impediment boards or risk boards does not create awareness in situations where several teams are accumulating similar debts.

Select ONE option.

Question #22 (1 Point)

A DevOps transformation struggles to improve the time it takes for customers to start using newly developed minimum viable products (MVPs) in their environments.

What might be the best metric for members of a product management organization to use to improve the maturity of the software development process?

a) Scrum masters are responsible for improving stream-aligned teams, it is not the responsibility of product owners to improve the development process, and metrics are not required.
b) In a customer-centric view business value is the most important focus point. Product owners can contribute to improving the development process by providing transparency about the customer feedback to MVP deployments.
c) Product management should encourage the tracking of user retention and adoption rates on newly deployed MVPs. Even if this does not provide direct feedback on the generated business value, it can help streamline development and deliver MVPs that will be used.
d) The product owners must make sure that the products developed is a business success. Performance metrics could be added to the backlog to measure business success.

Select ONE option.

Question #23 (3 Points)

In your organization several agile teams are struggling with system integration testing. Although the teams plan to collaboratively perform End-to-End (E2E) testing at the end of each iteration, most of the iteration is spent by teams developing and testing their own software. Additionally, individual teams sometimes fail to fully implement the agreed-upon scope of an iteration making their system incompatible with the output of other teams. The teams then perform E2E testing following a big bang approach but there is often not enough time to localize and resolve all communication issues and interface mismatches between systems. As a result, there were several releases where the agile teams failed to deliver a fully integrated solution so hotfixes or rollbacks were required to restore the functionality of business processes. As an agile test leader, you are asked by corporate management to address this situation in order to achieve more stable releases without sacrificing time to market.

Which recommendations would be most likely to be helpful in the scenario described?

a) Advise the teams to focus on running their own tests within iterations and perform E2E testing within a dedicated phase before each planned release.
b) Establish a team of external testers to take care of E2E testing.
c) Investigate whether coordination between teams is a problem for E2E testing. If so, try to refine the product backlog using big room planning to address dependencies between teams.
d) Support discussions on backlog for architecture and infrastructure revisions to support independent testing and release of system components.
e) Conduct a management review before every rollout to ensure that E2E testing has been properly performed.

Select TWO options.

Question #24 (3 Points)

To fulfill legal requirements, your product must pass a standardized accessibility test as part of acceptance testing. Because accessibility problems found late during acceptance testing may endanger the scheduled release date, the organization wants to perform accessibility testing earlier in the development value stream. In the current setup all knowledge about the accessibility standard is available in a centralized team, that also does the accessibility testing. However, the centralized team does not have enough people to do more accessibility testing at this earlier stage.

Which recommendation would be helpful in the scenario described to find accessibility problems earlier?

a) A crowd testing event of disabled people could be organized with the help of an enabling team.
b) The team knowledgeable about the accessibility standard could start to act as an enabling team and spread knowledge into the stream aligned teams.
c) Since there is no knowledge about the accessibility standard in the stream-aligned teams, the accessibility testing has to be treated as a complicated subsystem. The team members of the complicated subsystem team could join sprint planning meetings of the stream-aligned teams to find options for starting the accessibility test earlier.
d) An agile test leader must strengthen the centralized team with resources. Then the centralized team will be able to complete accessibility testing earlier.

Select ONE option.

Question #25 (1 Point)

Alex has recently been appointed as the delivery quality manager in a custom software development company. He noticed the excessive number of complaints from the users about system failures, so he decided to implement several measures to address the issue.

Which ONE of the following BEST demonstrates his QUALITY ASSISTANCE approach?

a) Increase the number of testers in project teams to improve coverage and prevent escaped defects.
b) Assign accountability for delivery quality to respective project team leads.
c) Setup a web-based dashboard to monitor and control quality assurance and quality control (QC) activities of individual teams.
d) Educate and train project teams to adopt methods that are customer-focused.

Select ONE option.

Question #26 (1 Point)

An organization which is in the middle of a digital transformation has started to use Value Stream Mapping (VSM) to analyze its work processes. The agile test leader is also working in this value stream. The main area of attention is the release of a mobile application for which the following value stream was identified:

Should the agile test leader participate in the analysis of such a value stream?

a) Yes, by collaborating with others to identify and analyze value streams, agile test leaders help improve both quality and flow of value.
b) No, the value stream was created incorrectly. It cannot contain a mix of elements from both operational and development value streams.
c) Yes, but the agile test leader should only work with static data from past releases in order to avoid drawing the wrong conclusions.
d) No, because the agile test leader does not need to drill into the details of the entire stream in order to analyze the working steps associated with quality and testing.

Select ONE option.

Question #27 (1 Point)

In a DevOps cycle that include the stages of monitor, plan, test, and operate, which of the following actions should be AVOIDED when contributing from a test perspective?

a) Inquiring about the test stage and asking probing questions to understand if the activities in this stage are necessary for a staged approach.
b) Inquiring as to which tools from the monitoring stage could potentially add value to test environments and conducting a brief online research to explore relevant tools.
c) Asking the team which backlog items addressing the needs of test environments should be emphasized in the plan stage and making tickets on another team's backlog for communicating that early.
d) Exploring communication channels with operations specialists and offering to learn about their tools.

Select ONE option.

Question #28 (1 Point)

Which of the following activities is an example of activities associated with the exploration stage in a DevOps cycle and which should be supported by the organizational test strategy?

a) Discussing that a certain minimum viable product (MVP) does not provide the expected value to stakeholders.
b) Implementing a common static analysis tool to improve code quality.
c) Promoting a test-first mindset and zero-defect culture.
d) Closely monitoring the feature toggle management tool to increase the resilience of production environments.

Select ONE option.

Question #29 (1 Point)

Which of the following is an example of an organizational test strategy being implemented using a tailoring up approach?

a) The teams in the organization agree on a minimum definition of done for features. The agile test leader facilitates learning sessions where the teams reflect on how the organizational test strategy supports them and discuss what could be useful to include.
b) The agile test leader presents the organizational test strategy document in a Community of Practice meeting and asks the teams to create a local version of it. The teams describe their implementation of the organizational test strategy and if they are deviating from it.
c) The teams have their own test strategy which they have developed over time. They share it with the agile test leader on a yearly basis. The agile test leader is responsible for circulating good ideas between teams.
d) The agile test leader facilitates a workshop with relevant representatives from the entire organization to discuss how the organizational test strategy can support the business strategy. The participants then generate ideas on how the test strategy could be implemented and share the ideas with the rest of the organization.

Select ONE option.

Question #30 (2 Points)

Your company has used Agile software development in the development teams for years with some success. The teams take more responsibility and are able to develop new functionality or update existing functionality on a quarterly basis. The business strategy for the next two years is to enter a new market abroad. Being able to adapt the products to the new market will be critical in order to gain a foothold. Therefore, the company needs to improve its ability to sense the market and substantially shorten the lead time.

It has been suggested to assess the agile maturity of the organization.

Together with a group of leaders you are responsible for conducting the first assessment. Your responsibility is to ensure the assessment covers how testing supports the business and technical needs.

Which of the following activities would you suggest as input to the group of leaders?

a) Send a questionnaire to all leaders with questions about how testing is performed in their area of the organization.
b) In the group of leaders, map the value streams and define some improvement initiatives to decrease wait times between steps.
c) Engage an external company which specializes in test maturity assessments and ask them to conduct a series of interviews and present their findings.
d) Ensure the assessment involves people from the entire value stream and that the assessment covers multiple aspects, not just aspects related to lead time.

Select ONE option.

Question #31 (2 Points)

You have been asked to lead a SELF-ASSESSMENT initiative in a group of leaders to assess the agile maturity from a testing perspective on an organizational level.

Which of the following describes BEST some of the steps and the order in which these steps should be performed?

a) Conduct an individual interview with each leader, perform self-assessment, go through the conclusions with relevant stakeholders.
b) Review questions from existing surveys and adjust questions where relevant, fill out the questionnaire together, discuss results and insights, create an action plan, share results with the rest of the organization.
c) Schedule the self-assessment with the group, decide when the next self-assessment will take place, assess maturity in the group, define improvement actions.
d) Decide what to improve, conduct an assessment using an external facilitator, analyze gaps based on the external facilitator's assessment, discuss conclusions with stakeholders, set the date for the next assessment.

Select ONE option.

Question #32 (3 Points)

Some of the agile teams in an organization frequently express concerns that their product owners heavily prioritize functional backlog items on the teams' backlogs, which results in user story risk assessments being continually postponed. Assuming these concerns are valid, what actions can agile test leaders take to encourage long-term solutions?

a) Implementing participatory budgeting at the operational level can highlight the need for allocating time to risk assessments.
b) Serving as a practice leader at the product level and participating in product owner communities of practice (CoPs) can help emphasize the importance and added value of risk assessments to all product owners within the product development teams.
c) Promoting test effort estimations at the organizational level can increase transparency and showcase the added value of all tests.
d) Introducing a management improvement service at the operational level can facilitate better discussions around prioritization.

Select ONE option.

Question #33 (3 Points)

As the test leader for a test automation team performing test automation in system testing for a product, you overhear a conversation in which a scrum master asserts that any interference with her team's definition of done by the organization is unacceptable.

In addition to talking directly with the scrum master, appropriate reactions could be:

a) Look for ways to make your test automation in system testing optional for teams to encourage quality ownership at the operational level.
b) Collaborate with members of scrum master sync events to discuss how agile scaling frameworks see the team's responsibility for defining "done" and what your organization's view of it should be.
c) Work with testers who are part of the agile teams to add some entry criteria to the start of your test automation in system testing to better address potential deficiencies in some teams' definitions of done.
d) Make room in your test team's backlog to study the agile scaling framework's perspective on testing, so that members of your test automation team can share that perspective as they collaborate with the stream aligned teams.
e) Promote value stream mapping by providing examples of value stream aspects found in agile scaling frameworks as well as a future state map with clear accountabilities for definition of done.

Select TWO options.

Question #34 (1 Point)

A value-driven organization is creating a large product platform which includes a website used by the company's customers (private consumers). Smaller companies can sell their services (e.g., online stores, cellular communications, medicine) through the organization's website. The platform imposes general requirements for performance, page opening speed and latency. These requirements affect the lead time of new features. Not all teams have perfomance testing engineers, and it is necessary to pass the mandatory performance Definition of Done (DoD) in order to deploy a release in production.

Which of the following statements describes a testing challenge with performance testing in the scenario above?

a) Performance testing in an agile team can be time-consuming because they do not have enough knowledge about performance testing. By giving performance testing to a specialized team, the specialized team may become a bottleneck resulting in the agile team having to wait a long time for their turn.
b) Testers with good knowledge of the business domain can execute testing processes with a focus on early pilots with several private consumers instead of going to production with all clients. It helps to understand the user scenario and check performance issues.
c) The agile teams are not aware of the performance efficiency requirements and that these requirements must be tested as part of a delivery. Therefore, the agile teams take longer to produce an increment which can then be deployed to production.
d) Because performance testing tools are expensive it is not possible to have all agile teams using the tools.

Select ONE option.

Question #35 (1 Point)

In an organization, the cost of reducing technical debt increases every year, and the agile delivery teams struggle with reducing it. They would like to coordinate testing across agile and non-agile teams in order to address the technical debt.

Which of the following statements BEST describes a practice which an agile test leader can use to help the teams coordinate testing?

a) Create a training course for a wide audience (developers, testers) on good coding practices like design patterns.
b) Introduce the concept of working with one, shared backlog across agile and non-agile teams.
c) Ensure that the technical debt is coordinated at the level of the organization's technology strategy and not at the operational level where testing is performed.
d) Visualize the areas with the most technical debt using impediment and risk boards.

Select ONE option.

Question #36 (1 Point)

The company is releasing a new version of a mobile app. The management of the company asks you to provide quality metrics that reflect both the maturity of the teams that have been involved in the project for a long time, as well as the quality of the product being released to the market from customer perspective. You engage with the project as an agile test leader.

Which set of metrics do you suggest using?

a) Outcomes in terms of business value: Customer satisfaction, percentage of missed defects in the production. Maturity metrics for teams: Using all practices from organizations maturity team model, lead time for changes.
b) Outcomes in terms of business value: Process, Wait and Lead time for Customer value. Maturity metrics for teams: Number of releases using canary deployment, adoption rate of agile processes
c) Outcomes in terms of business value: Customer satisfaction. Maturity metrics for teams: percentage coverage of the new and all code, lead time for changes.
d) 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 level.

Select ONE option.

Question #37 (3 Points)

A technology company that is co-developing a national real-time based weather information system must collaborate and integrate with the government meteorological organization, who have not yet fully adopted agile software development. This has led to a difficulty in deployments and releases that are not synchronized and hence is affecting integration testing.

Which of the below statements best demonstrates how to structure testing to resolve this challenge?

a) Shift-left to create clearer requirements which accommodate the organization's less agile way of working.
b) Postpone integration testing and create more automated tests using mocked integrations.
c) Conduct a big room planning session to align development and testing of the two systems.
d) Initiate an adaptation of agile software development in the meteorological governmental organization.

Select ONE option.

Question #38 (3 Points)

A fintech company that provides middleware to offer financial institutions the connectivity to multiple third-party applications is upgrading its application to enable usage of microservices. The parties have agreed upon interface definitions for the microservices and are therefore able to test their services in isolation using mocks.

After some iterations the solution as a whole is completed and needs to be tested end-to-end. The parties are unsure about how this end-to-end testing should be handled.

As an agile test leader, which of the below recommendations would be the BEST to suggest to the organization considering the scenario described?

a) Centralize end-to-end testing in an enabling team to facilitate better planning.
b) Skip performing system testing manually as the end-to-end testing will cover the scope.
c) Focus on non-functional testing in the end-to-end testing as the functionality is already tested by the parties.
d) Introduce integration testing between some of the microservices across parties at regular intervals to avoid a big-bang end-to-end testing in the end.

Select ONE option.

Question #39 (3 Points)

A value-driven organization has an established release cycle. Releases in the last three months show a high rate of defects missed in production. The types of teams in an organization and their activities are as follows:

- Platform team – one team responsible for infrastructure on an organizational level, servers, allocation resources and support of test environments. Does not work and connect with application layer and stream-aligned and enabling teams
- Stream-aligned team – 45 agile teams developing business functionality. Release cycle once every week or two. Releases occur using an automated pipeline from enabling team or manually (passing the distribution to colleagues responsible for supporting the production environment)
- Enabling team – a small team consisting of most of the organization's DevOps engineers and a few testers who are also leaders in testing competencies. The team has developed a pipeline for release automation and provides it to teams as a turnkey solution

This year there is no way to take on more functional testers to strengthen the stream-aligned teams, but it is permitted to involve development in quality and testing issues. The goals of the management team are to reduce the number of defects in production and increase the number of automatic implementations for stream-aligned teams but lead time and number of releases should not decrease.

What are the best solutions you can offer to achieve the organization's goals?

a) Developers in stream-aligned teams should focus on the practices inherent in the shift-left approach (e.g., increasing coverage (component testing, api testing, contract testing).
b) DevOps specialists should add mandatory quality gates with the level of coverage in order to not miss releases due to the releases not being sufficiently covered by tests.
c) It is necessary to distribute DevOps engineers from enabling teams to stream-aligned teams so that the teams are more autonomous and have engineers with the proper expertise in the teams in order to improve implementation processes.
d) DevOps specialists in enabling teams should focus on ensuring that most teams know how to use their pipeline at the organization level.
e) Add a goal for developers in stream-aligned teams to achieve a coverage level of component tests at 90- 100% to increase confidence that the functionality in a release is sufficiently tested.

Select TWO options.

Question #40 (3 Points)

A value-driven organization completes a digital transformation associated with moving from a monolithic architecture to a microservice one. Teams in the company deal with the tasks of migrating to microservices and releasing business value. The organization has the following types of teams performing different activities:

- Platform team
    - One global platform team servicing the entire organization.

    - Creates common platform services supporting business functionality. These include the audit service, monitoring and logging services. All services that include business functionality must be integrated with platform services.

- Enabling teams
    - Multiple agile teams, usually small, that serve the teams who contact them to get assistance.
    - Have expertise in tools for automating microservice testing including load testing (e.g., stubs, test data generation tools).
    - Often reach out to the other types of teams to see if they can help.

- Complicated-subsystem team
    - One team helping one part of the organization, responsible for conducting chaos engineering in the organization for stream-aligned teams.

- Stream-aligned teams
    - Develop business functionality and run the solutions in operations.
    - Responsible for load testing the solutions for which they are responsible.

The following challenges have been identified:

- Stream-aligned teams do not use the expertise and tools provided by the enabling teams because they are often unaware of the existence of these tools.
- The complicated-subsystem team often becomes a bottleneck where all teams must queue to get help.
- Many teams in organizations believe that a complicated-subsystem team should also perform load testing and some teams believe that they should only focus on creating business functionality.

The goal for the next six months set by the management team is to improve the stability and reliability of existing services.

What is the BEST recommendation you can offer to improve the test processes that the teams perform considering the organization, the challenges and the goals described in the scenario?

a) One of the enabling teams can develop a new test automation framework and help stream-aligned teams implement the new framework.
b) Stream-aligned teams can share experience with each other in conducting chaos engineering in order to increase expertise and be less dependent on the complicated-subsystem team.
c) It is necessary to have one shared backlog between the stream-aligned teams and the platform team.
d) Communicate the different types of testing which the teams perform so the teams have a clear understanding of who is responsible for what. Conduct a risk analysis and update the list of teams who need to use chaos engineering.

Select ONE option.