Test01 Answer

Question 1: In the middle of the Sprint, a Development Team identifies a defect. Initially they were not sure about the cause of the defect, and hence they involved the Product Owner to discuss it. After the discussion, both the Product Owner and the Development Team agreed that the defect is indeed a clear gap in the feature being developed in their Sprint and not a new requirement. The defect should be

1. Deferred since this is not a critical defect.
2. Deferred to the Product Backlog since it is a new requirement.
3. Fixed in the current Sprint. (CORRECT)

Explain:

> This defect is from the work performed in the current Sprint. There are some questions that are not clarified in Scrum. You may want to be aware of them so you can use Scrum values and high-level principles to infer guidelines around them. That understanding will be handy if there are any related questions in the assessment.Parameters like release date, cost, etc. are reviewed in the Sprint Review. However, Scrum leaves it open about their first definition. Unless otherwise inferred through the question, it is safe to assume that they are defined at the time when the Just Enough Backlog is defined before the first Sprint.There are many sub techniques of product development like handling defects that are intentionally left undefined. So, by providing a detailed guideline for handling bugs, we tend to add more rules than necessary to keep Scrum lightweight.Here are some high-level guidelines to answer related questions.The Development Team makes an informed decision about forecasting what they can accomplish in the current Sprint. There is less likelihood of large defects being introduced because the team has refined the Product Backlog Items to a fine degree so that they can see through the requirements. So, when the team does get defects, it is expected that the defects are minor in nature and the team fixes them in the current Sprint. However, in complex problems, what can happen is unknown.So, if the team does identify major defects, i.e., those that will be considered as new work, they are added to the Product Backlog.

Question 2: A Scrum Team must produce the following artifacts. Select all that apply.

1. Test Case Specifications
2. Project Status Report
3. Sprint Backlog (CORRECT)
4. Product Backlog (CORRECT)
5. Project Plan
6. Design Document
7. Increment (CORRECT)

Explain:

> A Scrum Team produces and maintains artifacts that help them to plan their work, track their progress, and share information visibly to required stakeholders. In that respect, Scrum mandates only three artifacts. Notice that the Increment is not a document but a working product Increment. Other artifacts or documents are optional and can be chosen by the team if they add value to their work or final product.Scrum uses three artifacts to track the information about the Product and the work.We have already discussed two of the artifacts, the Increment and the ProductBacklog.Scrum artifacts

Question 3: Select the best answer. Scrum is a newer way of doing things to address complex problems. It is a newer way because

1. It is closely associated with emerging technologies
2. It offers new terminology for traditional practices
3. It is easier to master (implement) than the traditional way
4. It increases the opportunity to control risk and optimizes the predictability of progress (CORRECT)

Explain:

> Scrum brings in new terminology but it is not the primary difference. It is easy to learn, but difficult to master. There is incidental association of lot of emerging technologies executed in Scrum, but that is not the reason for its identity as a newer way.Scrum does not guarantee success, but it increases the likelihood of success by controlling the risks and optimizing predictability. Ken and Jeff authored Scrum two decades ago. Several organizations and practitioners have applied it with profound results. Many case studies are documented.Today, Scrum is the most widely adopted framework among all the frameworks intended to bring agility into producing software.Scrum events that offer opportunity for early feedback.There are total of five events within the Scrum framework. Other than the container event Sprint, each event implements the theory of empiricism by offering an opportunity to get early feedback and the opportunity to best utilize that feedback.Five events of ScrumScrum events

Question 4: The Sprint Review is an event that requires

1. Inspection and adaptation activities. (CORRECT)
2. The Product Owner's sign-off.
3. Stakeholders active participation. (CORRECT)
4. Transition sign-off.

Explain:

> The Development Team discusses what went well during the Sprint, what problems it experienced, and how those problems were resolved. These discussions are not about technical problems, but those relating to understanding the Product Backlog Items, business and product issues that were uncovered, coherence or lack of coherence between the items, conflicts with previous Sprint implementations, and so on. These discussions will add more transparency.The Development Team demonstrates the work that is "Done" and answers questions about the Increment. They do not demonstrate any items that are incomplete.The participants collaborate on what to do next. They review how the marketplace or potential use of the product might have changed and what are the most valuable things to do next. They also review the timeline, budget, potential capabilities, and marketplace for the next anticipated product release.At the end, they come up with valuable input to the subsequent Sprint Planning by adapting the Product Backlog. A revised Product Backlog defines the probable Product Backlog Items for the next Sprint. However, the scope of the next Sprint is finalized only in the next Sprint Planning. The Product Backlog may also be adjusted overall to meet new opportunities.After the Sprint Review, the Scrum Team gathers and discusses their journey in the last Sprint.

Question 5: Within every Sprint, the working Increment should be tested progressively starting from unit testing, then integration testing, and then finally user acceptance testing.

1. Not necessarily. It is up to the team to find the best approach to achieve this. (CORRECT)
2. No. The test strategy is decided by the Quality Assurance Lead in the team.
3. Incorrect. It should also include non-functional testing.
4. Yes. It is the prescribed method.

Explain:

> While the team needs to ensure that each Increment is thoroughly tested, ensuring that all Increments work together and meet the definition of "Done," it is up to the team to find the best approach to achieve this. The increment is delivered to the Product Owner and the stakeholders for their inspection in the Sprint Review. The Sprint Review is specifically kept informal to foster the participants to bring in the highest amount of transparency to what was achieved and openly discuss how to best leverage this new understanding and adapt for the next Sprint.The Increment is the most important artifact of all because it is the mark of the progress. This is the end result of work completed. The Increment is not just the outcome of the latest Sprint. It is the sum of all the Product Backlog items completed during a Sprint and the value of the increments of all previous Sprints.Format: Note that this artifact is not a document but a working product. The new Increment must be "Done," which means it must be in a useable condition and meet the Scrum Team's definition of "Done." It must be in a useable condition regardless of whether the Product Owner decides to actually release it.No. Any Product Backlog Item is incomplete if it does not meet the definition of "Done." Delivering incomplete items to the Sprint Review reduces the transparency of real progress and increases risks due to unknown work that is yet to be completed.

Question 6: A Development Team has only three members. The time box for the Daily Scrum is

1. Per team's decision
2. 15 minutes (CORRECT)
3. 3 minutes

Explain:

> Daily Scrum is always time boxed to 15 minutes and scheduled that way. However, the team can close the Daily Scrum earlier on the days if they are done. Scrum does not explicitly define or list any controls. Yet, if you analyze Scrum, you can see that Scrum has many built-in risk controls, because Scrum is fundamentally a risk-reduction framework for addressing complex problems. This book features the prominent controls with the intention that Scrum users can appreciate the significance of such controls and make an effort to fully leverage them in their Scrum implementations.The following controls minimize risk of producing waste and lack of progress:1. Time-boxed Scrum events eliminate waste associated with traditional meetings.2. Inspections increase the transparency of the Product Value and Work Progress.3. The ScrumMaster guards the Scrum Framework and champions the Scrum rules including transparency.4. Standards like the definition of "Done" set the expectations of the required quality levels and makes them transparent.The Scrum events are significant controls in the hands of the Scrum Team that are used to maneuver the journey to the desired end.• All events are time-boxed events, which means that every event has a maximum duration.• The events create regularity and minimize the need for meetings not defined in Scrum.The Scrum Master coaches the Scrum Team to correctly conduct and utilize the events. The Scrum Master need not be part of some of the events, but they need to ensure that these events happen. A Sprint showing the time-boxed events

Question 7: What should be the frequency of Inspection in Scrum? Select all that apply.

1. As planned in the Sprint Planning
2. As needed by the Product Owner
3. In every event within the Sprint (CORRECT)
4. Frequently, as decided by the team, but not getting in the way of work (CORRECT)

Explain:

> Every event is an opportunity for inspection. In addition, a team can optionally inspect more frequently, without having the inspections getting in the way of the work. Every event is an opportunity for inspection. In addition, a team can optionally inspect more frequently. However, their inspection should not be so frequent that inspection gets in the way of the work.Inspections are performed by those doing the work and those who have knowledge of the product. In addition to the Development Team, the Product Owner, and invited stakeholders inspect the product Increment during the Sprint Review.If an inspector finds that any aspect of the work or product deviates from the acceptable limits and that the resulting product will be unacceptable, the work activity must be adjusted. The Development Team does not wait for any formal event to make this adjustment; instead they make it as soon as possible to minimize further deviation.Sprint Starts – Sprint PlanningOngoing Development Work** In the middle of the Sprint, if the Development Team needs some external technical/domain help, they have to raise this as an impediment, and they can reach out to technical/domain stakeholders for help. However, later in the Sprint Retrospective, they need to inspect why they could not do it themselves without help.They need to identify the improvements to be made to make them truly cross functional and self-sufficient.On a side note, if the team still cannot resolve an issue even with the external technical/domain help, they need to bring it up to the ScrumMaster immediately and collaborate on the next course of action. If the ScrumMaster cannot remove the impediment, then the Product Owner should be consulted.Daily Scrum** Only those ScrumMasters who perform the Development Work should participate in the Daily Scrum. As an exception, a ScrumMaster can optionally participate to observe the correct implementation or facilitate discussions.Ongoing Product Backlog RefinementSprint ReviewSprint Retrospective – Sprint EndsOnce a Sprint begins, its duration is fixed and cannot be shortened or lengthened.The remaining events may end whenever the purpose of that event is achieved, ensuring an appropriate amount of time is spent without allowing waste in the process.What happens if a Development Team completes the work before the Sprint end?If a team completes the work before the Sprint end, they may collaboratively decide to do additional work such as refining the Backlog, etc. and still complete theSprint as planned. The Sprint duration is kept intact without contraction or expansion.But for the other four events, Sprint Planning, Daily Scrum, Review, and Retrospective, if the team completes the intended agenda early, they can be closed early.

Question 8: During the Daily Scrum, a team member says he does not know when his task will be complete.

1. It is acceptable as the Sprint Review date is far away.
2. Replace the team member with a new team member.
3. The Development Team should collaborate to plan alternative steps such as pairing the member with someone else to eliminate the risk of not meeting the Sprint Goal. (CORRECT)
4. The ScrumMaster should mentor the team member on how to estimate the task.

Explain:

> The team starts by discussing the progress thus far. This is done by inspecting the work done since the last Daily Scrum. Since the Sprint Backlog contains the work units with each of them showing the remaining work, the team can understand the progress from the remaining work.In addition, the Development Team members explain:This is not a status meeting for managers, so the team does not resort to any particular style, such as one individual asking these questions of the others.The team agrees on some ordering, preferably based on the Sprint Backlog plan, and voluntarily provides the status to rest of the team. Some teams may pass an object like a ball to each other, indicating that whoever has the ball talks. Such tactics are not part of Scrum but may be used by the team if they find them useful to increase collaboration and self-organization. If there are issues that the team can mutually solve with each other's help, the team agrees to collaborate on them. If there are impediments outside of their influence blocking the progress, they are captured and made transparent to the ScrumMaster. As a self-organized team, it is the team's collective responsibility to immediately take steps to resolve issues and meet the Sprint Goal. They still have to discuss how to improve a team member's abilities, but it is a topic for discussion later in the Sprint Retrospective. This issue is well within the influence of the team to solve and hence the ScrumMaster's help is not needed. Only the Development Team can participate in the Daily Scrum. However, the ScrumMaster can choose to attend to ensure Scrum is correctly understood and enacted. They can also facilitate the Daily Scrum at the team's request.The question is – If the ScrumMaster does not attend the Daily Scrum, how would they know come to know about impediments? This question assumes that impediments are brought out only during the Daily Scrum. That is incorrect. A team needs to bring out any impediment as soon as they know they need help.So, the team will transparently make the impediments visible for anyone to see and also approach the ScrumMaster when they know they need help.What if the team identifies that adjustments are needed for the rest of the Sprint plan and not just the next 24 hours?If the Daily Scrum exposes the need to re-plan the rest of the Sprint, not just 24 hours, the Development Team or team members often meet immediately after theDaily Scrum for detailed discussions or to adapt or re-plan the rest of the Sprint's work. Regardless, the Development Team always closes the Daily Scrum within 15 minutes.At the end of each Daily Scrum, the team will have a plan for the next 24 hours(Daily Plan) updated in the Sprint Backlog. This Daily Plan will contain the most important work that needs to be done in the next 24 hours. Also, the Backlog of impediments is updated and made transparent so others including the ScrumMaster will know even if they do not attend the Daily Scrum.By performing the development work, the Development Team reaches the Sprint Goal by producing a Product Increment.

Question 9: An organization forms Development Teams each with a size of 15 members because it is convenient way to map their current teams that are of the same size.

1. This is okay. It will speed up the Scrum transformation.
2. Scrum is immutable. It is recommended to stick to the guideline of 3 – 9 Developers to drive Scrum-based change. (CORRECT)
3. It is up to the Teams to decide how they want to be formed.

Explain:

> Scrum recommends 3 – 9 Developers, which is small enough to reduce complexity but big enough to have the required skills and capacity. Anything less may only get marginal productivity gains. Anything more will invite complexity. What is expected from the Development Team?The Team is structured in such a way that they are small enough to reduce communication complexities and big enough to include the required skills to perform a complete work.Optimal Development Team size is small enough to remain nimble and large enough to complete significant work within a Sprint. Fewer than three Development Team members decreases interaction and results in smaller productivity gains. Smaller Development Teams may encounter skill constraints during the Sprint causing the Development Team to be unable to deliver a potentially releasable Increment. Having more than nine members requires too much coordination. Large

> Development Teams generate too much complexity for an empirical process to manage. The Product Owner and ScrumMaster roles are not included in this count unless they are also executing the work of the Sprint Backlog.Individual Development Team members may have specialized skills and areas of focus, but accountability belongs to the Development Team as a whole. The SprintGoal binds the Team together. Scrum recognizes no titles for the Development Team members other than Developer, regardless of the work being performed by the person.Scrum recognizes no sub-teams in the Development Team, regardless of particular domains that need to be addressed like testing or business analysis.

Question 10: What are some examples of Product Backlog management techniques where a ScrumMaster can coach the Product Owner and the Development Team?

1. Choosing a tool to manage the Product Backlog.
2. In addition to using value, a Product Owner can choose input from the Development Team on ordering the items based on their technical coherence. (CORRECT)
3. Techniques like writing the items in the form of user stories and their Acceptance Tests. (CORRECT)
4. Creating a common standard that defines the preferred level of description and transparency each Product Backlog Item should meet before introducing them in Sprint Planning. The Team can then use this standard as a guideline to decompose the Items. (CORRECT)

Explain:

> A ScrumMaster coaches the Development Team and the Product Owner about managing the Product Backlog to facilitate empiricism-based product planning and arranging the items so that the order can maximize overall value. Services to the Organization

Question 11: Shortly into using Scrum for the first time in an organization, the Scrum Team runs into several impediments against following Scrum. The most common inference is

1. The team should have followed only the Scrum's guidance about how to perform software engineering practices like design, coding, testing, etc.
2. Scrum should have been applied for Product Development instead of Software Development
3. It is normal for first timers. Scrum will expose all weakness in the current ecosystem that need to be resolved (CORRECT)
4. The Scrum Team didn't plan the product development project completely in advance

Explain:

> For organizations with historical development practices and infrastructure, the most common scenario after applying Scrum is that it will expose the weaknesses in the current organizational ecosystem. It is normal and expected. The organizations should strive to address these weaknesses while maturing their team's ability to produce useable software within the Sprints. The objective of every Sprint is to produce at least one potentially releasable and useable Product Increment. The definition of 'Done' should have conditions that the Product Increment must meet to be released to production. For newer teams, this is often a big challenge.Yet, the definition of "Done" should not be set with the objective of making it easy to meet though it will fail to qualify for production. Unless the Increment is potentially releasable, the Scrum Team cannot get feedback from actual usage. Diluting the definition of "Done" will hide the current weaknesses in Product Development.Given this, even a new team should define "Done" with conditions such that the Increment will be Production ready. At the same time, the conditions need to berealistic to motivate the team. Over the iterations, as the team's ability gets more mature, more stringent conditions can be gradually added. Having a realistic definition of "Done" for a new team means that the working Increment may have known bugs, but they are transparent between the Development Team and Product Owner.Since Scrum was in existence before the Agile movement, Agile is not referred to within Scrum. Today Scrum is widely seen as one of the "methods" under the broader umbrella of "Agile." Many regard Scrum and Agile as being the same. We need to put these things into perspective before moving on.Agile within software development is associated with the "Agile Manifesto". The Agile Manifesto is a proclamation of a better way of working to create software. The Agile Manifesto is a set of values and principles for a new way of software development. Scrum has contributed a lot to the development of Agile. See agilemani-festo.org for more information.Though the Agile Manifesto is widely seen as the mother of all Agile-based frameworks, Scrum, which is an alternative software development model, existed before the Agile Manifesto was written.Scrum started as an alternative approach to complex product development several decades back. The rough idea of Scrum in product development was

> introduced by Hirotaka Takeuchi and Ikujiro Nonaka in their white paper titled “The New New Product Development Game”, which was published in the Harvard Business Review in 1986.Ken Schwaber and Jeff Sutherland introduced Scrum as an alternative to traditional development models to systems and the software development world. They presented a process framework called Scrum at the 1995 OOPSLA Conference. They presented Scrum as an enhancement to traditional models of systems development.Later they defined the Scrum framework that employs Scrum Teams and the associated roles, events, artifacts, and rules, to produce frequent working Product Increments. Scrum is a standalone framework, but it respects the Agile Manifesto. The Agile Manifesto was written by group of representatives of “alternative implementations of software delivery models” in February 2001. The authors of The Scrum Guide (Ken Schwaber and Jeff Sutherland) were among these representatives.In principle, the Agile Manifesto’s ideas have a lot in common with the Scrum framework elements. Scrum mutually respects the Agile Manifesto values and principles. Scrum explicitly lists “Understanding and practicing agility” as one of the services that the ScrumMaster provides to a team.Agile is a philosophy about a “Newer way of developing software”. It is a philosophy because it is not descriptive on an exact implementation. Scrum is one ofthose concrete implementation frameworks to help people develop any complex product not just software. The Scrum framework definition is concrete with ScrumTeams and the associated roles, events, artifacts, and rules. Anyone wanting to transition to Agile should understand the Agile Manifesto, and its values and principles. Many organizations embrace the Agile values and principles at the conceptual level. Then they decide on a concrete implementation framework such as Scrum that gives a structure to the Agile way of working. After that, the Scrum Team employs additional techniques that add value specifically to them within the Scrum framework. For example, many Scrum Teams in the soft-ware domain employ Extreme Programming practices within the Scrum Framework to add agility to their development work.

Question 12: When multiple Scrum Teams are working on the same Product Backlog, each team selects the Product Backlog Items for the Sprint with the guidance of the Product Owner.

1. True (CORRECT)
2. False

Explain:

> The Product Backlog is continuously refined to a thinly sliced functionality so that each Product Backlog Item has very minimal dependency between the Scrum Teams. The refinement also strives to identify which team will deliver what item.Later, in the Sprint Planning, each Scrum Team selects the Product Backlog Items with the guidance of the Product Owner. Knowledge of The Agile ManifestoScrum mutually respects The Agile Manifesto as a newer way of working. For the questions on the assessment, if the answer is not deductible from within the boundary of Scrum, apply the knowledge from The Agile Manifesto as a second body of knowledge.Complementing ideas between Agile and Scrum – Four ValuesThe Agile Manifesto has four values and twelve principles. These are provided below. Scrum implements many of The Agile Manifesto values and principles in terms of Scrum Teams and their associated roles, events, artifacts, and rules.Agile Value 1: For a better way of building software, The Agile Manifesto values “Individuals and interactions over processes and tools.” Scrum implements this value through Self-Organizing teams.Agile Value 2: For a better way of building software, The Agile Manifesto values“Working Software over comprehensive documentation.” Scrum implements this value through Sprints: A Sprint is a container of a few weeks of development work, where a “Done,” useable, and potentially releasable product Increment is created.The mark of progress is the creation of this “Done” Increment, and not the creation of documents.Agile Value 3: For a better way of building software, The Agile Manifesto values“Customer collaboration over contract negotiation.” Scrum implements this value through the Product Owner role: the Product Owner maximizes the value of the product being developed and optimizes the work of the team through continuous collaboration with the Development Team.Agile Value 4: For a better way of building software, The Agile Manifesto values“Responding to change over following a plan.” Scrum implements this value through Scrum events: Each Scrum event is an opportunity for inspection and plan adjustment. Also, each Scrum event is time-boxed to eliminate unnecessary and extensive planning.Complementing ideas between Agile and Scrum – Twelve PrinciplesScrum is intentionally lightweight avoiding thick and heavy processes and tools which have questionable value.Sprint Retrospective every Sprint which is an inspection and adaptation of the team itself.Additional knowledge from the “Developer Open”The PSM 1 may contain one or two questions from the Scrum development work perspective. If you have time, attend the Developer Open assessment to grasp some of the related concepts.

Question 13: When a Scrum Team adds new team members to replace outgoing members, the productivity of the team

1. Will be negatively impacted (CORRECT)
2. Will be positively impacted
3. Will remain the same

Explain:

> When new team members join, the productivity of the team will be temporarily reduced.

Question 14: A Development Team has many Developers with cross-functional skills. This team builds the product Increment that almost meets the standards set by the definition of “Done.” To completely meet the definition of “Done,” they hand over the product Increment to another team outside the Scrum Team for specialized testing. Is this is truly a cross-functional team?

1. Yes
2. No (CORRECT)

Explain:

> A Development Team should possess all the skills needed to deliver a potentially shippable product that meets the definition of “Done” without external help. The resulting synergy of this structuring, empowering, and unifying optimizes the Development Team’s overall efficiency and effectiveness. Without any management or direction from outside, they strive to balance flexibility, creativity, and productivity, so they can get maximum value of their work.There are no sub-teams in the Development Team.

Question 15: The Sprint Goal provides the following

1. Guidance to the team on why it is building the Increment
2. Flexibility to the team about the functionalities implemented in this Sprint
3. All the above (CORRECT)
4. Coherence so that team members can work together

Explain:

> The Sprint Goal provides guidance to the Development Team. It also provides some flexibility regarding the functionality implemented within the Sprint. The selected Product Backlog Items deliver one coherent function, which can be the Sprint Goal. The Sprint Goal can be any other coherence that causes the Development Team to work together toward a common but specific goal. The team selects Product Backlog Items to forecast the work for the Sprint. Sprint Planning creates a definition of what is to be built and a flexible plan. The outcome is a Sprint Backlog that contains Product Backlog Items and the plan for delivering them. In addition to the Sprint Backlog, the team also creates a Sprint Goal.This plan is created by the collaborative work of the entire Scrum Team.The set of selected Product Backlog Items that the Development Team thinks they can complete and the associated work is called a forecast of functionality. The term forecast was called a commitment in older versions of the Scrum Guide.The entire Scrum Team gathers for the Sprint Planning. If the Development Team invited any external technical/domain experts, they participate as well. No individual leads or controls the meeting.The Scrum Master ensures that the event takes place and that attendants understand its purpose. The planning should answer two questions:• What can be delivered in the upcoming Sprint?• How will the work needed to deliver the Increment be achieved?The ScrumMaster teaches the Scrum Team to keep it within the time-box. Its duration is up to eight hours for a one-month Sprint. For shorter Sprints, it is usually shorter.In the first phase of Sprint Planning the team begins the Topic one, by selecting the Product Backlog Items and the setting the Sprint Goal. The Product Owner discusses the objective that the Sprint should achieve and the Product Backlog Items that, if completed in the Sprint, would achieve the Sprint Goal. The Product Owner will introduce the Product Backlog Items that are “ready” – already refined to a state agreed upon by the Development Team and Product Owner. Just in time refinement will lead to poorly understood product needs and result in poor Sprint Planning. The number of items selected from the Product Backlog for the Sprint is solely up to the Development Team. The selected items are moved to the Sprint Backlog.After the Development Team forecasts the Product Backlog Items it will deliver in the Sprint, the Scrum Team crafts a Sprint Goal. The Sprint Goal is an objective that will be met within the Sprint through the implementation of the Product Backlog. The Sprint Goal provides guidance to the Development Team on why it is building the Increment.The Sprint Goal is a tool for team coherence. The selected Product Backlog Items deliver one

> coherent function, which can be the Sprint Goal. The coherence between the Product Backlog Items is made transparent by the Sprint Goal. This is important because it provides an opportunity for team members to work together and offers some flexibility of adjusting the Product Backlog Items when required.Lack of coherence may lead the team to working on separate initiatives. So, the Sprint Goal is a tool to verify and create this coherence. As the Development Team works, it keeps the Sprint Goal in mind. In order to satisfy the Sprint Goal, it implements the functionality and technology. If the work turns out to be different than what the Development Team expected, they collaborate with the Product Owner to negotiate the scope of the Sprint Backlog within the Sprint. Should the entire Sprint work be decomposed within Sprint Planning? Not necessary. Work planned for the first days of the Sprint by the Development Team is decomposed by the end of this meeting, often to units of one day or less.Development Team members collaboratively assign these work units among themselves.

Question 16: In waterfall, the project team often gets early feedback from customers or markets about the product they are building, so they can act on this feedback on time.

1. True
2. False (CORRECT)

Explain:

> Waterfall-based projects rarely offer any opportunity to get early feedback about product. After executing the complete plan, usually after a long period of time, the product is delivered to Business / users in a big one-time release. These people see the outcome and provide feedback about the product. The business may choose to test the market and release the product. So, the market also may provide feedback.If the feedback is positive and indicates the larger acceptance of the product, everyone is happy.However, this is not always the case. The assumptions made by the business about user behavior may be invalid. The interpretation of the Project Managers/Planners about what the business people wanted may be incorrect. Also, the external factors, market receptiveness, and assumptions might have changed.Sometimes, the feedback may be about a new insight that requires major modification to the product, or the product itself is identified as obsolete. Such feedback is called Late Feedback since the waterfall project may already be closed, or it may involve too large an effort to incorporate the feedback so late.Late Feedback in Waterfall

Question 17: Which of the following statements is not correct?

1. Only the people who perform the work can finalize the estimate of Product Backlog Items.
2. Multiple Development Teams working for the same product should have only one common Product Backlog.
3. The Development Team finalizes all estimates.
4. The Product Owner always orders the Product Backlog Items based solely on the value of each individual item compared to another item. (CORRECT)
5. A ScrumMaster can author a Product Backlog Item for the Product Owner's consideration.

Explain:

> The Product Owner is the ultimate authority of finalizing what needs to be added to the Product Backlog. However, they can have others provide them with suggestions. So, a ScrumMaster can always author an item for the Product Owner’s consideration. The Product Owner strives to maximize the collective value of the Product and the Development Team’s work. To achieve that, they can choose to follow any appropriate logic for ordering. It need not always be the individual business value.

Question 18: Scrum is immutable

1. Yes (CORRECT)
2. No

Explain:

> Changing Scrum or customizing it for the convenience of an existing culture may dilute its distinguishing identity as a “change agent.” Also, it may be perceived as just another additional practice, which fails to motivate those who anticipate change. For organizations with historical development practices and infrastructure, the most common

> scenario after applying Scrum is that the Scrum Teams may encounter issues that will impede their effort to create potentially shippable Increments within short Sprints. Scrum will expose such dysfunctions in the current organizational ecosystem. It is normal and expected. The organizations should try to correct these dysfunctions. Sometimes organizations take the route of ScrumButs to handle these dysfunctions.ScrumBut refers to an adjustment or modification made to Scrum, so that the organization can hide the problem instead of addressing it.Scrum.org defines ScrumButs as having a particular syntax:(ScrumBut)(Reason)(Workaround)Scrum.org provides some examples of ScrumButs:"(We use Scrum, but) (we cannot build a piece of functionality in a month,) (so our Sprints are 6 weeks long.)""(We use Scrum, but) (sometimes our managers give us special tasks,) (so we do not always have time to meet our Definition of "Done".)"Hiding the weaknesses using ScrumBut will take away the opportunity for organizations to address them and become agile.Some organizations learn about the dramatic changes that Scrum brings and want to implement Scrum. At the same time, they want to implement Scrum "smoothly".A common approach is to follow a hybrid model where they retain the existing methods and selectively apply partial Scrum. An example is – the planning of Sprints into a Design Sprint, Development Sprint, Testing Sprint, etc. This is nothing but Waterfall in a Scrum disguise.The Scrum authors are particular about providing a version of Scrum that will maximize the benefits intended. The approved body of knowledge on Scrum is "The Scrum Guide." The authors position this version of Scrum in The Scrum Guide as immutable, i.e., it cannot be adulterated with customized practices or hybrid terminology.Any such act will dilute the identity and distinguishing character of Scrum. The adulterated Scrum without its original identity may not be seen as a "change for the better" by the people in the organization.If someone claims that a hybrid model is working fine, they need to investigate if they are able to witness the transformational changes that Scrum brings:We already go for multiple releases. Why should we consider Scrum?Some organizations may already go for multiple releases of their product instead of batching. However, they may not have a disciplined product development approach to contain the risks and increase the value.Some organizations have occasions where such self-organized teams produce business benefits with initial increments, which could fund the follow-on work. In some other instances, the follow-on low-value work is cut down after enough value is delivered, thus saving cost.This disciplined ecosystem of risk mitigation through empiricism, bottom-up intelligence, and the owner's mindset of value maximization is possible only with the application of Scrum in its entirety.

Question 19: A large-scale product development requires more than 100 Developers. What is the most appropriate approach to develop an overall technical architecture?

1. Start the product development with the minimal number of teams possible. Let them evolve the foundation architecture that reflects the core product features of high value and commonly expected non-functional needs. Gradually add more teams. (CORRECT)
2. Divide the teams into technical component teams with specific responsibilities to design and manage their own components. Resolve any ongoing integration issues using Scrum of Scrums.
3. Create a complete reference architecture before the development. Provide training to the Developers to teach them to comply with this architecture and hand over the architecture to them.
4. Identify a small set of best designers and let them guide the DevelopmentTeams during the Sprint with its implementation.

Explain:

> Scrum recognizes no titles for the Development Team members other than 'Developer' regardless of the work being performed by the person. There are no exceptions to this rule. As for the technical architecture, the design emerges throughout the journey: Development Teams do not create a big upfront design before they start Sprints. Instead they evolve the design.There is no designer or design team.Technically dividing the team increases the dependency between the teams in large scale Scrum. Coding Standards, Architectural Guidelines: The Scrum Guide does not talk about the technical practices or artifacts. There is no reference to anything called "Coding Standards" or "Architectural Guidelines." However, many Scrum Teams use them as part of their technical practices. Coding Standards ensure that the team produces readable and maintainable code. In Scrum, architecture is evolved continuously throughout the product development duration as more is learned. There is no exclusive Sprint or Scrum event to define architecture upfront. Usually, the Scrum Team defines architectural guidelines that every team member can use in their work. The team can have core hours to review the design and architecture during the Sprint. As a result, these guidelines are continually updated. Scrum.org provides a framework called Nexus to scale Scrum for large product development efforts. At Scrum.org, originally there was a Scrum practitioners Open which later was replaced with the Nexus open assessment. You can also practice the Nexus open assessment available at Scrum.org. It is not a "MUST DO" to prepare for the exam.Structuring a large team into feature teams helps minimize or eliminate dependencies. Dividing on other basis such as a technical component is called layer teams or component teams. The advantages of feature teams are•

> They are usually self-sufficient and hence have low communication overheads with external teams.• There will be increased opportunity for direct business collaboration.• Any dependencies that still exist between feature teams are made transparent and planned in an event called Scrum of Scrums.

Question 20: Select all that apply. For a Scrum Team, the Sprint Planning meetings are always going beyond the time-boxing. What could be the likely causes?

1. The Product Backlog size is huge.
2. The Development Team is trying to get a perfect and detailed Sprint plan. (CORRECT)
3. The ScrumMaster does not moderate and control the participants.
4. The Team didn't invest enough into Backlog Refinement. (CORRECT)

Explain:

> The ScrumMaster's role is not to control people or discussions but let the Team self-organize. They only coach and educate the Team to become self-organized.The Product Backlog size does not impact the time because the team does not need to discuss all items in the Product Backlog only those that are ordered on the top and are sufficiently deemed "ready" to be pulled into the Sprint.Most teams are usually stuck with Product Backlog items that are not decomposed and refined to a level that have sufficient clarity and transparency so they can be done within a Sprint. If the Team has not continuously engaged in Backlog Refinement sessions, they will end up doing "Just in Time refinement" during Sprint Planning.The chosen Product Backlog Items and the details of work planned for first few days of the Sprint are enough to close the Sprint Planning and start the work. The Development Team does not need to create a detailed work plan for a complete Sprint in the Sprint Planning. They can update the work plan as more details emerge during the Sprint.

Question 21: Which of the following statements is true?

1. ScrumMaster is an optional position. An alternative is to train the team on Scrum before they start, and they can self-organize without a ScrumMaster.
2. ScrumMaster is a management position. A person with Scrum experience and a coaching style of servant leadership is a good fit. (CORRECT)
3. ScrumMaster is a management position. A person with strong project management experience in delivering results is a good fit.

Explain:

> The ScrumMaster is required to have Scrum experience and strong inclination to wards a Servant Leadership style. It is a mandatory position due to the benefits brought by the focus of the role in Scrum. Additional services to the Development Team: Additional services to the Product Owner: ScrumMaster's responsibles

Question 22: In the Sprint Review, the presentation of the product Increment to stakeholders is

1. To elicit feedback. (CORRECT)
2. To provide the status of the project.
3. To get the Sprint completion sign-off.

Explain:

> The Sprint Review is an informal meeting, not a status meeting, and the presentation of the Increment is intended to elicit feedback and foster collaboration. The increment is delivered to the Product Owner and the stakeholders for their inspection in the Sprint Review. The Sprint Review is specifically kept informal to foster the participants to bring in the highest amount of transparency to what was achieved and openly discuss how to best leverage this new understanding and adapt for the next Sprint.

Question 23: When multiple Scrum Teams are working on a same product, how many Product Owners and Product Backlogs are needed?

1. Multiple Product Owners and multiple Product Backlogs.
2. One Product Owner and one Product Backlog. (CORRECT)
3. Multiple Product Owners and one Product Backlog.
4. One Product Owner and multiple Product Backlogs.

Explain:

> If there is one product, then there must be only one Product Backlog and one Product Owner. All the teams must work from the same Product Backlog. Also, note that it is not necessary for the definition of “Done” to be same but a mutually defined definition of “Done” should enable the combined Increments to be potentially releasable.

Question 24: In Backlog Refinement sessions, the Development Team performs development activities such as coding and testing.

1. False (CORRECT)
2. True

Explain:

> The Development Team helps in refining the items to a level such that the team can complete the items to “Done” within a Sprint. They do this by analyzing, putting together solutions/designs, decomposing, and adding details, but there is no technical development activity during this refining session. Spike: During the Product Backlog Refinement, a Team can perform technical analysis or design to understand the work involved. In situations where there is less clarity to estimate the effort and in-depth technical analysis or development (coding) is needed, the team can go for a “Spike” with the consensus of the Product Owner. A Spike is a time boxed research activity to prove or disprove something and gain more clarity. Note that the time for Backlog Refinement including any Spike should not exceed 10% of the Development Team’s time. The term ‘Spike’ is not part of the Scrum definition. Content: A Product Backlog contains an ordered list of Product Backlog Items, each one having a description, order, estimate, and value. The Product BacklogItems together represent all that is needed in the product. The items include features, functions, requirements, enhancements, and fixes that constitute the changes to be made to the product in future releases. It is the single source of requirements for any changes to be made to the product.Purpose: To maximize the transparency of what is required for the product, the order the team will work on next, and the estimate of the work involved.Owner: The Product Owner is responsible for the Product Backlog, including its content, availability, and ordering.Format: Nothing specific, but each item must have a description, order, estimate, and value. Usually the higher-order Product Backlog Items are clearer and more detailed than lower-order ones.Lifecycle: A Product Backlog is never complete. The earliest development of it only lays out the initially known and best-understood requirements. The Product Backlog evolves as the product and the environment in which it will be used evolves.The Product Backlog is dynamic; it constantly changes to identify what the product needs in order to be appropriate, competitive, and useful. As long as a product exists, its Product Backlog also exists. As a product is used and gains value and the marketplace provides feedback, the Product Backlog becomes a larger and more exhaustive list. Requirements never stop changing, so a Product Backlog is a living artifact. Changes in business requirements, market conditions, or technology may cause changes to the Product Backlog.Sample of Product Backlog

Question 25: A Scrum Team can have an exclusive first Sprint to prepare a Product Backlog, which is the sole outcome from that Sprint.

1. False (CORRECT)
2. True

Explain:

> A Scrum Team can initially work outside the Scrum Sprints to create and refine just enough of a Product Backlog so that the first Sprint can start. However, this initial effort should not be called a Sprint. Also, it should only take a few days. Every Sprint must produce potentially useable business functionality. Some teams create Sprint Zero for preparing a Product Backlog and other upfront preparation including tasks such as setting up the work environment, configuring tools, etc.Sprint Zero does not produce any useable functionality. If there is no useable functionality, there is no opportunity for feedback on inspection and adaptation. Without the feedback, we will not know if the investment in the concluded Sprint was justified or not. This resembles a waterfall way of working.Scrum is immutable. The essence of

> Scrum is lost when Scrum is customized to include a Sprint Zero.The inability of Scrum Teams to get the development work started immediately indicates weaknesses in the way that organization works today. When Scrum is newly applied, it makes the existing weaknesses in the organization transparent.That is the strength of Scrum and organizations should leverage the transparency that Scrum brings in. Organizations should commit to improve the identified weak nesses. Only then will the truly self-organized teams emerge.Making exceptions to weaknesses, in this case Sprint Zero, will hide the opportunities for improvements. The status quo will continue.Another example is that some teams will create an exclusive Sprint called the “hardening Sprint” to enhance the technical quality of the Product Increment to make it production ready. Instead of looking at the situation by asking the right question “Why is the team not able to produce a production-quality Product Increment in the original Sprint itself?” this weakness is hidden under disguise of falseScrum terminology such as “hardening Sprint.” Purpose : The Product Owner and Development Team continuously refine the Product Backlog Items. The items are refined until they are transparent enough for the Development Team to estimate and confirm that they can be “Done” within a Sprint. When a Product Backlog Item reaches this level of transparency, it is also known as “Ready.” The Development Team is responsible for all estimates. The Product Owner may influence the Development Team by helping it to understand and select trade-offs, but the people who will perform the work make the final estimate.The definition of “Ready” is a shared understanding by the Product Owner and the Development Team regarding how much clarity the Product Backlog Items should have before they are introduced at Sprint Planning.A Scrum Team should not wait until Sprint Planning to refine the items in a “just in time” manner. It is good practice to have a sufficient number of items in a “Ready” state for at least one or two upcoming Sprints. When : Backlog Refinement starts before the first Sprint and goes on throughout all Sprints. The Scrum Team decides how and when refinement is done. However, Product Backlog Items can be updated at any time by the Product Owner or at the Product Owner’s discretion. Timeline : This is probably the only activity in the Sprint where the Development Team performs work outside the current Sprint Goal. Because it is important to ensure that there will always be some “Ready” items that can be selected for the next Sprint.But care should be taken to optimize the time which the team spends on this act.Though this is not a time boxed activity, Refinement usually consumes no more than 10% of the capacity of the Development Team. What is achieved : Product Backlog Items are decomposed by analyzing their intent. Each item is added with a description, order, estimate, and value. Higher-order Product Backlog Items are usually clearer and more detailed than lower-order ones. More precise estimates are made based on the greater clarity and increased detail; the lower the order, the less detail.

Question 26: In their journey to deliver products of the highest business value, what factors will enable the Scrum Team to balance creativity, flexibility, and productivity?

1. Strong Team Management and Guidance by a team member identified as their leader
2. Having all the skills required to perform all their work without external help (CORRECT)
3. Performance Management System that rewards the super achievers of the team
4. Structuring the team such that it can self-organize its work against a common goal (CORRECT)

Explain:

> If sufficient capabilities and empowerment are not present, the team cannot acquire flexibility. Nor it can command the creativity and productivity. Sufficient capabilities are ensured by having all the skills required for the job. Empowerment is ensured by the structure of self-organization. In a self-organized team, all the team members plan their work together and track its progress against a common goal. They also identify and resolve challenges together. Without any management or direction from outside, they strive to balance flexibility, creativity, and productivity, so they can maximize the collective value of their work.Every Scrum Team usually works within a larger organizational ecosystem. Though Scrum does not have management roles like Project Managers, there is a shared understanding among Scrum Practitioners about the important role “Managers of Organization” play. These managers set and manage larger strategies, define operational units, structure self-organized teams, and help to resolve organization impediments to Agility.For any personnel issues within the team’s influence, such as personality conflicts, the self-organized team itself will resolve them. If the issue is outside their influence, such as human resource management functions of hiring, firing, compensation, and other legal aspects, they are handled by the appropriate human resource authority defined by the organization’s management.

Question 27: Scrum is best described as a

1. Product development process
2. Collection of best practices

3. Framework for developing and sustaining complex products (CORRECT)
4. Software methodology

Explain:

> Scrum is a framework within which appropriate processes and techniques can be employed to develop complex products. Scrum is not a methodology, process, or technique for building products. It is a framework within which one can employ various product building processes and techniques. Scrum is a collaboration framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value.As a framework, Scrum provides a broad structure consisting of a Scrum Team and associated roles, events, artifacts, and rules.Scrum is lightweight with only three roles, five events, and three artifacts. It is simple to understand.This structure enables a simple but effective way of working together as a team towards a focused goal. Scrum is not a process or methodology for building products. Unlike a process or method, it does not prescribe a detailed development blueprint specific to an industry sector or domain. It is a container framework wrapping around any appropriate process or technique.A team within an industry sector can choose to employ industry specific processes and techniques within Scrum. For example, the software building Scrum Team can employ software engineering techniques such as continuous integration, Test Driven Development, etc. as part of their development work.Scrum – Container of other Processes and Techniques

Question 28: After the Sprint Review, production release in Scrum requires

1. Non-Functional Testing.
2. Hardening Sprints.
3. Architectural Validations.
4. None of the above. (CORRECT)
5. All of the above.
6. Usability/End User testing.

Explain:

> Every Sprint must produce an Increment that is potentially releasable and useable.Some teams customize Scrum to include an exclusive Sprint for increasing quality called the “Hardening Sprint.” The Hardening Sprint focuses on ‘perfecting’ the Increment to meet the production release requirements. The team takes the Increment that was approved by the Product Owner in the Sprint Review and performs a list of “post Sprint Review” activities to enhance the technical fit of the Increment so it can go to production.However, in Scrum the purpose of every Sprint is to deliver an Increment that meets the quality requirements for production. This means that every Increment coming out of any Sprint must be in a potentially releasable and useable state without the need for additional work. The definition of “Done” maintained by the Scrum Team should include conditions to meet these “releasable” criteria consistent with the organization’s quality objectives.

Question 29: What factors will increase complexity? Select all that apply.

1. Larger number of project people (CORRECT)
2. Longer duration of the project (CORRECT)
3. Batching of product release into one big bang (CORRECT)

Explain:

> All these factors – larger number of people, longer duration of the project, and grouping of all deliveries into one big bang final release – increase the complexity.Product building is a complex problem. Most often, it is not just an isolated product development, but may involve integration of the product into the larger organizational system.For example, in software development, as technology evolves and markets change, organizations need to continuously adopt the newer software developments and enhancements into their existing complex web of technology infrastructure.This complexity is further multiplied by the presence of many other factors such as different people, processes, technology components, and so on. Product building is not only complex. Multiple factors involved in building complex products also vary over time. For example, in a software project, a software component that worked in a small-scale system, which has limited users today, may not work when the system becomes larger with multiple users tomorrow.Similarly, some of the

> developers that worked today may not be available for the project tomorrow, and the productivity may vary.Such time-dependent complex problems are also called complex adaptive problems.In these problems, the amount of unknown is really huge in the initial stages and will likely trend down over the course of product development. This trend is called the cone of uncertainty. Therefore, future change is certain in complex adaptive problems.

Question 30: During the Sprint, while the Sprint Backlog can be modified as more is learned, no changes are made that would endanger the Sprint Goal.

1. False
2. True (CORRECT)

Explain:

> If the Sprint Goal is endangered, it would lead to cancelation of the Sprint. Planning produces the Sprint GoalThe Sprint Goal is not maintained as a separate artifact in Scrum. Considering the importance and significance of the Sprint Goal, the author has pulled it out to highlight its special importance.It is usually made available as publicly radiated information for the Scrum Team.The Sprint Goal is NOT part of the Sprint Backlog. While the Sprint Goal is not changed, the Sprint Backlog can be negotiated for change anytime during the Sprint.When the Sprint Goal becomes obsolete, the Sprint is automatically cancelled.There are various reasons for the Sprint Goal to become invalid, such as market changes, organizational changes, etc.

Question 31: Effort required to fix or refactor a product after it has been built is known as

1. Technical Debt. (CORRECT)
2. Maintenance.
3. Plumbing code.

Explain:

> Technical debt is accrued as a result of making poor technical choices. Technical debt is not part of Scrum. A Scrum Team may employ this if that helps them in meeting their definition of “Done” and increase the quality. In software development, technical debt refers to the sub-standard technical work that leaves gaps in the technical quality of the Product Increment. A Product Increment that is already tested to be functionally fit and useable in the market can still have bad technical quality and hence the technical debt. Technical debt accrues due to bad technical choices. Technical debt will need additional work to improve the quality of the Product Increment and may increase the cost of the maintenance of the product.An example of technical debt is – writing lengthy code, all dumped into one file, leading to several thousand lines of code in that single file. Such code will look unreadable, be prone to injecting errors while introducing the code changes later, increase the dependencies during code deployments, and so on. In this example, an acceptable standard would be to write simple and short code in modules. To fix this technical debt (bad technical choice of lengthy code), code refactoring (modifying to short code modules) is needed later.There are tools that scan the software code and come up with a numerical index that reflects the technical debt of that code. Many Scrum Teams measure technical debt, but there is no specification of technical debt within Scrum. However, it is useful to know what the technical debt is.

Question 32: Product Backlog is ordered by

1. Whatever is deemed as appropriate by technical and domain experts
2. Individual Product Backlog Item's value
3. Priority of senior management (CORRECT)

Explain:

> There is no direct answer. Choose the next best choice.

Question 33: A Scrum Team is in the process of defining the Product Backlog Items. The ScrumMaster notices that the team is not using the User Story format to capture the Product Backlog Items. The ScrumMaster should

1. Correct the team's behavior by coaching them about User Stories.
2. Add a business analyst with the knowledge of writing User Stories to the team with the specific responsibility of documenting the Product Backlog with User Stories.
3. Let the team decide the format of the Product Backlog Items. (CORRECT)

Explain:

> Scrum does not define a specific technique for documenting the Product Backlog Items. Scrum clearly defines each event, role, artifact, rule, and those that constitute the Scrum framework. However, there are many subtechniques of product development that are left undefined intentionally.While it is optional to apply the technique that works for the team, Scrum does not bind the Scrum users to specific subtechniques. The Scrum Team is expected to figure out the best methods, techniques, and practices themselves. Scrum is light weight and can be implemented without the need of subtechniques. Some of the experienced Scrum practitioners working in an environment where teams "filled" these intentional gaps with some techniques tend to associate these techniques with Scrum. Here is an indicative list of those that are not prescribed by Scrum but are often mistaken as a definitive part of Scrum.Scrum does not prescribe a specific format for how the Product Backlog Items (requirements) are defined. Many Scrum Teams use the format of User Stories to define the Product Backlog Items, and find them useful. A User Story format looks something like the followingAs a , I would like , so that I can .

Question 34: This is used by the Scrum Team to identify unfinished work in a Sprint

1. Definition of "Done" (CORRECT)
2. Testing Standard
3. Coding Standard
4. Definition of Ready

Explain:

> The definition of "Done" provides the same shared understanding of what it means for work to be complete, which ensures transparency. It is used to assess when work is complete on the product Increment. The definition of "Done" defines what is meant by the completion of a Product Backlog item or a product Increment. The definition of "Done" contains conditions that must be met in order to deem a team's deliverable as a Potentially Shippable Item. By using the definition of "Done" everyone transparently understands what a"Done" Product Backlog item or a "Done" Increment means. In the Sprint Review, a Product Owner will accept a Product Backlog item as complete only if it meets the conditions set forth in the definition of "Done". The definition of "Done" can also contain non-functional requirements like performance.As an example, the following can be some possible conditions of a definition of "Done":The definition of "Done" need not be the same between different Scrum Teams of an organization. However, any one product or system should have a definition of "Done" which will be a standard for any work done on it.

Question 35: A Development Team decides to divide the Sprint Backlog and assign ownership of every Sprint Backlog Item to separate individuals on the team. The ScrumMaster

1. Should coach the team to collectively take ownership of the Sprint Backlog Items even though an individual works on a specific item. (CORRECT)
2. Should encourage this practice as it increases productivity.
3. Should encourage this practice as it increases individual accountability.

Explain:

> The Sprint Backlog is collectively owned by the Development Team. Rules

Question 36: In the first few Sprints, the Development Team is expected to focus on

1. Delivering a useable and potentially releasable product Increment.
2. Iteratively refining the requirements and obtaining sign-off from the Product Owner.
3. Reviewing and base lining the project plan so the changes can be controlled.
4. All of the above. (CORRECT)

5. Setting up the basic infrastructure needed for subsequent Sprint work.

Explain:

> The Development Team must try to deliver at least one piece of functionality NOT only in the first few Sprints but in every single Sprint. A pictorial representation of a sample Sprint with a one-week duration is shown in following figure.A Sprint of one week durationSprint is the heart of Scrum. Each Sprint may be considered as a project with no more than a one-month horizon. The Sprint itself is an event that is the container of all the other events. Like projects, Sprints are used to accomplish something.Each Sprint includes:• A Sprint Backlog – a definition of what is to be built and a design and flexible plan that will guide building it• The development work• The resultant product (Increment)Every Sprint always needs to produce a "Done," useable, and potentially releasable product Increment.Each Sprint begins right after the conclusion of the previous Sprint. Each Sprint ends with its Retrospective, which is the last event.The Scrum Team chooses a maximum duration of one calendar month or less.When a Sprint's horizon is too long, the definition of what is being built may change, complexity may rise, and risk may increase. Sprints enable predictability by ensuring inspection and adaptation of progress towards a Sprint Goal at least every calendar month. Sprints also limit risks to one calendar month of cost.The Sprint duration, is decided by the Scrum Team after considering:• The need of the Product Owner to limit business risks,• The need of the Development Team to synchronize the development work with other business events, and• The time needed for the Development Team to meet all conditions required by the definition of "Done."Sprints are best when they have consistent durations throughout a development effort, unless there is a good reason to modify. The Scrum Team should inspect and modify the duration of the Sprint only in the last Sprint event, the Retrospective, and not in the middle of a Sprint.The Sprint is active as long as the Sprint Goal is valid. The Product Owner is the authority to decide if the goal is obsolete or not.Within the Sprint, the Development Team spends the majority of time on development work: The team works to complete the selected Product Backlog Items to reach the Sprint Goal. Traditionally, the development work is decomposed into work tasks, and a Project Manager assigns these work tasks to the next team leader or a team member. In Scrum, the Development Team organizes and manages its own work. They decide their work plan and collaboratively assign the work among themselves.Within the Sprint, the Development Team spends less than 10% of their time on Product Backlog Refinement: Within the Sprint, the Product Owner does not interfere in the Development Team's work. However, they engage the Development Team in refining the Product Backlog Items. This is probably the only activity in the Sprint where the Development Team performs an activity that is not within their current scope of the Sprint Goal. Because it is important to continuously refine the Product Backlog Items so that there will be always some "Ready" items that can be taken up in the next Sprint.The Sprint Goal provides some flexibility to the Development Team. The scope may be clarified and re-negotiated between the Product Owner and Development Team as more is learned. Accordingly, the Product Backlog Items for the current Sprint can be modified, as long as these changes do not endanger the Sprint Goal.If the Sprint Goal is impacted due to the changes, the Sprint shall be cancelled.Does the Development Team have any flexibility to change the definition of "Done" of a Sprint?Once the Sprint is in motion, the definition of "Done" for current Sprint cannot be changed if the change will lead to decrease in product quality. The team can inspect the need for changing the definition of "Done" during the last event of the Sprint, the Retrospective, and adjust as needed for subsequent Sprint.The Sprint duration is constant and is finished on a preset end date. Once the Sprint is in motion, the end date of the current Sprint is not changed. The team can inspect the need for changing the Sprint duration in the last event of the Sprint, the Retrospective.The only exception is – a Sprint can be cancelled before the Sprint time-box is over.A Sprint would be cancelled if the Sprint Goal becomes obsolete. This might occur if the company changes direction or if market or technology conditions change.However, only the Product Owner has the authority to cancel the Sprint, although they may do so under the influence of the stakeholders, Development Team, or ScrumMaster. In general, a Sprint should be cancelled if it no longer makes sense given the circumstances. But, due to the short duration of Sprints, cancellation rarely makes sense.Sprint cancellations consume resources, since everyone has to regroup in another Sprint Planning to start another Sprint. Sprint cancellations are often traumatic to the Scrum Team and are uncommon.What happens to the work in progress when the Sprint is cancelled?When a Sprint is cancelled, any completed and "Done" Product Backlog Items are reviewed. If part of the work is potentially releasable, the Product Owner typically accepts it. All incomplete Product Backlog Items are re-estimated and put back into the Product Backlog. The work done on them depreciates quickly and must be frequently re-estimated.

Question 37: A Development Team has technical specialists in addition to Developers. They perform their work when the Sprint Backlog needs their special skills, but they are idle otherwise.

1. Defer and accumulate the special work to later Sprints until it needs full-time specialists. Add them to the team for that time frame alone. Prior to that, deliver the Increment with stubbing.
2. Continue to have specialists deliver fully-integrated Increments. Gradually facilitate the team to organize their work to fully leverage these special skills. If required, they can enhance everyone's domain of expertise, so that everyone is productive as a team without idle time. (CORRECT)
3. Let the Project Manager coordinate their staffing needs and plan partial allocations to avoid idle time.

Explain:

> An individual can be cross-skilled, but it is not mandatory.A Development Team may contain various specialists needed to achieve the Sprint Goal. For example, there could be Programmers, Testers, UI modelers, Architects, Technical documenters, etc. But there is NO special name for any of them. Irrespective of their field of specializations, every one of them is called a Developer.While the specialist should identify themselves as part of team and learn additional skills to collectively deliver the Sprint Goal, there is no barrier to personally enhancing their vertical competencies and continue to specialize.For example, a team member with architecting skills may be added if the work requires that skill. Though this team member will contribute to the architectural aspects of the effort, he or she along with the entire team is responsible for the progress of the collective Sprint Goal and is expected to help the team to reach that goal. In the process, this team member may enhance skills other than architecting to become cross-functional too.Individual Development Team members may have specialized skills and areas of focus, but accountability belongs to the Development Team as a whole. The SprintGoal binds the Team together. Scrum recognizes no titles for the Development Team members other than Developer, regardless of the work being performed by the person.Scrum recognizes no sub-teams in the Development Team, regardless of particular domains that need to be addressed like testing or business analysis.

Question 38: Select all that apply. In Scrum, the person playing the business role, the Product Owner,

1. Hands over the Product Backlog to the Development Team and leaves the team alone. They only meet up again during final product delivery
2. Freezes the Product Backlog and tries not to change it
3. Works only with designated people in the Development Team
4. Continuously collaborates with the Development Team, sometimes almost every day (CORRECT)

Explain:

> The Product Owner continuously evolves the ordered list of everything that may be needed in the product. This list is called the Product Backlog. Since this list evolves based on frequent new insights, it requires the Product Owner to continuously work with the team to communicate these changing needs and also to clarify questions about ongoing work. The members of the Development Team are called Developers irrespective of their primary skill set. They perform all the development work required to convert the business needs into a useable product feature.For example, in a Development Team that builds software, each of the Developers could be a specialist in an individual area. But there is no special role assigned to them. As needed, the Developers can take up any activities such as user interface design, design, coding, testing, integrating, user manual creation, etc. to reach the goal. This arrangement is to reduce the role overhead and people working alone in silos.However, while the specialists should identify themselves as part of the team and learn additional skills to collectively deliver the work, there is no barrier to person-ally enhancing their special competencies and continuing to specialize. Scrum – A new way of optimizing work and maximizing valueIn waterfall, batching and big bang releases are common.Accumulating developed product features over a long time period without releasing them for use is called batching. Usually they are released together as a batch in a big-sized release (big bang fashion) in one or two limited production releases.By batching the features for a combined release, the waterfall plan treats all of these features as having the same value with no sensitivity to time.The truth may be that different features within a batch may have different business values. So, it will make significant business sense to rank (order) the features by their business values and start delivering those more valuable features earlier.By having the team work on features with the highest business value first, we earn more return on the team's work. Early developed features can be released to production if it makes business sense.There is an exclusive business role in the Scrum Team that is responsible for keeping the product features ordered. This role is the Product Owner.The Product Owner feeds the list of ordered product features to the team. By ensuring that the team works on higher value features first, and constantly working with them to clarify the business questions, they can optimize the team's work against value.The Product Owner can choose

> to deliver the completed features to production often instead of batching them. By using the feedback obtained from the production usage and any market changes, the Product Owner can adjust the product features and their order to maximize the business value and control risk.Product Owner We do have business managers even today. What is so different with the Product Owner?The Product Owner does not resort to a traditional working style where they define all the product needs at one go based on today's knowledge, and then toss a big requirements document over the "fence" to another team for development.The Product Owner is much more than a traditional business manager in two aspects:

Question 39: Product Backlog is ordered by

1. Individual Product Backlog Item's value
2. Whatever increases the overall value of team's work (CORRECT)
3. Priority of senior management

Explain:

> There is no direct answer. Choose the next best choice.

Question 40: Building complex products like software is a complex adaptive problem. Complex adaptive problems are

1. Stochastic
2. Hard to predict even using the history of the past (CORRECT)
3. Deterministic

Explain:

> Complex adaptive problems are hard to predict. At the initial stage of a project, planners use techniques such as Critical Path Method (CPM) to scientifically calculate the duration of the project. These calculations need some inputs such as product definition, people productivity, etc. The planners make assumptions to arrive at these inputs.Since the project is at the initial stage, the cone of uncertainty is high and hence the assumptions have high probability of becoming incorrect.So, if these assumptions are incorrect, output from the scientific calculation will also be incorrect. Therefore, project planning in the waterfall method is based on scientific calculation, but it does not mean that this planning is foolproof and risk proof. Scientific calculations and predictions are helpful when the problems are deterministic, stochastic, etc. In these types of problems, the future behavior or result can be modelled or predicted.Complex adaptive problems are not deterministic. Deterministic requires the elements of the problem to be either constant or follow a definite mathematical model. The elements of complex adaptive problems are not predictable and do not follow a definite mathematical model.Complex adaptive problems are also more complicated than being stochastic.While the elements of stochastic problems are random, the range or the boundaries of variation can be predicted. This boundary can be derived from data of the past. An example is the toss of a coin. Though the result of the coin toss is random, it is always within the boundary of either head or tail. The elements of complex adaptive problems are not only random, but their random behavior cannot be modeled based on the past.In complex adaptive environments, what will happen is unknown and hard to predict. Predictions based on scientific approach may need extensive resources and recursive fine-tuning to arrive at an optimal plan. For planning one project, such a huge investment in scientific modeling is usually not justified.

Question 41: The support of the organization or senior management

1. Is not needed for Scrum implementations.
2. Is needed to support the Product Owner to maximize the product value and the ScrumMaster to coach and implement Scrum. (CORRECT)
3. Is not needed because there is no scope for management in Scrum.

Explain:

> Organization or Senior Management is not a Scrum role. This is an entity external to the Scrum Team, who sets the larger strategies of organizational change.The organization should have guidelines about how to structure the Scrum Development Teams, so it will empower these teams to organize and manage their work If the organization is yet to

> understand the Scrum concept, it is the responsibility of Scrum Master to coach the organization on one side, and coach the Development Teams to work successfully in such organization, on the other side.The organization can expect the Scrum Master to coach the employees about Scrum and empirical product development, plan Scrum implementations, collaborate with other Scrum Masters for organization-wide Scrum adoption, and increase the productivity of Scrum Teams.The organization should understand the vital role played by the Product Owner and hence respect their decisions, so that the Product Owner can succeed in their role. The organization should provide the Product Owner with information that will help them increase the value of the product and capabilities.

Question 42: The estimation method recommended by Scrum is

1. Yesterday's weather.
2. None of the above. (CORRECT)
3. T-Shirt Sizing.
4. Poker Game.

Explain:

> Any technique that is useful can be chosen by the Development Team.Scrum clearly defines each event, role, artifact, rule, and those that constitute the Scrum framework. However, there are many subtechniques of product development that are left undefined intentionally.While it is optional to apply the technique that works for the team, Scrum does not bind the Scrum users to specific subtechniques. The Scrum Team is expected to figure out the best methods, techniques, and practices themselves. Scrum is light weight and can be implemented without the need of subtechniques. Some of the experienced Scrum practitioners working in an environment where teams "filled" these intentional gaps with some techniques tend to associate these techniques with Scrum. Here is an indicative list of those that are not prescribed by Scrum but are often mistaken as a definitive part of Scrum.Scrum does not prescribe a specific format for how the Product Backlog Items (requirements) are defined. Many Scrum Teams use the format of User Stories to define the Product Backlog Items, and find them useful. A User Story format looks something like the followingAs a , I would like , so that I can .Scrum does not prescribe a specific estimation technique. Often the practice of estimation by the Planning Poker card game is associated with Scrum. Planning Poker is a practice where a Development Team along with the Product Owner estimates the Product Backlog Items as described below.If there are only marginal differences between their estimates, they arrive at a consensus by discussion.These are the visual representations of the Sprint Backlog and the current work status. These boards are useful in making the information publicly available on the product development floor. Also, they can be used to increase the efficiency of managing the work items through the lean principles like 'Flow', 'Limit the Work in Progress', etc. Lean is another powerful philosophy of product development like Agile.Though many Scrum Teams may use this, the task board or Kanban board is an optional implementation in Scrum.

Question 43: Since the team is self-organized in Scrum and they manage their own work, they do not need any planning to perform their development work.

1. False (CORRECT)
2. True

Explain:

> There is still a planning activity in Scrum. Though there is no detailed long-term planning for a complete project, the planning is done for short-term Sprints. This plan is reviewed and adjusted almost every day through the Daily Scrum.This is a more realistic approach and continuous planning allows the team to be agile enough to pro-actively look for changes and respond to the changes.At the end of Sprint Planning, the Development Team starts the development work.The team discusses the work items in the Sprint Backlog and collaboratively decides who will work on what task. Though they may work individually on an item, there is no sole ownership of a Sprint Backlog Item by an individual team member.This is to ensure that there is increased transparency of work within the team, without any individual boundary.Development work may include the necessary product engineering practices. The Development Team is expected to be cross-functional enough to have all the skills needed for engineering the product Increment without any external help.A Product Backlog Item is considered to be completely done only if it meets the conditions defined in the definition of "Done."This is one of the major problems new Development Teams face. Usually there are many constraints to creating a fully functional Increment due to the way an Organization may work today, and many of these constraints

> will block the Development Team's progress. Some examples in the software development process include:• The development cycle needs to be followed by a lengthy testing cycle• The required skills are not available within the team• The Product Backlog Item was not sufficiently decomposedFollowing the Scrum rules helps to avoid many such blockers. For example, staffing the team such that it becomes cross-functional eliminates the problem of lack of required skills. Refining the Product Backlog ahead of Sprint Planning helps to have granular Product Backlog Items that are less complex to develop.Yet the teams will face many issues that cannot be readily addressed by just following Scrum. The lengthy test cycle is an example.One of the primary responsibilities of the Scrum Master for new teams is to coach them in the art of working to produce a useable Product Increment within short Sprints. In addition, the Scrum Master needs to coach the team to identify issues every day and learn to resolve those issues by themselves. The road to excellence is a journey, and the team needs to go through this initial learning with the Scrum Master's help.When there are issues that are outside the team's influence, they are called impediments. The Scrum Master needs to own these impediments and resolve them. For example, the lengthy testing cycle example above may be an organizational-level constraint that the Scrum Master needs to work with the larger Organization to find an alternative solution.Though the Project Manager role is not there, the traditional job of project planning and control is still performed. The difference is that the planning is continuous, and the entire team performs the planning and control instead of leaving that to a management position. A Development Team • plans how the development work will be performed in terms of decomposing the work into work units. Decomposition for the first days of the Sprint happens in Sprint Planning.• tracks the progress of development work against the Sprint plan every day. The team may use tools like a Sprint Burn Down that shows how much work is left against the remaining time. This tracking and adjustment of daily plans happens in the Daily Scrum.• takes control and communicates actions if there is a variance between actual progress versus the plan.• continues this tracking->re-planning->communicating->controlling cycle everyday.

Question 44: A Development Team often gets some production support requirements in addition to the work in the Sprint Backlog. The team adapted their team composition and created a sub team to support these ad-hoc requirements.

1. The team can complete the production support as one team, since it is high priority, and then come back to the original Sprint work.
2. It is not okay since there cannot be sub teams within a Development Team. (CORRECT)
3. It is okay to create sub teams within a Development Team.

Explain:

> Every Sprint is meant for delivering a potentially releasable product Increment as required in the Sprint Goal. If an outside item is taking the team's time, it is treated as an issue. If the team is forced by any authority, the ScrumMaster needs to coach them about how Scrum works and facilitates removing this issue. Some teams may have special roles like an impediment manager. Sometimes they create a sub team for production support (Business as usual teams). However, Scrum is immutable and does not allow customization.

Question 45: Throughout the effort, who takes ownership of the Scrum events, sets-up the meeting for every event, and invites the required participants?

1. Product Owner
2. ScrumMaster
3. Scrum Team (CORRECT)
4. Development Team

Explain:

> The Scrum Team is a self-organized team. They manage and organize how they perform their work and are collectively the owner of their work. The Scrum Team together comes up with the shared understanding of when to have these events. By bringing in this self-management and regularity, the team avoids the complexities of meeting arrangement and attendance associated with traditional meetings. The ScrumMaster may facilitate this only during the early period and coach the team to do it by themselves later.

Question 46: Hundreds of developers are identified for a Scrum work. Which two of the following may be appropriate considerations to form these developers into teams?

1. Each team must be a technical component team.
2. The team formation should seek input from the business side. (CORRECT)
3. Each team must be a business feature team.
4. Each team must be sized to reduce external dependencies with less internal communication issues. (CORRECT)
5. Each team must have a required number of technical leads.

Explain:

> There is no technical lead role in Scrum. Feature team, though a preferred practice, is not a mandatory requirement by Scrum. A technical component team increases dependency and reduces the ability for the team to produce a fully integrated working increment. Scrum.org provides a framework called Nexus to scale Scrum for large product development efforts. At Scrum.org, originally there was a Scrum practitioners Open which later was replaced with the Nexus open assessment. You can also practice the Nexus open assessment available at Scrum.org. It is not a “MUST DO” to prepare for the exam.Structuring a large team into feature teams helps minimize or eliminate dependencies. Dividing on other basis such as a technical component is called layer teams or component teams. The advantages of feature teams are• They are usually self-sufficient and hence have low communication overheads with external teams.• There will be increased opportunity for direct business collaboration.• Any dependencies that still exist between feature teams are made transparent and planned in an event called Scrum of Scrums.

Question 47: In self-organized teams, the work is divided between individual team members.Each team member takes accountability for the progress of only their work.

1. True
2. False (CORRECT)

Explain:

> In self-organized teams, the work is decomposed into work units. Individual team members take some work units. However, the entire team is accountable for the overall progress of reaching a common goal. Following figure shows the Development Team that is part of a Scrum Team. Just like the Scrum Team, the Development Team within the Scrum Team is also cross-functional and self-organized.In a Scrum Team, there is no role other than the three previously mentioned roles. This means there is no Project Manager.Building complex products is a knowledge game. The team involved in this game contains a knowledge-based workforce. If they face challenges in their work, they are knowledgeable enough to collaborate in innovative ways to address them.However, this ground-level team needs to be structured and empowered to become self-organized and cross-functional.One hindrance to self-organization is how project teams are traditionally managed.Usually, a team is assembled with individuals having some unique skill needed for the product development. These individuals are expected to wait for tasks to be assigned to them by a manager. Managers command these individuals with direction and control. Such leadership is known as command and control leadership.Once their task is completed, the individuals wait for the next task to be assigned. Instead of self-organizing as a team to solve the challenges, they usually just limit their contribution at individual level and execute what is asked.Another pitfall with command and control leadership is that more often the project decision and directions will reflect the subjectivity of one commanding individual.But, in complex adaptive problems the changes and challenges are generally multi-dimensional. They require multi-dimensional analysis to comprehend and respond.For such multi-dimensional thinking and action, it is desirable to leverage the collective wisdom of all members of the team, rather than just one commanding individual.Therefore, there is no commanding and controlling manager within Scrum. The Development Team, which is the team on the ground that knows the reality, takes full ownership and self-organizes their work.

Question 48: During a Sprint Review, the stakeholders notice that the product development progress is not clearly visible and lacks transparency. Moreover, they are not able to understand the Team’s next steps. Who bears the primary responsibility for this status?

1. Scrum Team
2. ScrumMaster
3. Product Owner (CORRECT)
4. Development Team

Explain:

> The entire Scrum Team is responsible for “how they plan and perform their work.”So, if there is a question about who is responsible for the failure or success of the Scrum work, the answer is the Scrum Team for sure.The ScrumMaster of course needs to help the Product Owner in coaching techniques for better Product Backlog management, increasing the transparency of the Backlog, and more. So, the ScrumMaster’s responsibility is to coach the team to adhere to Scrum and its principles. However, the ScrumMaster does not bear the primary responsibility for those items that are clearly owned by a specific role.There are clearly defined responsibilities for each role. In this case, the question is who is responsible for a specific activity of Backlog management including its transparency. The following are guidance from Scrum Guide as to this subject:– The Product Owner is the sole person responsible for managing the Product Backlog.– Product Backlog management includes Ensuring that the Product Backlog is visible, transparent, and clear to all, and shows what the Scrum Team will work on next– The Product Owner is responsible for the Product Backlog, including its content, avail ability, and ordering– The Product Owner discusses the Product Backlog as it stands. He or she projects likely completion dates based on progress to dateSo, the best choice is the “Product Owner.” It is common for an organization to identify an existing business manager and staff them in the Product Owner role. While this is perfectly acceptable, the Product Owner role is significantly more empowered. This role also requires strong inclination towards a collaborative style of product development.No one is allowed to tell the Development Team to work from a different set of requirements, and the Development Team is not allowed to act on what anyone else says. Even the CEO of the organization cannot request the team to work on something else. Anybody wanting to change the priority must address the Product Owner.

Question 49: Not having the Daily Scrum will

1. Reduce the opportunity to create a status report.
2. Reduce the speed of development work.
3. Reduce the transparency of overall progress. (CORRECT)

Explain:

> Failure to include any of these Scrum events (including the Daily Scrum) results in reduced transparency and is a lost opportunity to inspect and adapt. In the Daily Scrum, the Development Team synchronizes the on-going activities and creates a plan for the next 24 hours (Daily Plan) to drive its development work.Also, any impediments are updated to the Backlog of impediments and made transparent, so others including the Scrum Master will know the details even if they do not attend the Daily Scrum.As a self-organized team, the Development Team is responsible for conducting the Daily Scrum. The Daily Scrum is held at the same time and place each day to reduce complexity – Doing something regularly at the same time and place facilitates people to get used to that as a second nature. Moreover, it simplifies the logistics.The Daily Scrum is a 15-minute time-boxed event irrespective of the size of the team or duration of the Sprint. Once initially agreed upon, the Development Team members gather for the meeting at the same time and place every day, without any special arrangements that are typically needed for traditional meetings.The Daily Scrum is an exclusive event for the Development Team. The ScrumMaster enforces the rule that only Development Team members participate in the Daily Scrum.As an exception, a Scrum Master can participate to observe the correct implementation or facilitate discussions. The Scrum Master or any individual does not lead or control the event. The Scrum Master t• ensures that the Development Team has the meeting and teaches the Development Team to keep the Daily Scrum within the 15-minute time-box.The Daily Scrum goes on irrespective of minor developments such as someone being away. In fact, the Daily Scrum is a key inspect and adapt opportunity used to identify any issues like an unexpected absence and adapt the next 24-hour plan to respond. This daily sync up increases the possibility of acting on issues soon enough and hence optimizes the probability of getting the work done to meet the Sprint Goal.Every day, the Development Team should understand how it intends to work together as a self-organizing team to accomplish the Sprint Goal and create the anticipated Increment by the end of the Sprint.Daily Scrums improve communications, eliminate other meetings, identify impediments to development for removal, highlight and promote quick decision-making, and improve the Development Team’s level of knowledge. This is a key inspect and adapt meeting.The team starts by discussing the progress thus far. This is done by inspecting the work done since the last Daily Scrum. Since the Sprint Backlog contains the work units with each of them showing the remaining work, the team can understand the progress from the remaining work.In addition, the Development Team members explain:This is not a status meeting for managers, so the team does not resort to any particular style, such as one individual asking these questions of the others.The team agrees on some ordering, preferably based on the Sprint Backlog plan, and voluntarily provides the status to rest of the team. Some teams may pass an object like a ball to each other, indicating that whoever has the ball talks. Such tactics are not part of

> Scrum but may be used by the team if they find them useful to increase collaboration and self-organization. If there are issues that the team can mutually solve with each other's help, the team agrees to collaborate on them. If there are impediments outside of their influence blocking the progress, they are captured and made transparent to the ScrumMaster.

Question 50: A Development Team gets into a situation where a conflicting team member's behavior causes issues to progress. Who is responsible for removing this issue?

1. Product Owner
2. Development Team (CORRECT)
3. Management
4. ScrumMaster

Explain:

> Think about who is responsible for identifying and removing different types of issues. The ScrumMaster is responsible for removing impediments outside the Development Team's influence. Also, they are responsible for causing change that increases the productivity of the Scrum Team.In this case, the issue faced by the Development Team is well within the influence of the Development Team to resolve. So, the ScrumMaster should coach the team to resolve such items themselves. If the ScrumMaster actively takes steps such as removing this person from the Team, it will lead to a diminished inclination of the Development Team to resolve internal problems for themselves in the long run.

Question 51: Select all that apply. Empiricism provides

1. Frequent opportunities to make informed decisions, thus reducing risk (CORRECT)
2. Frequent opportunities to discuss different possibilities (CORRECT)
3. Frequent opportunities to get information using which uncertainty can be completely eliminated

Explain:

> Empiricism is an alternative to waterfall to manage complexity and uncertainty. In waterfall, the risk of uncertainty accumulates over long cycles. The risk is reduced by the empiricism approach because it provides frequent feedback and course correction points. These points are where more information may be available to view different possibilities and make informed decisions. However, empiricism does not completely eliminate uncertainty. Scrum is a newer way or framework within which people can address complex adaptive problems. Scrum is founded on empiricism control theory. Scrum provides new set of terminology to define the framework.Empiricism theory is based on the concept that complex problems are hard to predict.Empiricism helps people to navigate uncertain complex problems. It requires them to take one step at a time, such as performing a small amount of work to gather experience.You can equate the traditional "trial and error" model to empiricism. Each iteration is a trial to solve a problem and gain more clarity. Based on the trial outcome and the newly found clarity, the next iteration is planned. Since each iteration is planned based on the new found clarity from the previous iteration, the risk of unknowns is gradually reduced over the iterations.Reducing risk increases the probability of meeting the goal.So, empiricism applies an iterative, incremental approach to optimize predictability and control risk.Empiricism through iterative incremental approach

Question 52: As a self-organized team, what can it manage? Select all that apply.

1. Managing some other teams
2. Managing their human-related aspects like leave, firing one of the team members, office dress code, etc.
3. Managing to support ad-hoc high-priority requirements from important executives
4. Managing their work to reach a common a goal (CORRECT)

Explain:

> Self-organized teams are empowered to organize and manage their work. However, the team cannot self-manage the human resource related aspects. They also cannot work from a different set of requirements outside the Product Backlog. Every Scrum Team usually works within a larger organizational ecosystem. Though Scrum does not have management roles like Project Managers, there is a shared understanding among Scrum Practitioners about the

> important role “Managers of Organization” play. These managers set and manage larger strategies, define operational units, structure self-organized teams, and help to resolve organization impediments to Agility.For any personnel issues within the team’s influence, such as personality conflicts, the self-organized team itself will resolve them. If the issue is outside their influence, such as human resource management functions of hiring, firing, compensation, and other legal aspects, they are handled by the appropriate human resource authority defined by the organization’s management.

Question 53: Having more than nine members on a Scrum Team

1. Is not recommended because the Scrum roles cannot be provided to everyone on the team.
2. Is not recommended because the empirical process behind Scrum may not manage the complexities associated with larger teams. (CORRECT)
3. Is good because there is more opportunity for cross training and backups.
4. Is good because a larger team increases productivity.

Explain:

> The source of the answer is a direct statement from the Scrum Guide: “Having more than nine members requires too much coordination. Large Development Teams generate too much complexity for an empirical process to manage”.

Question 54: A good guideline to differentiate Acceptance Criteria from the definition of “Done” is, “the definition of “Done” provides a checklist to take the Increment to a potentially shippable state, while the Acceptance Criteria focus on testing the business requirements.”

1. True (CORRECT)
2. False

Explain:

> The definition of “Done” is a standard to define the quality for the production release. Acceptance criteria are the specifications of the expected business behavior.The following table shows the relationship between the roles, events, and artifacts.It points out the creation and ownership of each Scrum artifact and the definition of “Done.”Sprint Starts – Sprint PlanningDaily ScrumOngoing Product Backlog RefinementSprint ReviewSprint Retrospective – Sprint Ends

Question 55: Select all that apply. In Scrum, the technical design of the solution is

1. Built one module after another with the Architect’s guidance
2. Initially created as a common architectural pattern by selected designers and architects and shared with others to build on top of it
3. Started with just enough design which emerges throughout the Sprints (CORRECT)
4. Provided focused attention through core design hours in the Sprint (CORRECT)

Explain:

> There is no Designer or Architect role in Scrum.Traditional projects create an upfront design: Traditionally, the entire technical design is created before development begins. This design is based on the current understanding of the business needs and technical solution patterns used in the past.Development Teams emerge the design throughout the journey: Development Teams do not create a big upfront design before they start Sprints. Instead they evolve the design.As stated earlier, Scrum is a container framework within which Scrum Teams can employ domain-specific engineering techniques. The guideline above is one approach under the concept of “Design Emergence.” Many teams also follow other variations. The skills required to emerge the design through constant refactoring is a separate subject.

Question 56: What are the roles in a Scrum Team? Select all that apply.

1. Project Manager
2. Architect
3. None of the above (CORRECT)
4. Programmer

5. Business Analyst
6. Operations Analyst

Explain:

> There are only three roles in a Scrum Team. Along with empiricism, Scrum aims to maximize the value of people working together. The vehicle of Scrum is the Scrum Team. It is a small team that has a clear focus on product ownership and has less complexity in the way it works.To enable this ownership and reduced complexity, Scrum lays down two strict rules:1. Reduce management-communication and role overhead by being self-organized:A Scrum Team plans, executes, and controls its own work without any one individual managing their work. The team contains only three roles: Product Owner, Scrum Master, and Developer . A team that manages its own work is called self-organizing.2. Take full ownership by being cross-functional: A Scrum Team must have a minimum of three and maximum of nine Developers so that the team can have all skills necessary to create the product. A team that has all the required skills to build the product is called cross-functional.Following figure shows the Development Team that is part of a Scrum Team. Just like the Scrum Team, the Development Team within the Scrum Team is also cross-functional and self-organized.In a Scrum Team, there is no role other than the three previously mentioned roles. This means there is no Project Manager.Building complex products is a knowledge game. The team involved in this game contains a knowledge-based workforce. If they face challenges in their work, they are knowledgeable enough to collaborate in innovative ways to address them.However, this ground-level team needs to be structured and empowered to become self-organized and cross-functional.One hindrance to self-organization is how project teams are traditionally managed.Usually, a team is assembled with individuals having some unique skill needed for the product development. These individuals are expected to wait for tasks to be assigned to them by a manager. Managers command these individuals with direction and control. Such leadership is known as command and control leadership.Once their task is completed, the individuals wait for the next task to be assigned. Instead of self-organizing as a team to solve the challenges, they usually just limit their contribution at individual level and execute what is asked.Another pitfall with command and control leadership is that more often the project decision and directions will reflect the subjectivity of one commanding individual.But, in complex adaptive problems the changes and challenges are generally multi-dimensional. They require multi-dimensional analysis to comprehend and respond.For such multi-dimensional thinking and action, it is desirable to leverage the collective wisdom of all members of the team, rather than just one commanding individual.Therefore, there is no commanding and controlling manager within Scrum. The Development Team, which is the team on the ground that knows the reality, takes full ownership and self-organizes their work.

Question 57: A Development Team decides that the frequency of Daily Scrum should be reduced to once a week

1. Such decisions need to be approved by the Team Manager.
2. The Development Team is self-organized. They can choose their practices.
3. The ScrumMaster should coach the team on the essentials of conducting Daily Scrums. (CORRECT)
4. Such decisions need to be approved by the Agile Coach.

Explain:

> Though individuals may report to some management authority on the “people aspects,” there is no exclusive manager for a Scrum Team. In Scrum, there is no role called Agile Coach.Self-organization is about the empowerment for the Development Team to decide how to get the development work done to meet the Sprint Goal. So, it is only limited choices they make about how to perform the development work. They are still subject to following other rules including following Scrum. As a guardian of the Scrum implementation, the ScrumMaster should coach the team on Scrum essentials.The fact that the Development Team is self-organized does not mean that there are no managers for team members. But they may be “people aspect” managers and not “product development work aspect” managers. These two types of management are explained below:

Question 58: The ScrumMaster is the manager of the Scrum Team.

1. True
2. False (CORRECT)

Explain:

> In Scrum, there is no exclusive team manager role like a Project Manager. There are project management activities in Scrum, but they are distributed among the three Scrum roles. The ScrumMaster manages Scrum deployment and coaches the team on Scrum. In Scrum, empiricism and self-organization drive the product development approach. A leadership role is introduced to teach and coach people about these concepts and other elements of Scrum.This leadership model is called servant leadership. The servant-leader does not take the lead in planning or controlling the development work. Instead, the servant-leader mentors the team to manage their work themselves within the Scrum framework.In Scrum, the person playing the servant-leader role is called the ScrumMaster.The ScrumMaster serves the team by coaching them to work together for a common goal irrespective of their individual skills. The ScrumMaster mentors theteam so that it becomes self-sufficient in their product development ownership.Such a self-sufficient team will frequently create working product increment, get early feedback in order to re-plan based on emerging insights, and solve the problems by their collective wisdom and collaboration.ScrumMaster is a management position in Scrum. ScrumMaster manages the Scrum Implementation. The ScrumMaster coaches the Scrum Team to realize their potential. They are not just teachers or coaches. They are responsible for many other activities that are instrumental in transforming teams into value creators.An example of a critical activity they play is- when the Scrum Team runs into issues that prevent it from achieving their goal and if these issues are outside the team's influence, the ScrumMaster owns these impediments and resolves them. The ScrumMaster also helps the organization to adopt Scrum, set the goals to improve the way of working in Scrum, etc.

Question 59: What causes a change to the Product Backlog?

1. The Product Backlog can be updated anytime by the Product Owner. Changes in business requirements, market conditions, or technology may cause changes to the Product Backlog. (CORRECT)
2. The Product Backlog is not updated when a Sprint is in progress. Changes to team size and estimations may cause changes in the Product Backlog.
3. The Product Backlog cannot be changed without a change request to the Product Owner.

Explain:

> Defining the definition of "Done," which can provide clarity on the required work standardWe have already discussed how the definition of "Done" provides a common understanding to the Scrum Team members about what it means for the work to be complete.In addition to being a standard for measuring completion, the definition of "Done" is a reminder to the Development Team about the need to account for all the end to-end work required to meet the conditions. Teams can use this information to find out how many items they can select during Sprint Planning. Who defines the definition of "Done"?If the Scrum Team is going to work on an existing Product or System, there should be an existing definition of "Done" that is a standard for any work performed on this Product or System. The team should start with that.If the definition of "Done" for an increment is part of a development organization's conventions, standards, or guidelines, all Scrum Teams must follow that as a minimum.If there is no existing definition of "Done," the Development Team must define the definition of "Done" as appropriate for the product.As Scrum Teams mature, it is expected that their definitions of "Done" will expand to include more stringent criteria for higher quality. What If multiple Scrum Teams are working on the same Product?If there are multiple Scrum Teams working on a system or product release, theDevelopment Teams on all of the Scrum Teams must mutually define the definition of "Done." Each Increment is additive to all prior Increments and thoroughly tested, ensuring that all Increments work together. It is not necessary for the definition of "Done" to be same but a mutually defined definition of "Done" should enable the combined Increments to be potentially releasable. Should the Product Owner approve the definition of "Done"?The Development Team defines the definition of "Done." It is essential for the entire Scrum Team including the Product Owner to be well aware of the definition.However, there is no need for approval from the Product Owner.While the Product Owner needs to be involved and made to understand the conditions, it is the Development Team's responsibility to define the conditions in a verifiable way because many of these conditions are usually about technical quality.For example, the Product Owner may want a condition such as "The Increment should be thoroughly tested because it will be released to production," and the Development Team may define it as "The Increment should pass all the automated unit tests with 95% code coverage." Can new teams define a relatively easy definition of "Done"? The purpose of each Sprint is to deliver Increments of potentially releasable functionality that adhere to the Scrum Team's current definition of "Done." Development Teams deliver an Increment with product functionality every Sprint. This Increment is useable, so the Product Owner may choose to immediately release it.The definition of "Done" should not be set with the objective of making it easy to meet but failing to qualify for production. Unless the Increment is potentially releasable, the Scrum Team cannot get feedback from actual usage. Diluting the definition of "Done" will hide the current weaknesses in Product Development.Given this, even a new team should define it such that the Increment will be production fit.

> However, the definition should contain conditions that are realistic to motivate the team. Then it can be continually improved by the maturing team's ability to perform all that is required. Having a realistic definition of "Done" for a new team means that the working Increment may have known bugs, but they are transparent between the Development Team and Product Owner. The total budget and number of Sprints are decided in which event?Parameters like timelines and budget are reviewed in the Sprint Review. Work standards, like definition of "Done," are reviewed in the Sprint Retrospective. However, Scrum does not clarify when these parameters are decided for the first time. Unless otherwise inferred through the question, it is safe to assume that they are defined before the first Sprint, at the time when just enough of a Product Backlog is put together. Rules:Backlog is used to describe the upcoming work on the product. A Product Backlog attribute that groups items may then be employed.

Question 60: In a traditional approach, _____ organizes and manages the team members work, and _____ is their management style.

1. Business Manager, People Centricity
2. Project Manager, Command and Control (CORRECT)
3. The team, Self-Organization

Explain:

> In a traditional model, the Project Manager controls the project budget, the project team members, and the project tasks. In Scrum, these activities are distributed between the three Scrum roles.Though the Project Manager role is eliminated, there are still management positions within Scrum. The Development Team collectively manages the project tasks and their own work. The Product Owner manages the business investment. The ScrumMaster manages how Scrum is implemented.As for the existing Project Manager, they can choose one of these management positions. However, they need to consciously choose the position with the understanding of the responsibilities involved. None of these management positions, such as Product Owner, ScrumMaster, etc., involve managing people or unilaterally controlling the project plan or tasks.Following figure shows the Development Team that is part of a Scrum Team. Just like the Scrum Team, the Development Team within the Scrum Team is also cross-functional and self-organized.In a Scrum Team, there is no role other than the three previously mentioned roles. This means there is no Project Manager.Building complex products is a knowledge game. The team involved in this game contains a knowledge-based workforce. If they face challenges in their work, they are knowledgeable enough to collaborate in innovative ways to address them.However, this ground-level team needs to be structured and empowered to become self-organized and cross-functional.One hindrance to self-organization is how project teams are traditionally managed.Usually, a team is assembled with individuals having some unique skill needed for the product development. These individuals are expected to wait for tasks to be assigned to them by a manager. Managers command these individuals with direction and control. Such leadership is known as command and control leadership.Once their task is completed, the individuals wait for the next task to be assigned. Instead of self-organizing as a team to solve the challenges, they usually just limit their contribution at individual level and execute what is asked.Another pitfall with command and control leadership is that more often the project decision and directions will reflect the subjectivity of one commanding individual.But, in complex adaptive problems the changes and challenges are generally multi-dimensional. They require multi-dimensional analysis to comprehend and respond.For such multi-dimensional thinking and action, it is desirable to leverage the collective wisdom of all members of the team, rather than just one commanding individual.Therefore, there is no commanding and controlling manager within Scrum. The Development Team, which is the team on the ground that knows the reality, takes full ownership and self-organizes their work.

Question 61: The Scrum Team is in the middle of a Sprint. The burn-down indicates that there is a big divergence between planned burn-down and actual burn-down. The inference is

1. The Development Team needs to re-plan as soon as possible. (CORRECT)
2. The ScrumMaster did not plan the Sprint properly.
3. There is less remaining work to do than originally anticipated.
4. There is more remaining work to do than originally anticipated.

Explain:

> The actual progress is different from what was forecast by the team. So, the team has to re-plan to meet the Sprint Goal. Other answers are incorrect because though there is a divergence, there is no indication if the team is ahead or behind.

> Also, the ScrumMaster is not the owner of the planning. The Scrum Guide touches upon burn-down on a fleeting note only with no description. Answering this question requires additional knowledge beyond that description.

Question 62: In Scrum, the usage of a forecast tool like a Burn-down Chart is a fool-proof way of estimating the completion of product development.

1. Incorrect. If the Scrum Team is highly disciplined in updating the Burn-down Chart, then this could be true.
2. Incorrect. The Burn-up Chart is the better alternative.
3. Incorrect. Such practices, though useful to some extent, do not replace the importance of empiricism. (CORRECT)

Explain:

> Burn-up and Burn-down Charts have proven useful. However, these do not replace the importance of empiricism. In complex environments, what will happen is unknown. Only what has happened may be used for forward-looking decision making. The Sprint Backlog is a plan with enough detail as a reference. Using this reference, any changes in progress can be understood on a regular basis. This change in progress is inspected and any deviations are acted upon.The team may optionally use a technique like a Sprint Burn-down to project the trend of completion. A Sprint burn-down is not mandatory but may be used if the team finds value.Sample of Sprint Burn-down ChartThe tool Sprint Burn-down Chart shows the total work remaining in the Sprint. Its format is usually a graph containing the days on the x-axis and the work on the y axis. Using a Sprint Burn-down Chart, the team tracks the estimated remaining work to meet the Sprint Goal.Based on the findings, the team forecasts the work that could be done before the next Daily Scrum. Any adjustments identified for the next 24 hours (Daily Plan) are updated in the Sprint Backlog.Not necessarily. At any point in time during a Sprint, the total work remaining in the Sprint Backlog can be summed. At a minimum, the Development Team tracks this total work remaining in every Daily Scrum to project the likelihood of achieving the Sprint Goal. The Development Team can track the remaining work at any time throughout the Sprint.The highest priority of the Development Team is to complete the Sprint Goal.Impediment refers to any problems faced by the Development Team that stops or blocks their planned progress towards the Sprint Goal. Impediments threaten the completion of the Sprint by the pre-set date.In Scrum impediments are continuously identified throughout the Sprint, and they are made transparent during the Daily Scrum. The following are guidelines that the Development Teams follow whenever they face impediments:Note: The Development Team can reach out to technical/domain people outside the Scrum Team for help. However, later in the Sprint Retrospective, they need to inspect why they could not do it themselves. They need to identify the improvements necessary to make them truly cross-functional and self-sufficient.

Question 63: The architectural features of the product need to be

1. Completely designed upfront before the Sprints.
2. Decided at least at a skeleton level in Sprint zero.
3. Evolved along with the Sprint deliveries. (CORRECT)

Explain:

> Some teams customize Scrum to include an iteration called Sprint zero before the first Sprint to do the initial design. This is the replacement of the traditional “Big Upfront Design” of waterfall. Such practices defeat the purpose of empiricism.Many professionals with on the job Scrum experience may have seen a Sprint called Sprint zero. This Sprint zero is created to accomplish some upfront preparations before the other Sprints. Some of the upfront preparation includes tasks such as setting up the work environment, staffing people, etc. This Sprint zero will not produce a working Increment. This is common in many organizations following Scrum. However, Scrum does not endorse a Sprint that is not intended to create a potentially releasable Increment.

Question 64: In Scrum, the servant-leader of the self-organized team is the new name for the old Project Manager role.

1. True
2. False (CORRECT)

Explain:

> The servant-leader of the self-organized team manages the implementation of principles like Self-Organization, Theory of Empiricism, etc. by teaching and coaching the team. The servant-leader is neither a Project Manager nor a People Manager. In Scrum, empiricism and self-organization drive the product development approach. A leadership role is introduced to teach and coach people about these concepts and other elements of Scrum.This leadership model is called servant leadership. The servant-leader does not take the lead in planning or controlling the development work. Instead, the servant-leader mentors the team to manage their work themselves within the Scrum framework.In Scrum, the person playing the servant-leader role is called the ScrumMaster.The ScrumMaster serves the team by coaching them to work together for a common goal irrespective of their individual skills. The ScrumMaster mentors theteam so that it becomes self-sufficient in their product development ownership.Such a self-sufficient team will frequently create working product increment, get early feedback in order to re-plan based on emerging insights, and solve the problems by their collective wisdom and collaboration.

Question 65: Select all that apply. Who performs inspections in Scrum events?

1. Invited Stakeholders (CORRECT)
2. Technical Domain Experts
3. Senior Management
4. Development Team (CORRECT)
5. Corporate Audit Group
6. Product Owner (CORRECT)

Explain:

> In Scrum, inspections are performed by those doing the work and those who have knowledge of the product. In addition to the Development Team, the Product Owner and invited stakeholders inspect the product Increment during the Sprint Review.

Question 66: Transparency, Inspection, and Adaptation are the three pillars of

1. PDCA
2. Six Sigma
3. Empirical Process Control Theory (CORRECT)
4. Lean

Explain:

> Irrespective of the domain-specific product building techniques applied by different Scrum Teams, all teams follow the same Scrum framework. Scrum is founded on empiricism, and three pillars uphold every implementation of empiricism.Scrum events are built around these three pillars. If these pillars are properly followed, Scrum will be healthy.The three pillars of empiricism areBy transparency, the significant aspects of the work must be visible to those responsible for the outcome.Team has collective responsibility to make the adjustments as soon as possible to minimize further deviation.Other than the Sprint itself, which is a container for all other events, each of the other four events in Scrum is a formal opportunity to inspect and adapt. These four events are predefined points of inspection to understand what has happened. In every Scrum event where inspection is performed, there can be an opportunity to adapt and respond. The following picture shows the events of transparency, inspection, and adaptation.Pillars of Empiricism

Question 67: In the waterfall methodology, the duration of the activities, like development, testing, etc. are

1. Never decided upfront
2. Predicted using some calculations based on “today’s weather” (CORRECT)
3. Planned to be fixed irrespective of any calculation (time boxed)

Explain:

> The waterfall activities are estimated and calculated well in advance based on today’s knowledge and assumptions. Their duration will vary depending on the calculations. They are not time boxed; they do not have fixed durations.

> Organizations create strategies for business purposes. Some of these strategies aim at building product capabilities. For example, a software product building strategy may include a Customer Relationship Management System, Billing and Payments, Mobile Channel, New Product Introduction, etc.Many organizations use a process methodology called waterfall in their projects to build products. Two types of people are needed to define the business and development aspects of project plans.The business people: They define what the product should do. To define the product needs, they make long-term predictions about the future. Some examples of predictions include what the value of the product will be, how it will be received in the market, and more importantly what that market will be when the product is actually released. Predictions are based on many assumptions and projections built on what is known today, which may be years before the product is actually released.The project managers or planners: They plan how to build the product. Based on the product needs deduced from the business predictions, they come up with a sequence of activities like Analyzing, Designing, and so on. They also predict (estimate) the future cost and time of these activities to find the total project cost and time. Such estimations are based on many assumptions and future projections of the product needs, people competency and behavior, project technology, etc.The outcome from the waterfall-based project planning is a detailed plan.Later, during the execution of this plan, future changes may invalidate the current plan. Such changes may require re-planning project activities, sometimes again from product definition, and re-doing all the activities. Such revisiting, re-planning, re-doing, is called as Iterating. In waterfall, iteration is seen as the result of bad planning. So, when people in waterfall encounter a change, they reactively go through an elaborate change control process to resist the change, to keep the original plan intact.A waterfall-based project plan expects that the sequence of steps in the plan will go forward without requiring changes. They resist changes when they do occur. So, the plan is designed such that the activities only go forward without iterating back again, and hence the name waterfall. It is just a waterfall, the water falls only forward, not backward. Waterfall way of building products

Question 68: A Development Team has created the Sprint Backlog in the form of a task board. What is your inference?

1. The Sprint Backlog contains the Product Backlog Items for the current Sprint and the plan to meet the Sprint Goal. The team can choose to represent it in any form that makes sense. (CORRECT)
2. It is okay to have it in task board format, but it must be ensured that it follows Kanban guidelines.
3. The ScrumMaster must advise the team to create a proper Sprint Backlog in the form of a matrix of the selected Product Backlog Items, related tasks, estimations, owners, and expected completion dates.

Explain:

> Scrum clearly defines each event, role, artifact, rule, and those that constitute the Scrum framework. However, there are many subtechniques of product development that are left undefined intentionally.While it is optional to apply the technique that works for the team, Scrum does not bind the Scrum users to specific subtechniques. The Scrum Team is expected to figure out the best methods, techniques, and practices themselves. Scrum is light weight and can be implemented without the need of subtechniques. Some of the experienced Scrum practitioners working in an environment where teams “filled” these intentional gaps with some techniques tend to associate these techniques with Scrum. Here is an indicative list of those that are not prescribed by Scrum but are often mistaken as a definitive part of Scrum.These are the visual representations of the Sprint Backlog and the current work status. These boards are useful in making the information publicly available on the product development floor. Also, they can be used to increase the efficiency of managing the work items through the lean principles like ‘Flow’, ‘Limit the Work in Progress’, etc. Lean is another powerful philosophy of product development like Agile.Though many Scrum Teams may use this, the task board or Kanban board is an optional implementation in Scrum.Scrum does not prescribe a specific format for how the Product Backlog Items (requirements) are defined. Many Scrum Teams use the format of User Stories to define the Product Backlog Items, and find them useful. A User Story format looks something like the followingAs a , I would like , so that I can .Scrum does not prescribe a specific estimation technique. Often the practice of estimation by the Planning Poker card game is associated with Scrum. Planning Poker is a practice where a Development Team along with the Product Owner estimates the Product Backlog Items as described below.If there are only marginal differences between their estimates, they arrive at a consensus by discussion.

Question 69: The role of the ScrumMaster with respect to the Scrum artifacts is:

1. Coach the Team to increase the transparency of the artifacts (CORRECT)
2. Decide the format of the artifacts and ensure that the Team follows it
3. Owner of the artifacts and responsible for having them up to date

Explain:

> Rules:The ScrumMaster need not be a core technical member. They can be full time or part time for a Scrum Team. They are usually a ScrumMaster for more than one Scrum Team in parallel.It is mandatory for the ScrumMaster to participate in all events except the Daily Scrum.

Question 70: A Development Team is requested by an important stakeholder to help them with some external task because it is urgently required by the organization's board. The team referred them to Product Owner. In this case, the ScrumMaster

1. Should do nothing, since the team's action was correct. (CORRECT)
2. Should coach the team to support senior management requirements.
3. Should form a sub-team that can take up such external requests

Explain:

> No one is allowed to tell the Development Team to work from a different set of requirements, and the Development Team is not allowed to act on what anyone else says. Who should play the Product Owner role in contract efforts?A Product Owner is not necessarily the customer. If the project is a contract work performed by a service organization, a person within the service organization can play the Product Owner role and represent the customer.

Question 71: Scrum effectively limits the risk of unknowingly doing something wrong by

1. Using short iterations called Sprints (CORRECT)
2. Having multiple checkpoints and thorough review by senior management at those checkpoints
3. Having a detailed and extensive risk management plan

Explain:

> At the end of each Sprint, the team will get feedback about the outcome from the stakeholders and users to understand if their work was worthwhile. If the work out-come is identified as a waste, the cost spent is limited only to that of the weeks incurred in the Sprint. This feedback is a control and can be used to plan better for the next Sprint. In other words, the risk of pursuing a wrong direction is limited to the cost of one Sprint.

Question 72: Select all that apply. Who must participate in Sprint Review?

1. Scrum Team (CORRECT)
2. Customers
3. Users
4. Technical and domain Experts
5. Stakeholders

Explain:

> Scrum has a specific meaning for the term 'stakeholder', which refers to people such as customers, users, and all those who have the commonality of having a specific interest and knowledge in a product. The stakeholder is not a Scrum role.However, they influence the product development direction when invited by Product Owner to participate in the Sprint Review.Before starting the Sprints, it is highly useful to identify the stakeholders with whom the Scrum Team needs to work. There is no formal artifact to record such information. The stakeholder's information can be publicly displayed in the workplace of the Team. Apart from the Scrum Team, stakeholders must participate only if they are invited by the Product Owner. Technical and domain experts are not stakeholders. If one of the options is 'invited stakeholders', it is a correct answer and needs to be selected along with 'Scrum Team'. What can they expect from Scrum Teams?

Question 73: Which is true?

1. The Retrospective focuses on the product, and the Sprint Review focuses on the Scrum Team's process.

2. The Retrospective focuses on the Scrum Team's process and people, and the Sprint Review focuses on velocity.
3. The Retrospective focuses on the Scrum Team's process and people, and the Sprint Review focuses on the product. (CORRECT)

Explain:

> The outcome is a list of identified improvements that will be implemented in the next SprintThe Sprint Retrospective is an opportunity for the Scrum Team to inspect itself and create a plan for improvements to be enacted during the next Sprint.The ScrumMaster participates as a peer team member in the meeting from the accountability of the Scrum process. The ScrumMaster or any individual does not lead or control the event. The ScrumMaster ensures that the event takes place and that attendants understand its purpose and teaches all to keep it within the time box. This is a three-hour time-boxed meeting for one-month Sprints. For shorter Sprints, the event is usually shorter.The Scrum team inspects how the last Sprint went with regards to people, relationships, process, and tools. It identifies and orders the major items that went well and potential improvements. It also creates a plan for implementing improvements to the way the Scrum Team does its work.The ScrumMaster encourages the Scrum Team to improve its development process and practices to make it more effective and enjoyable for the next Sprint.The changes must still occur within the Scrum process framework.No, the Product Increment is already reviewed by the Scrum Team and stakeholders in the Sprint Review. The Retrospective is about improving the way the product is built. It is not only the improvements to how Scrum is implemented by the team, but also the engineering practices like coding, testing, integration, deployment, etc.During each Sprint Retrospective, the Scrum Team plans ways to increase product quality by adapting the definition of “Done” as appropriate.By the end of the Sprint Retrospective, the Scrum Team should have identified improvements that it will implement in the next Sprint. Implementing these improvements is the adaptation to the inspection of the Scrum Team itself.The Scrum Team can make improvement plans on development process and practices, but it cannot change the fundamentals of the Scrum framework itself.

Question 74: The Sprint Backlog is modified throughout the Sprint. As soon as a new task is identified,

1. The Product Owner adds it to the Sprint Backlog and communicates it to the Scrum Team.
2. The ScrumMaster adds it to the Sprint Backlog and communicates it to the Scrum Team.
3. The Development Team adds it to the Sprint Backlog and communicates it to the Scrum Team. (CORRECT)

Explain:

> The Sprint Backlog belongs solely to the Development Team. The Sprint Backlog is maintained from Sprint Planning until the Sprint Review.Athough it starts with some detail, the Sprint Backlog emerges during the Sprint as the Development Team learns more about the work and modifies the Sprint Backlog accordingly.The Sprint Backlog belongs solely to the Development Team. Only the Development Team can change the Sprint Backlog.As work is performed or completed, the Development Team updates the estimated remaining work.The Development Team works through the plan and learns more about the work needed to achieve the Sprint Goal. The team may find that they under-estimated or over-estimated a Product Backlog Item. It is absolutely normal. As new work is required, the Development Team adds it to the Sprint Backlog. When elements of the plan are deemed unnecessary, they are removed. The Development Team modifies the Sprint Backlog throughout the Sprint, and the Sprint Backlog emerges during the Sprint.

Question 75: Which estimation unit must be used by the Development Team for the work needed to convert the selected Product Backlog Items into a working product Increment?

1. Ideal Hours
2. Story Points
3. Function Points
4. Any useful sizing technique (CORRECT)

Explain:

> The work can be of varying size or estimated effort. Note the emphasis on the rule that only the Development Team finalizes how much they can develop within that Sprint. No one else can persuade them with different expectations.At Topic two, the second phase of Sprint Planning, the Development Team decides how it will build this functionality into a

> “Done” product Increment during the Sprint.The Development Team usually starts by designing the system and identifies the work needed to convert the selected Product Backlog Items into a working product Increment. Based on the estimate of the work, the Development Team plans enough work to match the available capacity. If the Development Team determines it has too much or too little work, it may renegotiate the selected Product Backlog Items with the Product Owner.The Product Backlog Items selected for this Sprint plus the plan for delivering them is called the Sprint Backlog.By the end of Sprint Planning, the Development Team should be able to explain to the Product Owner and Scrum Master how it intends to work as a self-organizing team to accomplish the Sprint Goal and create the anticipated Increment.The Sprint Backlog increases the transparency of information about work planned and performed during the Sprint.It is a highly visible, real-time picture of the work that the Development Team plans to accomplish during the Sprint.Content: Product Backlog Items in scope for the Sprint (What) and the Development Team’s plan for realizing the Sprint Goal (How). Each plan item has a description and estimate. The Sprint Backlog is also called a Forecast.Format: Nothing specific, but each item must have a description and estimate.Sample Sprint Backlog

Question 76: A Development Team member is requested by an important stakeholder to help them with an urgent and important task outside the Sprint Goal. The Team member set aside the Sprint work for the day and instead helped with this request.Which statement best describes the Team member’s action?

1. The Team member has violated Scrum rules by not consulting with his manager.
2. The Team member has gone the extra mile and must be rewarded.
3. The Team member did not live by the Scrum value of focus. (CORRECT)

Explain:

> The Scrum value of focus helps to avoid doing other things not related to the Sprint Goal. The Team member is expected to live the Scrum value of focus by prioritizing and completing the Sprint work to achieve the goals of the Scrum Team.Scrum values are a set of fundamental qualities underpinning the Scrum framework. The older versions of the Scrum Guide did not contain these values.Later the authors regarded these values as an important common denominator to develop better software and hence added them to the latest Scrum Guide 2016.Scrum Teams live by five values: commitment, courage, focus, openness, and respect. Being proficient in living these values brings the Scrum pillars of transparency, inspection, and adaptation to life and builds trust for everyone. The Scrum Team members learn and explore these values as they work with the Scrum events, roles, and artifacts. These values are seen as another checkpoint to com pare the behavior within the Scrum Team to see if the behavior reflects the understanding or just the mechanics.The five values of Scrum are:Commitment of every team member to achieve the goals of the Scrum Team. Commitment in following the pillars of empiricism and self-organization and using them to achieve the goals.Courage to work on tough problems. Courage to do the right thing by accepting that the future cannot be predicted and responding to emerging change. Courage helps everyone to be grounded in reality, not giving into personal pride.Focus of the team on prioritizing and completing the Sprint work to achieve the goals of the Scrum Team. Focus helps to avoid doing other things not related to the Sprint Goal.Openness of the Scrum Team and its stakeholders in expressing and facing the facts and truths about all the work and challenges with performing the work, there by increasing transparency. Openness to collaborate with others with the highest amount of transparency.Respect each other as capable and independent people so that it can provide a trustworthy environment to learn and share.

Question 77: In the middle of the Sprint, a Development Team finds that they have more room for additional work. They decide to change the Sprint Backlog by adding a few more Backlog Items from the Product Backlog. Who should be present to decide the additional work and accordingly modify the Sprint Backlog?

1. Product Owner (CORRECT)
2. Development Team (CORRECT)
3. Senior members of the Development Team
4. ScrumMaster
5. Scrum Team

Explain:

> Nobody can change the Sprint Backlog other than the Development Team. So they should be present. The Product Owner is responsible for optimizing the value of the Development Team’s work and is needed to explain the content of the Product Backlog and give mutual consent on the next work. So they also need to be present.Rules

Question 78: Product Backlog is ordered by

1. Whatever increases the overall value of team's work
2. Individual Product Backlog Item's value
3. whatever is deemed as appropriate by Product Owner (CORRECT)

Explain:

> Direct answer is there.

Question 79: Select all that apply. Before starting the first Sprint, what needs to be in place?

1. Completed System Architecture
2. Availability of the Project Manager
3. Staffed Scrum Team (CORRECT)
4. A complete Product Backlog capturing detailed product needs
5. Just enough Product Backlog Items with business ideas for the first Sprint (CORRECT)

Explain:

> There are no preconditions for the first Sprint. The availability of a Scrum Team and a list of business ideas for the first Sprint are enough to start the Sprint. Scrum is a container framework, with a focus on collaboration, within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value. Building a product using Scrum is a discovery process that starts with just enough preparation. This may sound odd to those who have planned “Projects in traditional methods.” In a traditional approach, a lot of preparation is required before the team starts the development work.Traditionally, the Project Manager needs to forecast the budget, schedule, staffing plan, risk management plan, quality plan, and communication plan based on the project scope.Scrum does not take such an approach. It does not attach value to plans and artifacts that are based on long-term assumptions. It starts with just enough preparation and pursues a “value discovery and maximization” journey. Therefore, Scrum is a journey and cannot be called a “Project” in the traditional sense.The inputs to the first Sprint are the Product Backlog and projected Sprint capacity of the Development Team. The Product Backlog may contain only the initial business ideas. The projected capacity of the team is only a guess at this point. It will be refined over the upcoming Sprints as new clarity emerges based on past performance.The following picture shows the lifecycle of Scrum. The journey starts with “just enough preparation.” The journey concludes when enough value is delivered, the investment becomes unjustified, or when allocated resources are exhausted.Starting Scrum – Inputs to the SprintApart from the first Sprint, every other Sprint has more input to Sprint Planning. In addition to Product Backlog and projected Sprint capacity of the Development Team, the additional inputs to Sprint Planning include the latest product Increment and the past performance of the Development Team.Traditional Projects bring people to the work and manage staffing complexities: In ‘traditional projects,’ the Project Manager produces a staffing plan based on the predicted work. This staffing plan projects the volume of work on a timescale, e.g. ,weekly or monthly. Using this projection, the “human resources” are brought to the work and removed when the work is complete.The Project Manager manages and controls the complexities associated with maintaining this projection, forecasting the resource expenditure, and monitoring the full utilization of the resources.Scrum brings the work to a constant team and avoids staffing complexities: The Scrum Team is an appropriately sized team with 3 – 9 Developers, a Product Owner, and a ScrumMaster. Before the Sprint starts, this team is staffed with all three roles. The Development Team is staffed such that it has all the skills needed to create the Product Increment.Once a Scrum Team is staffed, the team is maintained as a constant talent pool that is available throughout the journey. After establishing the constant team, Scrum facilitates ‘bringing the work to this team.’ The Product Owner brings the work, and the Development Team maps their availability to do the best-valued work. This self-organization of the team eliminates the necessity for any manager to map their work.There could be an occasional churn of team members going out and replacements coming in. There may be occasions where the team identifies a lack of some skills and will induct more developers with those skills.So, other than the initial staffing and ongoing adjustments to maintain it, there is no need for an exclusive staffing plan.All of these aspects are owned, managed, and controlled within Scrum. However, there is no exclusive project management plan or person who manages it. These project

> management activities are distributed among the three Scrum roles.Product Scope, Budget, and Schedule: The Product Owner manages the product scope in terms of the Product Backlog. They also manage the cost benefit of the product features. The cost of the work does not fluctuate as Scrum has a constant team. So, it is the Product Owner's responsibility to put together the features such that maximum value is obtained from this constantly available team. The Product Owner keeps the estimated time updated on the incomplete features. Keeping this up to date is important to forecast the schedule and completion timelines.Quality Plan: The Scrum Team as a whole owns the quality of the Increment. The expected functional quality is specified in the tests. The expected technical quality is made transparent by the definition of "Done." The Scrum Team ensures the following rules:Risk Plan: The Scrum framework is fundamentally a risk reduction framework. It reduces the risk of big commitments, accumulation of waste, hidden weaknesses in product development abilities, etc. by limiting the planning horizon to shorter periods of time. Sprints enable predictability by ensuring inspection and adaptation of progress towards a Sprint Goal at least every calendar month. Sprints also limit risk to one calendar month of cost. Any other ongoing risks such as potential undone work are publicly communicated via impediments and acted upon by the team.Communication Plan: Scrum defines clear boundaries for communication to increase the transparency and focus on valuable work.The Product Owner is the single point of communication for stakeholders including customers, users, and management on product-related items. The ScrumMaster manages the communication at the periphery of the team, such as multiple departments of the organization vs. the Development Team.Within the Scrum Team, the communication is continuous. It is achieved by the transparency of information through artifacts. These artifacts provide necessary information about the product plan, work pipeline, current completion status, etc.Scrum events enhance the communication. In particular, Daily Scrums improve communication, eliminate other meetings, identify impediments to development, highlight and promote quick decision-making, and improve the Development Team's level of knowledge. This is a key inspect and adapt meeting.Standards such as definition of "Done," definition of "Ready," coding standards, etc. establish the same understanding to all stakeholders about the expected work.Traditional projects create an upfront design: Traditionally, the entire technical design is created before development begins. This design is based on the current understanding of the business needs and technical solution patterns used in the past.Development Teams emerge the design throughout the journey: Development Teams do not create a big upfront design before they start Sprints. Instead they evolve the design.As stated earlier, Scrum is a container framework within which Scrum Teams can employ domain-specific engineering techniques. The guideline above is one approach under the concept of "Design Emergence." Many teams also follow other variations. The skills required to emerge the design through constant refactoring is a separate subject.While there are a couple of ways to come up with an initial Product Backlog, it is not mandatory to have any minimum criteria for the Product Backlog before the first Sprint starts. All that is required for the first Sprint to start is – a staffed Scrum Team and a set of business ideas to deliver in the first Sprint.Approach I – A Scrum Team can initially work outside the Scrum Sprints to create and refine just enough of a Product Backlog to start. It should be made transparent to stakeholders that this activity does not lead to any opportunity of inspecting a useful outcome. Since this activity does not create working functionality, this activity should not be incorrectly named as a Sprint. The time taken to arrive at this type of Product Backlog should be as minimal as possible.Approach II – Start the Sprint Planning and refine just enough Product Backlog Items for the first Sprint. The team can craft the Sprint Goal, and then come up with a work plan for the initial days of the Sprint. Once the Sprint is in motion, the Product Backlog Items are further refined in the Product Backlog Refinement sessions during the Sprint, so that there will always be some refined items ahead of future Sprints.

Question 80: Transparency in empiricism refers to

1. The highest levels of morality
2. The significant aspects of the product development process are defined by common standards and made visible, so the observers will share the same understanding (CORRECT)
3. Clear thinking and planning by each team member

Explain:

> So, the empirical approach requires the team to increase the transparency of the information as much as possible. One can increase the transparency by keeping the information factual, making it visible to those responsible for the outcome, and establishing common standards. An example of a common standard is the definition of "Done". Those performing the work and those accepting the work product must share a common definition of "Done".