The ITIL® 4 Create, Deliver and Support Examination

Sample Paper 2

Answers and Rationales

For exam paper: EN_ITIL4_CDS_2019_SamplePaper2_QuestionBk_v1.2

Q	A	Syllabus Ref	Rationale
1	D	2.1	A. Incorrect. Reducing testing would reduce service quality, which might increase customer dissatisfaction. Although this activity focuses on improving the time to market, the more important issue is that the value stream does not focus on delivering value. "A value stream ends in the creation or restoration of value through functioning products or services." Ref 4.1.1 B. Incorrect. It is right to seek to improve communication with customers, but this action would not resolve the issue of new services not being available when needed by customers. "A value stream always starts with demand and ends with value being created or restored for one or more stakeholder." Ref 4.1.3.2 C. Incorrect. Although this activity focuses on improving the time to market, the more important issue is that the value stream does not focus on delivering value. "A value stream ends in the creation or restoration of value through functioning products or services." Ref 4.1.1 D. Correct. The value stream, in the current state, ends before the services are delivered to the customer and does not take into account any delays between the applications being ready for deployment and the services being available for use. It could be these delays which are causing customer dissatisfaction. "A value stream ends in the creation or restoration of value through functioning products or services." Ref 4.1.1
2	C	1.1.b	A. Incorrect. This is a description of cooperation, not collaboration. Cooperation is "working with others to achieve your own goals". Ref 2.3.5 B. Incorrect. "Most managers are cooperative, friendly, willing to share information – but lack the ability and flexibility to align their goals and resources with others in real time". Ref 2.3.5 C. Correct. "It is impossible to enforce collaboration, because it is based on shared goals and a high level of trust." Ref 2.3.5 D. Incorrect. "Cooperation and collaboration are based on the individuals' and organizations' relationships and cannot be limited to supporting components, such as controls or tools." Ref 2.3.5

Q	A	Syllabus Ref	Rationale
3	C	1.4.a	A. Incorrect. Robotic process automation can help to automate workflows, but is not used to communicate with stakeholders. "Through the use of software robots (bots), repetitive and mundane tasks can be automated". Ref 3.4 B. Incorrect. CI/CD can contribute to automation, but is not used for communication with stakeholders. "These practices involve specific skills, processes, procedures, automation tools, and agreements with third parties." Ref 3.7 C. Correct. Integrated service management toolsets "automate records and workflow management and act as engagement and communication tools". Ref 3.9.1 D. Incorrect. Reporting and advanced analytics will help communication with stakeholders, but are not used to automate workflows. "For example, they enable organizations to make informed business decisions and help scientists and researchers to verify or disprove scientific models, theories, and hypotheses." Ref 3.2.1
4	A	3.2.c	A. Correct. "Service integration and management refers to an approach whereby organizations manage and integrate multiple suppliers in a value stream." Ref 5.2.4 B. Incorrect. Insourcing work - "the organization's existing resources are leveraged to create, deliver and support service components". Ref 5.2.2 C. Incorrect. Commodification is one of the considerations when deciding whether to build or buy a component. Ref 5.2.1.1 D. Incorrect. "The MoSCoW method is a simple prioritization technique for managing requirements. It relies on cooperation, and often negotiation, between all relevant stakeholder." Ref 5.2.1.2

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
5	B	3.1.a	A. Incorrect. This option focuses on the activities of the IT support teams rather than on the experience of users. In addition, "Effective service design does not require the avoidance or elimination of tickets, but it does require that they are not the dominant influence on the user's experience." Ref 5.1.1 B. Correct. "Recently, service providers have differentiated themselves by moving away from the digital equivalents of forms to polished interfaces that obscure the record-keeping experience. These new interfaces significantly enhance user experience because the interface is a more human representation of the work and context, although the system still performs data entry and record keeping." Ref 5.1.1 C. Incorrect. While reducing resolution times is important, the question focuses on the concern of the users' experience of creating tickets. "Design-thinking principles are crucial, encouraging the service designer to focus on the stakeholders' specific challenges and identify user-focused solutions." Ref 5.1.1 D. Incorrect. Gathering more information about users does not necessarily make the interaction more personal. "Recently, service providers have differentiated themselves by moving away from the digital equivalents of forms to polished interfaces that obscure the record-keeping experience. These new interfaces significantly enhance user experience because the interface is a more human representation of the work and context, although the system still performs data entry and record keeping." Ref 5.1.1
6	A	3.2.b	A. Correct. Offshoring is where "Vendors are located in a different country or continent, often several time zones away from the organization" Ref 5.2.2 B. Incorrect. Insourcing is "Where the organization's existing resources are leveraged to create, deliver, and support service components". In contrast, the question describes an outsourcing arrangement. Ref 5.2.2 C. Incorrect. Nearshoring is where "Vendors are located in a different country or continent, but there is a minimal difference in time zone" Ref 5.2.2 D. Incorrect. Onshoring is where "Vendors are in the same country." Ref 5.2.2

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
7	D	3.2.a	A. Incorrect. 'Managing work as tickets' focuses on the use of 'tickets' to manage queues. "It is important to recognize that the ticket represents a discrete unit of work and its current state within its expected lifespan. A busy service provider performs many tasks and activities simultaneously, so it is vital that they have the means to record and track their work." Ref 5.1.1 B. Incorrect. "Service integration and management refers to an approach whereby organizations manage and integrate multiple suppliers in a value stream. This is a new challenge for outsourced services and suppliers, where previously the end-to-end ownership and coordination of various third-party suppliers were managed by a single entity." Ref 5.2.4 C. Incorrect. Integration and data sharing focuses on bringing together multiple systems within service design. "Service design frequently relies upon integration between multiple systems." Ref 3.1 D. Correct. MoSCoW is a prioritization technique used in management, business analysis, project management, and software development to reach a common understanding with stakeholders on the importance they place on the delivery of each requirement. "The MoSCoW method is a simple prioritization technique for managing requirements. It relies on cooperation, and often negotiation, between all relevant stakeholders. As a result, it allows stakeholders to explicitly agree on priorities." Ref 5.2.1.2

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
8	D	1.3.d	A. Incorrect. It is indicated that there is a simple process and so it is unlikely that this is the reason for the employees' hesitation. "Clarifying the following will also contribute to the success of a continual improvement initiative: How to raise an improvement idea." Ref 2.3.4 B. Incorrect. Although reward systems are useful, the lack of reward system on its own is not the MOST LIKELY reason that employees would hesitate to suggest ideas. "All ideas should be visibly reviewed, responses given within agreed timeframes, and the participants thanked and rewarded." Ref 2.3.8 C. Incorrect. This answer refers to the results of past suggestions not employees' hesitation to make additional suggestions. "Sometimes an organization may insist that their staff engage in continual improvement but discover that it does not provide valuable or useable content. Careful thought must therefore be invested in identifying individual and organizational needs and then finding learning/training opportunities that are suitably tailored to requirements." Ref 2.3.4 D. Correct. Not knowing how suggestions are being handled is likely to make employees hesitant to make additional suggestions. "Clarifying the following will also contribute to the success of a continual improvement initiative: …What happens to improvement ideas after they have been raised (are they reviewed and actioned)?" "In order to build trust, everyone needs to follow through on their promises. All ideas should be visibly reviewed, responses given within agreed timeframes, and the participants thanked and rewarded." Ref 2.3.4, 2.3.8

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
9	A	2.1	A. Correct. A value stream "can either be designed to reflect the aspirations of the service provider or it can be explored to document the ways work is being done". Furthermore, "Value streams are a representation of work, as viewed at a certain level of granularity". Ref 4.1.3.1, 4.1.3.4 B. Incorrect. It is important to highlight practice contributions when documenting a value stream. However, the team must first agree on what level of granularity they want to document the value stream, and whether the value stream represents aspirational or actual ways of working. Ref 4.1.3.1, 4.1.3.4 C. Incorrect. It is important to document the impact of governance policies on the steps, actions, and tasks within a value stream. However, the team must first agree on what level of granularity they want to document the value stream, and whether the value stream represents aspirational or actual ways of working. Ref 4.1.3.1, 4.1.3.4 D. Incorrect. Using an external resource, like a consultant, can help when documenting a value stream. However, the team must first agree on what level of granularity they want to document the value stream, and whether the value stream represents aspirational or actual ways of working. Ref 4.1.3.1, 4.1.3.4
10	A	3.1.b	A. Correct. This is an example of a drop-in swarm where "Experts are either made continuously available or they continuously monitor the activity of other teams in order to decide if and when to get involved." Ref 5.1.4 B. Incorrect. Shift-left would mean that the service desk team is able to handle the incident on its own. "Shift-left involves moving work closer to its source." "In support environments, repair or problem-solving activities can be moved from the higher-level technical teams to generalist frontline teams." Ref 5.1.5 C. Incorrect. Robotic process automation involves using robots to "simulate activities that humans perform via screens or applications in order to capture, interpret, and process transactions." Ref 3.4 D. Incorrect. Continuous integration is "An approach to integrating, building, and testing code within the software development environment." Ref 3.7

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
11	A	3.2.a	A. Correct. (1) "Buying (or otherwise acquiring) service components from partners and suppliers works well when: ...the processes to build products and services are immature and need to be developed and implemented". Ref 5.2.1 (2) "Buying (or otherwise acquiring) service components from partners and suppliers works well when: …creating the service component is predictable and repetitive work". Ref 5.2.1 B, C, D. Incorrect. (3) This is a reason to build in house. "Building service components using existing resources works better in contexts where: ...the service component heavily relies on knowledge of the organization and its business". Ref 5.2.1 (4) This is a reason to build in house. "Building service components using existing resources works better in contexts where: ...compliance to standards and policies is a high priority". Ref 5.2.1
12	B	2.4.a	A. Incorrect. "Multichannel communications without sufficient integration is likely to create confusion and provoke mistakes." "The communications should be omnichannel, not multichannel." Ref Service Desk Practice Guide 2.4.1 B. Correct. Omnichannel communications would ensure that information provided through one channel would be available when replying on a different channel. "In most cases, service providers use multiple channels. It is important to ensure effective integration between the channels; the communications should be omnichannel, not multichannel." Ref Service Desk Practice Guide 2.4.1 C. Incorrect. "Shift-left involves moving work closer to its source." This approach would not help to avoid requiring that users repeat information. Ref 5.1.5 D. Incorrect. Service empathy is "The ability to recognize, understand, predict, and project the interests, needs, intentions, and experiences of another party in order to establish, maintain, and improve the service relationship." While this may help to acknowledge users' frustration, it would not help to avoid requiring that users repeat information. Ref Service Desk Practice Guide 2.2.2

Q	A	Syllabus Ref	Rationale
13	D	1.3.a	A. Incorrect. Machine learning is an applied form of artificial Intelligence. "It is based on the principle of systems responding to data, and, as they are continually exposed to more of it, adapting their actions and outputs accordingly." Machine learning would not help the support staff to become more creative. Ref 3.6
			B. Incorrect. "Shift-left is an integrated approach to improving the flow, efficiency, and effectiveness of work. It is used to move the delivery of work toward the optimum team or person with the aim of improving lead times, resolution times, customer satisfaction, and efficiency. In development environments, this means moving bug-fixing activities to the frontline of build and test teams earlier in the lifecycle. In support environments, repair or problem-solving activities can be moved from the higher-level technical teams to generalist frontline teams." Ref 5.1.5
			C. Incorrect. The situation described in the scenario is based on algorithmic work. "An algorithmic task involves a person following a defined process, that consistently follows a set of established instructions until the work is concluded." Adding extra algorithmic tasks in this situation will not lead to improvement. Ref 2.3.5.1
			D. Correct. The situation described in the scenario is based on algorithmic work, whereas "A heuristic task depends on human inventiveness and involves enabling a person to discover or learn something for themselves." Ref 2.3.5.1

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
14	B	3.1.a	A. Incorrect. This refers to a typical way of managing workloads. Swarming aims to improve on these methods. "Swarming is a method of managing work in which a variety of specialist resources or stakeholders work on an item until it becomes apparent who is best placed to continue with the work, at which point the others are freed up to move on to other work items." Ref 5.1.4 B. Correct. This is a good example of swarming. "Swarming is a method of managing work in which a variety of specialist resources or stakeholders work on an item until it becomes apparent who is best placed to continue with the work, at which point the others are freed up to move on to other work items." Ref 5.1.4 C. Incorrect. Swarming is a method of prioritizing or managing work within a service provider. It is not a group of incidents. "Swarming is a method of managing work in which a variety of specialist resources or stakeholders work on an item until it becomes apparent who is best placed to continue with the work, at which point the others are freed up to move on to other work items." Ref 5.1.4 D. Incorrect. This refers to a typical way of managing workloads. Swarming aims to improve on these methods. "The disadvantages of a hierarchical structure, which swarming addresses, include: Each tier has its own queue of work items". Ref 5.1.4
15	A	1.1.a	A. Correct. Functional structures "are typically hierarchical arrangements based on organizational control, lines of authority, or technical domain. These arrangements determine how power, roles, and responsibilities are assigned and how work is managed across different levels." Ref 2.1.1 B. Incorrect. "Divisionally based organizations arrange their activities around market, product, or geographical groups. Each division may be responsible for its own accounting, sales and marketing, engineering, production, etc." Ref 2.1.1 C. Incorrect. Matrix structures "are organized as a grid or matrix, with pools of people who can move across teams as needed. Employees in this structure often have dual reporting relationships; for example, both to a line manager and to a product, project, or programme of work." Ref 2.1.1 D. Incorrect. Flat structures "reduce hierarchical reporting lines because they are seen as barriers that hinder decision-making. As the organization grows, these structures become a challenge to maintain." Ref 2.1.1

Q	A	Syllabus Ref	Rationale
16	D	2.1	A. Incorrect. This example starts with the 'design and transition' activity (the deployment of new components) and ends with the 'deliver and support' activity (handing the database to the IT operations team). However, "A value stream always starts with demand and ends with value being created or restored for one or more stakeholder". Ref 4.1.3.2 B. Incorrect. This example starts with the 'engage' activity (contacting the customer) and ends with the 'improve' activity (acting on the feedback). However, "A value stream always starts with demand and ends with value being created or restored for one or more stakeholder". Ref 4.1.3.2 C. Incorrect. This example starts with the 'plan' activity (the planning of the purchase) and ends with the 'obtain/build' activity (the purchase of the equipment). However, "A value stream always starts with demand and ends with value being created or restored for one or more stakeholder". Ref 4.1.3.2 D. Correct. "A value stream always starts with demand and ends with value being created or restored for one or more stakeholder". Ref 4.1.3.2

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
17	B	2.4.e	A. Incorrect. This is an example of the contribution of the 'service level management' practice during investigation of the incident, referred to as step 2 "Investigate the query, reclassify it as an incident, and attempt to fix it". "Service level management - Provides information to assess sufficiency of the restored/achieved service level and timeliness of the restoration". Ref 4.2.2.3 B. Correct. "When the fix has been deployed, the next step is to verify that the incident has been resolved". "Service level management - Provides information to assess sufficiency of the restored/achieved service level and timeliness of the restoration". Ref 4.2.2.3 C. Incorrect. This is the contribution of knowledge management when verifying an incident is resolved. "Once the fix has been deployed, the next step is to verify that the incident has been resolved". "Knowledge Management - Provides the skills, tools, and other resources needed to update the existing knowledge records with information about the fix and the restoration of value". Ref 4.2.2.3 D. Incorrect. This is the contribution made when identifying opportunities to improve the overall system. "Service level management - Provides information, tools and skills to register and assess service improvement initiatives". Ref 4.2.2.3

Q	A	Syllabus Ref	Rationale
18	A	1.2	A. Correct. "Shift-left is an integrated approach to improving the flow, efficiency, and effectiveness of work. It is used to move the delivery of work toward the optimum team or person with the aim of improving lead times, resolution times, customer satisfaction, and efficiency. In development environments, this means moving bug-fixing activities to the frontline of build and test teams earlier in the lifecycle. In support environments, repair or problem-solving activities can be moved from the higher-level technical teams to generalist frontline teams." Ref 5.1.5 B. Incorrect. "Service integration and management refers to an approach whereby organizations manage and integrate multiple suppliers in a value stream. This is a new challenge for outsourced services and suppliers, where previously the end-to-end ownership and coordination of various third-party suppliers were managed by a single entity." Ref 5.2.4 C. Incorrect. Employee satisfaction measurement is a way of understanding how well an organization is meeting employee needs and expectations. "Organizations should... keep employee satisfaction under frequent review in order to understand how well they are meeting the changing needs and expectations of their staff. Employee satisfaction surveys can measure many attributes, including leadership, culture, morale, organizational climate, organizational structure, and job activities." Ref 2.2.4 D. Incorrect. Results-based measuring and reporting is an approach which focuses on outcomes and results to provide information the effectiveness and efficiency of services. "A results-based approach focuses only on the outcomes of employee actions; for example, customer experience, successful releases/deployments, sales per month, or the time taken to resolve an issue." Ref 2.2.5.1

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
19	C	1.4.g	A. Incorrect. This is the characteristic of a waterfall approach, not of CI/CD. CI/CD rejects linear development frameworks because they reduce the opportunity to interact on a regular basis with the customer, increasing the chances that a sub-optimal solution will be delivered for the customer's needs. Ref 3.7.1, 3.7.2 B. Incorrect. CI/CD rejects the idea of long periods between releases because they reduce the opportunity to deliver value quickly, leading to opportunity costs and reducing the organization's ability to adapt services to new, emergent conditions. Ref 3.7.1, 3.7.2 C. Correct. Continuous delivery describes the practice of making frequent, typically small deployments of code into the production environment. "An approach to software development in which software can be released to production at any time. Ref 3.7.1 D. Incorrect. "A significant focus for organizations or teams implementing CI/CD is the reduction of pieces of work requiring manual effort. (If left unchanged, these would impede the flow of the CI/CD pipeline without delivering a proportional amount of specific value.)" Tactical work is "interrupt-driven and reactive rather than strategy-driven and proactive." Ref 3.7.3

Q	A	Syllabus Ref	Rationale
20	A	2.2.a	A. Correct. This is an example of ideation and empathy. "Through direct observation of people and how they work or interact with products and services, as well as identifying how they might interact differently with other solutions". Ref Service Design Practice Guide 2.2.1

B. Incorrect. Design thinking recommends gathering initial requirements "through direct observation of people and how they work or interact with products and services, as well as identifying how they might interact differently with other solutions". Interview users through a workshop is not an example of direct observation. Ref Service Design Practice Guide 2.2.1

C. Incorrect. Prototyping is a different step of the 'design thinking' approach. Prototyping, "where these ideas are tested early, iterated, and refined. A prototype helps to gather feedback and improve an idea." Ref Service Design Practice Guide 2.2.1

D. Incorrect. Managers may not be aware of issues and problems that users have to deal with. "Through direct observation of people and how they work or interact with products and services, as well as identifying how they might interact differently with other solutions". Ref Service Design Practice Guide 2.2.1 |

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
21	D	2.3	A. Incorrect. Discussing with customers their requirements and expectations of service availability in order to determine incident prioritization categories is an activity that adds value for the customer and the organization. This would help organization to identify the requirements and expectation of service availability and how the issues are prioritized and managed to support business continuity. The data can also be used to identify actual levels of performance for future improvements. This is a customer-orientated, 'outside in' approach, and should be maintained. "It is highly desirable to maintain an outside-in tone or language when documenting the value stream, for example, by... framing outcomes and value from the customer or user's point of view." Ref 4.1.3.2 B. Incorrect. This is a consumer-orientated, 'outside in' approach, which will help the organization to make the self-service portal more user-friendly and improving the customer experience. This is an activity that adds value for the customer and should be maintained. "It is highly desirable to maintain an outside-in tone or language when documenting the value stream, for example, by... framing outcomes and value from the customer or user's point of view." Ref 4.1.3.2 C. Incorrect. This is another example of 'outside in' approach, which will help the organization to decide whether or not their support model needs to be re-designed as per the planned organizational re-structure. This is an activity that adds value for the customer by ensuring customer requirements and expectations are considered for the service support model in the planned organizational structure. "It is highly desirable to maintain an outside-in tone or language when documenting the value stream, for example, by... framing outcomes and value from the customer or user's point of view." Ref 4.1.3.2 D. Correct. This is not an example of an 'outside in' approach, as the organization is using a supplier-orientated method to determine customer-related goals. In this option the organization is viewing requirements from the perspective of their own technical and functional structures and working according to their capability. To be really effective however, it is vital to start with the customer journey and business objective and then work backwards to reflect how to deliver as per business objectives and requirements. "It is highly desirable to maintain an outside-in tone or language when documenting the value stream, for example, by... framing outcomes and value from the customer or user's point of view." Ref 4.3.1.2

Q	A	Syllabus Ref	Rationale
22	A	2.4.b	A. Correct. "The incident management practice includes the restoration of the normal operation of services and resources, even when their failure or deviation is not visible to the service consumers." Ref Incident Management Practice Guide 2.1 B. Incorrect. There is no information provided that could justify logging a change. There may be a need to log a change later in the proceedings, but this would be in addition to the incident record, not instead. "The incident management practice includes the restoration of the normal operation of services and resources, even when their failure or deviation is not visible to the service consumers." Ref Incident Management Practice Guide 2.1 C. Incorrect. This should be logged and managed as an incident. "The incident management practice includes the restoration of the normal operation of services and resources, even when their failure or deviation is not visible to the service consumers." Ref Incident Management Practice Guide 2.1 D. Incorrect. There may be a need to log a problem later, if the cause is not clear, but the technician still needs to log an incident to capture information about the restoration of this configuration item to normal operation. "The incident management practice includes the restoration of the normal operation of services and resources, even when their failure or deviation is not visible to the service consumers." Ref Incident Management Practice Guide 2.1
23	C	1.3.c	A. Incorrect. This is another quantitative measure. "When setting and measuring individual performance goals, it is important to... include both qualitative and quantitative measures". Ref 2.2.5.1 B. Incorrect. This is not a measure of service desk performance, but a measure of monitoring and event management. Also, it is another quantitative measure. "When setting and measuring individual performance goals, it is important to... include both qualitative and quantitative measures". Ref 2.2.5.1 C. Correct. This is a qualitative measure which will help to balance the existing quantitative measures. "When setting and measuring individual performance goals, it is important to... include both qualitative and quantitative measures". Ref 2.2.5.1 D. Incorrect. The choice of a user to respond to a satisfaction survey is not the direct outcome of an employee's actions. "A results-based approach focuses only on the outcomes of employee actions" Ref 2.2.5.1

Q	A	Syllabus Ref	Rationale
24	C	1.2	A. Incorrect. The 'shift-left' approach aims to bring testing closer to the development and coding steps in software development, not reduce testing. "Applying shift-left to software development involves testing earlier in the lifecycle. Placing the testing software closer to the step for gathering requirements results in a reduction of the number of defects that are found in the production step." Ref 5.1.5 B. Incorrect. The 'shift-left' approach aims to bring bug-fixing activities closer to the development and coding steps in software development, not wait until software is live before identifying errors. "In development environments, this means moving bug-fixing activities to the frontline of build and test teams earlier in the lifecycle." Ref 5.1.5 C. Correct. The 'shift-left' approach combines interdependent tasks so that issues can be identified earlier in lifecycle. "The value-stream design principle states that highly interdependent tasks should be combined rather than performed as a sequence of specialized tasks". Ref 5.1.5 D. Incorrect. The 'shift-left' approach does not aim to reduce the skills and knowledge required to perform a task. In fact, the opposite is true in that it can result in the need for staff to have broader skills and knowledge. "It requires more knowledge and skills, because practitioners (or, in some cases, users) need to perform a broader scope of tasks." Ref 5.1.5
25	A	2.2.c	A. Correct. "Deployment models also define the flow of deployment through controlled environments, responsibilities of the involved parties, triggers for deployment, and interactions with other practices' activities in the context of value streams." Ref Deployment Management Practice Guide 2.4.1 B. Incorrect. Robotic process automation involves using robots to "simulate activities that humans perform via screens or applications in order to capture, interpret, and process transactions." Ref 3.4 C. Incorrect. Continuous integration is "An approach to integrating, building, and testing code within the software development environment." It would not significantly contribute to ensuring that the vendors fulfil their responsibilities. Ref 3.7 D. Incorrect. "The MoSCoW method is a simple prioritization technique for managing requirements." Ref 5.2.1.2

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
26	C	2.2.f	A. Incorrect. There should be different approaches to assessing and authorizing changes according to the context. "The change enablement practice should ensure a balance between change effectiveness, change throughput, and risk control." Ref Change Enablement Practice Guide 2.2.1 B. Incorrect. This approach assumes that there should be no oversight of change enablement as a whole within an organization. "The change enablement practice should ensure a balance between change effectiveness, change throughput, and risk control." Ref Change Enablement Practice Guide 2.2.1 C. Correct. "The change enablement practice should ensure a balance between change effectiveness, change throughput, and risk control... Changes can be standardized and automated where uncertainty is low, which helps to decrease the costs and accelerate the changes. Checklists, templates, and standardized ways of working can be used in these situations. This is reflected in the definition of a standard change." Ref Change Enablement Practice Guide 2.2.1 D. Incorrect. Changes should not be considered out of scope merely because they are automated. "The full scope of planned and ongoing changes may be hard to oversee across an organization when change enablement is highly automated. It becomes difficult to tell exactly what change is being made where. This is due to the high level of complexity of the controlled environments. Organizations should embrace this complexity and adapt to the higher level of uncertainty while ensuring that the level of control is sufficient." Ref Change Enablement Practice Guide 2.2.3

Q	A	Syllabus Ref	Rationale
27	D	1.2	A. Incorrect. "Machine learning is an applied form of AI. It is based on the principle of systems responding to data, and, as they are continually exposed to more of it, adapting their actions and outputs accordingly. Where machine learning is used to underpin services, this essentially means that it becomes the basis for decision-making in place of paths which are defined by instructions created by human service designers." Ref 3.6 B. Incorrect. "Workforce planning involves understanding how employees can be used to meet an organization's business goals." Ref 2.2.3 C. Incorrect. Integration and data sharing focuses on bringing together multiple systems within service design. "Service design frequently relies upon integration between multiple systems". Ref 3.1 D. Correct. Involving partners and suppliers in a shift-left model for delivering new services means engaging with them throughout the process. The partner can gain an understanding of the limitations and capabilities of the partner's offering at the requirements-gathering phase. Partners and suppliers can also contribute to the development of a test plan and a proof of concept. "Shift-left involves moving work closer to its source... Shift-left is an integrated approach to improving the flow, efficiency, and effectiveness of work. It is used to move the delivery of work toward the optimum team or person with the aim of improving lead times, resolution times, customer satisfaction, and efficiency." Ref 5.1.5

Q	A	Syllabus Ref	Rationale
28	A	2.3	A. Correct. This correctly describes that a value stream is a series of steps from demand to value. "Document the steps required to traverse the service value chain from demand through to value." And "The overall goals and expectations for a product or service should be described from end-to-end, that is, from demand to value". Ref 4.1.4, 4.1.2 B. Incorrect. This describes the tools involved, but not the steps. "Document the steps required to traverse the service value chain from demand through to value." And "The overall goals and expectations for a product or service should be described from end-to-end, that is, from demand to value". Ref 4.1.4, 4.1.2 C. Incorrect. This describes the organization units, but not the steps. "Document the steps required to traverse the service value chain from demand through to value." And "The overall goals and expectations for a product or service should be described from end-to-end, that is, from demand to value". Ref 4.1.4, 4.1.2 D. Incorrect. This only describes the incident management practice steps, but other practices may also contribute. "Document the steps required to traverse the service value chain from demand through to value." And "The overall goals and expectations for a product or service should be described from end-to-end, that is, from demand to value". Ref 4.1.4, 4.1.2
29	C	3.1.b	A. Incorrect. This task has the lowest time to complete (as does task C), but it has a lower cost of delay than task C. "In the Weighted Shortest Job First (WSJF) method, prioritization considers the Cost of Delay and the duration of the work". Ref 5.1.3 B. Incorrect. This task has the lowest cost of delay and the longest time to complete. "In the Weighted Shortest Job First (WSJF) method, prioritization considers the Cost of Delay and the duration of the work". Ref 5.1.3 C. Correct. This task has the highest cost of delay AND the shortest time to complete. "In the Weighted Shortest Job First (WSJF) method, prioritization considers the Cost of Delay and the duration of the work". Ref 5.1.3 D. Incorrect. This task has the highest cost of delay (as does task C), but it has a longer time to complete than task C. "In the Weighted Shortest Job First (WSJF) method, prioritization considers the Cost of Delay and the duration of the work". Ref 5.1.3

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
30	A	2.2.e	A. Correct. Service validation starts before testing and ensures that the requirements are understood. "Service validation should establish an approach to capture all of the utility and warranty requirements for any product, services, and components." Ref Service Validation and Testing Practice Guide 2.4.1 B. Incorrect. This is part of the 'software development and management' practice. It is not part of the 'service validation and testing' practice. "Agree and improve an organization's approach to development and management of software." Ref Software Development and Management Practice Guide 2.4.1 C. Incorrect. The addition of new features refers to adding new functionality. The question states that functional testing has already been included in the plan. "Functional – Testing what the system being delivered will do." Ref Service Validation and Testing Practice Guide 2.4.1 D. Incorrect. This is regression testing, not service validation. "Regression testing aims to verify that the system still functions as required following change." Ref Service Validation and Testing Practice Guide 2.4.1
31	D	2.4.d	D. Correct. (1) Converting the employees' knowledge to explicit knowledge would mean that knowledge "can be transferred to others, codified, assessed, verbalized, and stored." Ref Knowledge Management Practice Guide 2.2.4 (4) In addition to converting tacit knowledge to explicit knowledge, the SECI model encourages "The transfer of knowledge from an individual to groups/organizations". Ref Knowledge Management Practice Guide 2.2.4 A, B, C. Incorrect. (2) This does not address the need to convert the retiring employees' tacit knowledge to explicit knowledge. "Explicit knowledge can be transferred to others, codified, assessed, verbalized, and stored. It includes information from books, databases, descriptions, and so on." Ref Knowledge Management Practice Guide 2.2.4 (3) "Tacit knowledge is difficult to transfer to others, difficult to express, codify, and assess. It is based on experience, values, capabilities, and skills." Ref Knowledge Management Practice Guide 2.2.4

Q	A	Syllabus Ref	Rationale
32	A	2.4.c	A. Correct. In Step 7 of the value stream, "Identify opportunities to improve the overall system", the 'problem management' practice "provides the skills, tools, and other resources to investigate and mitigate possible causes of the incident(s)." Ref 4.2.2.3 B. Incorrect. This is an example of how the 'knowledge management' practice contributes to a value stream for user support. Knowledge management "provides the skills, tools, and other resources needed to update existing knowledge records". Ref 4.2.2.3 C. Incorrect. This is an example of how the 'service level management' practice contributes to a value stream for user support. Service level management "provides the information, tools, and skills to register and assess service improvement initiatives." Ref 4.2.2.3 D. Incorrect. This is an example of how the 'software development and management' practice might contribute to a value stream for user support. Software development and management, depending on the nature of the incident, "might provide the skills, tools, and other resources necessary to build or configure the fix to faulty software." Ref 4.2.2.3

Q	A	Syllabus Ref	Rationale
33	B	3.1.a	A. Incorrect. Using shift-left techniques such as getting users to log their requests is a method of managing demand, however in this case the issue is with the number of staff available to fulfil the request and not with the logging of requests. Examples of managing demand include "using shift-left techniques to deflect demand or prevent demand from being created". Ref 5.1.2 B. Correct. Limiting demand is the best suggestion in this case. It is a reasonable short-term measure and is agreed with stakeholders. Examples of managing demand include "reducing variation in how much demand is taken into a value stream or step (e.g. employees only being allowed to submit one request per quarter to change their benefits)". Ref 5.1.2 C. Incorrect. Charging senior management more for a "gold" service will only reduce demand from one sector, it will not control the number of requests received from other users. Examples of managing demand include "using pricing mechanisms based on quality". Ref 5.1.2 D. Incorrect. Acquiring more staff is a method of managing demand, however in this case it contravenes the policy that additional staff cannot be provided. Examples of managing demand include "increasing the size of teams or the number of teams so that more work can be done in parallel". Ref 5.1.2

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
34	A	1.1.g	A. Correct. Positive communication requires "a recognition of the intellectual and emotional needs of the people engaging in the communication. Service management, sales, and customer support roles depend upon building positive relationships which include trust, empathy, proximity, and shared goals. Service management professionals require the ability to manage relationships with colleagues and team members to achieve business goals. They also need to be able to build and maintain effective and positive relationships with customers." Ref 2.3.7 B. Incorrect. "Shift-left is an integrated approach to improving the flow, efficiency, and effectiveness of work. It is used to move the delivery of work toward the optimum team or person with the aim of improving lead times, resolution times, customer satisfaction, and efficiency." Ref 5.1.5 C. Incorrect. An 'information model' helps an organization to develop a shared understanding of its information, terminology, systems and structure. "Organizations are increasingly using an information model with the aim of developing a shared understanding of their information, terminology, systems, and structure." Ref 3.8 D. Incorrect. CI/CD is an approach to delivering software in an agile manner. CI/CD refers to continuous integration and either continuous delivery or continuous deployment. Ref 3.7.1

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
35	D	2.2.b	A. Incorrect. "A waterfall approach can be an effective choice when the requirements and priorities are known, and when it is also known how to develop the software, and which resources are needed." Ref Software Development and Management Practice Guide 2.4.1 B. Incorrect. "A timeboxing approach in which the most important work items are developed first, could be a better choice when the requirements and priorities are known, but it is not yet known how to develop the software and which resources are needed." Ref Software Development and Management Practice Guide 2.4.1 C. Incorrect. "When the requirements and priorities are known at a high level but are difficult to finalize, a linear iterative approach would allow the product owner to experience and refine the product across several iterations." Ref Software Development and Management Practice Guide 2.4.1 D. Correct. "Parallel experimentation may provide the product owner with prototypes that help formulate the requirements when the requirements are ambiguous or even unarticulated." Ref Software Development and Management Practice Guide 2.4.1
36	C	1.1.d	A. Incorrect. The number of team meetings should not be minimized. Holding regular planned team meetings can build relationships in teams. Regular meetings can "build relationships between team members, encourage productivity, and focus on the need for improving team performance." Ref 2.3.3.2 B. Incorrect. Informal teams should not be discouraged, they can improve team working. "Informal teams often work more efficiently than formal ones, because issues frequently fall across organizational reporting lines." Ref 2.3.3.4 C. Correct. "The team culture cannot be forced upon individuals. Instead, individuals must be responsible for their own roles within the team culture. The most important task of any leader, therefore, is to clearly communicate the vision and how it will be achieved by the team. Team members need to understand how their contributions fit into the bigger picture, providing them with a sense of purpose and of belonging." Ref 2.3.3.1 D. Incorrect. Team culture can be improved by cross-functional training and awareness of each other's roles. This should not be minimized. "It is important to provide employees with opportunities to learn about other roles within the organization." Ref 2.3.3.5

EN_ITIL4_CDS_2019_SamplePaper2_Rationale_v1.2

Q	A	Syllabus Ref	Rationale
37	D	2.3	A. Incorrect. This will happen in step 4, where the steps are broken down into actions and tasks. First the main steps should be mapped to the service value chain. "2. Document the steps required to traverse the service value chain from demand through to value. 3. Map the steps from Step 2 to the service value chain." Ref 4.1.4 B. Incorrect. This will happen in step 5. Before this can be done the main steps should be mapped to the service value chain. "5. identify the practices and associated resources that contribute to the successful completion of each step". Ref 4.1.4 C. Incorrect. This is the first step. By stating that the value stream will be initiated by a request from a user, the question is implying that this has already been done. "1. Define the use case or scenario for the value stream by describing". Ref 4.1.4 D. Correct. The question describes that the first 2 steps in creating the value stream have been performed; defining the scenario and documenting the steps from demand to value. The next step is to map the steps to the value chain activities. "2. Document the steps required to traverse the service value chain from demand through to value. 3. Map the steps from Step 2 to the service value chain." Ref 4.1.4

Q	A	Syllabus Ref	Rationale
38	D	1.3.b	A. Incorrect. The design and sourcing of infrastructure is not relevant to workforce planning. It could be relevant in identifying the skills required to support new technology but the question states that this has already been done. "A good workforce planning strategy should identify the roles, together with the knowledge, skills, abilities, and attitudes associated with them, that keep an organization functioning. It should also address the emerging technologies, leadership, and organizational changes required to progress the organization's growth and success." Ref 2.2.3 B. Incorrect. This answer suggests making organizational changes and appointing managers, or leaders. However, the question states that this has already been done. "A good workforce planning strategy should identify the roles, together with the knowledge, skills, abilities, and attitudes associated with them, that keep an organization functioning. It should also address the emerging technologies, leadership, and organizational changes required to progress the organization's growth and success." Ref 2.2.3 C. Incorrect. Workforce planning is concerned with planning the skills and knowledge of employees, not external service users. "Fundamentally, workforce and talent management is a set of specific approaches for recruiting, retaining, developing, and managing employees." Ref 2.2.3 D. Correct. Workforce planning should include the identification of staff skills and knowledge. Further, this is not mentioned in the question as something that is already complete. "A good workforce planning strategy should identify the roles, together with the knowledge, skills, abilities, and attitudes associated with them, that keep an organization functioning." Ref 2.2.3

Q	A	Syllabus Ref	Rationale
39	C	1.4.e	A. Incorrect. "CI/CD is, effectively, a practical methodology for delivering software in an Agile manner". Ref 3.7.1 B. Incorrect. Integration and data sharing focuses on bringing together multiple systems within service design. Ref 3.1 C. Correct. "The types of processes where [Robotic Process Automation] can yield the most benefit tend to be high volume, error prone, and sensitive to faults. Processes that are rules-based and which do not require complex decision-making are open to this kind of automation." Ref 3.4.1 D. Incorrect. The purpose of results-based measurements is to understand how well the services are meeting the needs of the customer or whether there is value in the services provided. Results-based measurements also provide information on the effectiveness and efficiency of the services. Ref 2.2.5
40	B	1.1.h	A. Incorrect. Robotic Process Automation automates repetitive and mundane tasks, allowing resources to be deployed on higher-value activities. Ref 3.4 B. Correct. An information model provides a shared understanding an organization's information, terminology, systems and structure. "The value of such a model is multi-faceted, it can be a key enablement tool for transforming processes and practices, for integrating technologies, for gaining an accurate overview of strengths and weaknesses in the service framework, and for driving informed decisions at multiple levels of the organizational hierarchy. Ref 3.8 C. Incorrect. The reduction of reporting lines within an organization would be a result of implementing a flat organizational structure. Ref 2.1.1 D. Incorrect. Understanding how well an organization is meeting the needs of its employees is achieved through effective employee satisfaction management. Ref 2.2.4