



The ITIL® 4 High Velocity IT Examination

Sample Paper 2

Answers and Rationales

For exam paper: EN_ITIL4_HVIT_2020_SamplePaper2_QuestionBk_v1.1

Q	A	Syllabus Ref	Rationale
1	B	4.8.b	<p>A. Incorrect. This option reflects a holistic approach. “It is important that a holistic, results-driven approach to all aspects of service design is adopted, and that when changing or amending any of the individual elements of a service design, all other aspects are considered.” Ref Service Design Practice Guide 2.1</p> <p>B. Correct. “‘Co-created value’ refers to the value for the service consumer, service provider, and other stakeholders.” “The purpose of the service design practice is to design products and services that are fit for purpose and use, and that can be delivered by the organization and its ecosystem.” Ref 4.4, Service Design Practice Guide 2.1</p> <p>C. Incorrect. This option relates to orchestrating resources in service design. “Ensuring effective service design requires orchestrating resources in all four dimensions. Depending on the service design model, the activities and resources needed to implement a design may vary significantly”. Ref Service Design Practice Guide 2.4.2</p> <p>D. Incorrect. This option relates to design thinking and reflects a human-centred approach. “When applying design thinking, practitioners should aspire to the following behaviour: Empathize with stakeholders – It is important to be able to understand the point of view and needs of stakeholders.” Ref 3.2.1.2</p>

Q	A	Syllabus Ref	Rationale
2	B	4.4.a	<p>A. Incorrect. "A comprehensive architecture management practice applies to all levels of the organization's architecture. This includes the following: business architecture..." However, the activity in this answer would not contribute directly to the objective of reducing time to market. Ref Architecture Management Practice Guide 2.1</p> <p>B. Correct. A success factor of the 'architecture management' practice is "ensuring that the organization's architecture is continually evolving to the target state". By maintaining relevant architecture templates and guidelines, the organization will reduce effort and time in service design. Ref Architecture Management Practice Guide 2.4.2</p> <p>C. Incorrect. This is a useful contribution and would reduce the design effort, but it is associated with the 'service configuration management' practice. "Designing and maintaining information on various services and service components and their interrelationships." Ref 4.2.2, tab 4.6</p> <p>D. Incorrect. This is a contribution is associated with the 'business analysis' practice. "Understanding consumer needs and translating them into detailed requirements for each component of a loosely coupled service architecture." Ref 4.2.2, tab 4.6</p>

Q	A	Syllabus Ref	Rationale
3	D	4.8.b	<p>A. Incorrect. Release management contributions include "investigating successful and failed releases of services to identify opportunities to improve the success of future releases" and "recognition that the deployment of software and the release of functionality are often distinct activities that help to plan and manage releases," but these occur after service design. Ref 4.2.3.2, tab 4.8, 4.2.5, tab 4.10</p> <p>B. Incorrect. Service desk contributions include "communicating and coordinating with users to better manage incidents and requests" and "being empathetic and having the emotional intelligence to understand users' experiential needs," but these occur after service design. Ref 4.3.6, tab 4.19, 4.4.1, tab 4.21</p> <p>C. Incorrect. Service level management contributions include "designing and aligning service levels from a loosely coupled architecture with consumer expectations at the point of service consumption," but service level management does not start 'after the app has been designed'. This would be too late. Ref 4.2.2, tab 4.6</p> <p>D. Correct. "Service design ensures that the products and services created: ...are created for users to have a good experience", and "in any case, effective coordination, ensuring holistic approach to the design, information flow, stakeholder involvement and good planning of the design models from the early steps of service lifecycle are crucial for success." Ref Service Design Practice Guide 2.1, 2.4.2</p>

Q	A	Syllabus Ref	Rationale
4	B	4.4.c	<p>A. Incorrect. "Infrastructure as code (IaC) enables faster provisioning of environments, contributing to faster development and more resilient operations." Ref 4.2.1</p> <p>B. Correct. Loosely coupled information system architecture enables the separate development, testing and deployment of service components "by breaking a system down into parts that can be developed and managed relatively independently". Ref 4.2.2</p> <p>C. Incorrect. A blameless post-mortem would have been helpful to identify the cause of the interruptions, but in this case the remedial action has already been identified. A blameless post-mortem is "A non-judgmental description and analysis of the circumstances and events that preceded an incident." Ref 4.2.3.2</p> <p>D. Incorrect. Kanban is a method for managing the flow of work, not for defining the work that needs to be done. Kanban is "a Lean method based on a highly visualized pull-based workflow that manages and improves work across human systems by balancing demands with available capacity, and by improving the handling of system-level bottlenecks." Ref 4.2.7</p>
5	B	4.7	<p>A. Incorrect. This answer only addresses service interactions, but "co-creation is not only about the service interaction, where value is actually realized. It is also about the consumer's involvement in service design and further development." Ref 4.4</p> <p>B. Correct. "Co-creation is not only about the service interaction, where value is actually realized. It is also about the consumer's involvement in service design and further development." Ref 4.4</p> <p>C. Incorrect. Meeting agreed targets for service utility and service warranty is not sufficient to ensure that value is co-created. "Co-created value is about the service consumer using the service provider's products and services effectively and benefitting from their utility and warranty". Ref 4.4</p> <p>D. Incorrect. Collecting feedback from customers is important, but is not sufficient. It is important to involve customers and users at every stage. "Co-creation is not only about the service interaction, where value is actually realized. It is also about the consumer's involvement in service design and further development." Ref 4.4</p>

Q	A	Syllabus Ref	Rationale
6	C	1.1.b	<p>A. Incorrect. A digital product is one which allows the consumer to experience digital technology in the goods, resources, or interactions of the product. "A product is digital when digital technology plays a significant role in its goods, resources, or associated service interactions." Ref 2.6.1</p> <p>B. Incorrect. "'Digital transformation' is often used to indicate major investment in digitizing, robotizing, and other forms of automation that enable organizations to do business significantly differently, or do significantly different business." Ref 2.4</p> <p>C. Correct. High-velocity IT refers to "the application of digital technology for significant business enablement, where time to market, time to customer, time to change, and speed in general are crucial." Ref 2.1</p> <p>D. Incorrect. "'IT transformation' is often used to denote major change that improves how IT services are provided." Ref 2.4.1</p>
7	B	2.1.d	<p>A. Incorrect. "Before a service can be provided and consumed, there are onboarding activities, where preparations are made on both sides." This occurs after the service provider and service consumer have explored the market to discover each other. Ref 2.6.2</p> <p>B. Correct. "The lifecycle of a product begins with the exploration of market opportunities for investment in new products". Ref 2.6.2</p> <p>C. Incorrect. "Before a service can be provided and consumed, there are onboarding activities, where preparations are made on both sides. Then the provider and consumer begin interacting, using the service to co-create value, until either party announces the end of the engagement." The value co-creation occurs after exploration and onboarding. Ref 2.6.2</p> <p>D. Incorrect. "This is followed by offboarding activities and disengagement." This occurs at the end of the digital product lifecycle. Ref 2.6.2</p>

Q	A	Syllabus Ref	Rationale
8	C	3.1.h	<p>A. Incorrect. "Obvious: Clear causality, where predetermined best practice should be applied." Ref 3.2.3.1</p> <p>B. Incorrect. "Complicated: Unclear but knowable causality that can be determined by analysis or expertise, followed by good practice." Ref 3.2.3.1</p> <p>C. Correct. "The inherent unpredictability of these systems presents a challenge to people who are used to working with predetermined processes". "Complex: Unclear and unknowable causality requiring safe-to-fail experimentation (emergent practice)." Ref 3.2.3.1</p> <p>D. Incorrect. "Disorder: The state of not knowing in which of the other domains you are, with a bias to assume that the domain corresponds to the context in which you are most experienced." Ref 3.2.3.1</p>
9	D	4.9	<p>A. Incorrect. Whether by creating a model or deciding on a case-by-case basis, the change practitioner should not decide on the levels of risk acceptable to the organization. "Regarding governance, the practitioner does not govern but is governed. They operate within a governance framework, and must understand the applicable constraints and how to act within that framework." Ref 4.5</p> <p>B. Incorrect. The purpose of the DevOps Audit Defense Toolkit guidance is not to make decisions on acceptable levels of risk to the organization, but to address "the tension between IT and audit that is caused by new, more fluid patterns of work found in the DevOps community." Ref 4.5.1</p> <p>C. Incorrect. Development teams, containing practitioners, should not decide on the acceptable levels of risk to the organization. "Regarding governance, the practitioner does not govern but is governed. They operate within a governance framework, and must understand the applicable constraints and how to act within that framework." Ref 4.5</p> <p>D. Correct. The governing body of an organization decides on acceptable levels of risk for the organization. "High velocity is often associated with taking risks... Governing bodies must be assured that their directives have been followed." Ref 4.5</p>

Q	A	Syllabus Ref	Rationale
10	A	4.6.f	<p>A. Correct. This question gives an example of chaos engineering. An 'infrastructure and platform management' activity associated with chaos engineering is "designing infrastructure and platforms for sufficient resilience and redundancy to deal with the unexpected outages caused by chaos engineering tools." Ref tab 4.15</p> <p>B. Incorrect. "The co-created value objective involves co-creating value from digital products through the close collaboration of the service provider and the service consumer." Although the practice could contribute to co-created value, the focus of the question is on creating increased resilience to withstand chaos engineering tests. Ref 4.4</p> <p>C. Incorrect. "The fast development objective involves realizing new and improved digital products and services frequently, quickly, and reliably." Although the practice could contribute to fast development, the focus of the question is on creating increased resilience to withstand chaos engineering tests. Ref 4.2</p> <p>D. Incorrect. "The valuable investments objective involves identifying and justifying digital investments that would contribute significantly to business strategy." Although the practice could contribute to valuable investments, the focus of the question is on creating increased resilience to withstand chaos engineering tests. Ref 4.1</p>

Q	A	Syllabus Ref	Rationale
11	D	3.1.c	<p>A. Incorrect. This is about ethics. "When applying ethics, practitioners should aspire to the following behaviour: thinking about how their actions affect others". Ref 3.2.1.1</p> <p>B. Incorrect. This is about safety culture. Safety culture is "a climate in which people are comfortable being (and expressing) themselves". "A good safety culture can be promoted by the commitment of senior management to safety, realistic practices for handling hazards, continual organizational learning, and care and concern for hazards shared across the workforce." Ref 3.2.2.2</p> <p>C. Incorrect. This is about working in complex environments. "In order to work effectively, practitioners must understand the nature of the environment, or system, in which they work. ... Systems thinking in general, and complexity thinking in particular, help make sense of the system and offer guidance as to effective approaches." Ref 3.2.3.1</p> <p>D. Correct. "Gemba walks are a major part of Lean management philosophy. Managers observe the actual work process, understand the work, ask questions, and learn." Ref 3.2.3.2</p>

Q	A	Syllabus Ref	Rationale
12	B	4.2.b	<p>A. Incorrect. This is a contribution of the 'relationship management' practice, however, it is not the BEST approach in this situation. This option relates to the organization's culture which is not addressed in the question and would likely take time to change. "A shared approach to relationship management is an important part of the organization's culture. It is based on a common set of values and principles adopted by everyone within the organization." Ref Relationship Management Practice Guide 2.4.1</p> <p>B. Correct. This is a contribution of the 'relationship management' practice. Addressing complaints would ensure that dissatisfied users and the unhappy team are being heard. Establishing customers' priorities would lead to maximizing the value of the product. Relationship management – "Involvement in establishing customers' priorities for new or changed products and services." "Involvement in addressing complaints and mediating conflicting requirements". "The relationship management practice includes techniques and tools that help to understand the stakeholders' interests and ensure that their needs and expectations are managed and met." Ref tab 4.3, Relationship Management Practice Guide 2.4.3</p> <p>C. Incorrect. This is a contribution of the 'portfolio management' practice. "Portfolio management plays an important role in allocating, deploying, and managing resources across the organization" and "this practice ensures that the right investment decisions are made and that results are reviewed against their expected outcomes in order to minimize investing in underperforming efforts." Ref Portfolio Management Practice Guide 2.1, 2.4</p> <p>D. Incorrect. This is a contribution of the 'software development and management' practice. "Agree and improve an organization's approach to development and management of software" and "this Practice Success Factor for software development and management concerns itself with the tactical decision to select from this pre-defined set of approaches, the best approach for each software product, based on the organization's requirements for the product." Ref Software Development and Management Practice Guide 2.4.1</p>

Q	A	Syllabus Ref	Rationale
13	C	4.6.d	<p>A. Incorrect. A known error is "a problem that has been analysed but has not been resolved." In this case the problem does not need to be resolved, as it does not impact the organization, so there is no need to create a known error. "The vulnerability may not affect the organization's services. In these cases, the problem record may be closed after analysis." Ref Problem Management Practice Guide 2.2.2</p> <p>B. Incorrect. As the affected version is not in use, there is no need to deploy the patch, and this is definitely not needed 'as soon as practical'. "The vulnerability may not affect the organization's services. In these cases, the problem record may be closed after analysis." Ref Problem Management Practice Guide 2.2.2</p> <p>C. Correct. "The organization may not use the vulnerable version of the software or the vulnerability may not affect the organization's services. In these cases, the problem record may be closed after analysis." Ref Problem Management Practice Guide 2.2.2</p> <p>D. Incorrect. The problem has already been analysed and can now be closed. "Evaluating the impact and urgency of a problem (and the time constraints for its investigation and resolution) is not prioritization." Ref Problem Management Practice Guide 2.2.2</p>

Q	A	Syllabus Ref	Rationale
14	C	4.8.c	<p>A. Incorrect. "'Service experience' refers to the fact that service consumers value a service that is based on a combination of the 'technical' output of the service and how it is perceived from a human perspective." Ref 4.4.1</p> <p>B. Incorrect. Customers may not be aware of overall user satisfaction with the new service. The service desk should be the single point of contact for the service provider with all users. "The purpose of the service desk practice is to capture demand for incident resolution and service requests. It should also be the entry point and single point of contact for the service provider for all users." Ref Service Desk Practice Guide 2.1</p> <p>C. Correct. The 'service desk' practice contributes to service experience by "gathering service experience data (rough estimates of users happy/not happy with the service)". Ref 4.4.1, tab 4.21</p> <p>D. Incorrect. An annual survey may be far too late for feedback to be of any use. User satisfaction with IT services in general may not provide sufficient understanding of how users experience this new service. "Gathering service experience data (rough estimates of users happy/not happy with the service)". Ref 4.4.1, tab 4.21</p>
15	A	1.1.a	<p>A. Correct. "Digital organizations are enabled by digital technology. Digital technology is a significant underpinning enabler for these organizations' internal processes, and is often part of their products and services." Ref 2.3</p> <p>B. Incorrect. A digital organization is one which makes strategic, not just operational, use of digital technology. Ref 2.3</p> <p>C. Incorrect. This is an operational use of technology without any evidence that it leads to a strategic benefit. Ref 2.3</p> <p>D. Incorrect. "In organizations where business and IT are regarded as separate organizational functions, 'IT transformation' is often used to denote major change that improves how IT services are provided. IT transformation is focused on how IT services and IS are developed, run, and supported." An IT transformation does not necessarily lead to a digital transformation and a digital organization. Ref 2.4.1</p>

Q	A	Syllabus Ref	Rationale
16	A	1.1.d	<p>A. Correct. This answer describes changes to how digital solutions are provided (not how they are used). "IT transformation is focused on how IT services and information systems are developed, run, and supported." Ref 2.4.1</p> <p>B. Incorrect. This is a description of high-velocity IT. High-velocity IT is "the application of digital technology for significant business enablement, where time to market, time to customer, time to change, and speed in general are crucial." "High velocity equates with high performance in general." Ref 2.1</p> <p>C. Incorrect. This is a description of digital transformation. Digital transformation is "the use of digital technology to enable a significant improvement in the realization of an organization's objectives". "Digital transformation' is often used to indicate major investment in digitizing, robotizing, and other forms of automation that enable organizations to do business significantly differently, or do significantly different business." Ref 2.4</p> <p>D. Incorrect. This is a description of digital transformation. Digital transformation is "the use of digital technology to enable a significant improvement in the realization of an organization's objectives". "Digital transformation' is often used to indicate major investment in digitizing, robotizing and other forms of automation that enable organizations to do business significantly differently, or do significantly different business." Ref 2.4</p>
17	A	3.1.g	<p>A. Correct. A typical behaviour pattern of 'design thinking' is to "create hypotheses based on observation and reflection, and test them with prototypes." Ref 3.2.1.2</p> <p>B. Incorrect. Safety culture is "a climate in which people are comfortable being and expressing themselves." Ref 3.2.2.2</p> <p>C. Incorrect. The continual improvement model provides organizations with "a structured approach to implementing improvements." Ref 3.2.3.3</p> <p>D. Incorrect. Complexity thinking focuses on "the recognition and understanding of the various levels of complexity inherent in the systems and the context in which they operate." Ref 3.2.3.1</p>

Q	A	Syllabus Ref	Rationale
18	B	4.6.b	<p>A. Incorrect. The question is about how the 'capacity and performance management' practice contributes to resilient operations. However, this answer describes how the 'capacity and performance management' practice supports the valuable investments objective. "Using capacity and performance management as a basis for calculating the minimum resources (number of servers, number of service desk agents etc.) required for a minimum viable product or service". Ref 4.1.2, tab 4.2</p> <p>B. Correct. The question is about how the 'capacity and performance management' practice contributes to resilient operations. The 'capacity and performance management' practice contributes to the resilient operations objective by supporting AIOps. "AIOps provides capabilities for identifying patterns and anomalies, determining the capacity and utilization of assets, and planning the capacity of future products or services". Ref 4.3.5, tab 4.18</p> <p>C. Incorrect. The question is about how the 'capacity and performance management' practice contributes to resilient operations. However, this answer describes how the 'portfolio management' practice can contribute to resilient operations by considering technical debt. "Deciding whether to invest resources to fix the technical debt present in live products and services, and understanding the impact on investments towards future products and services." Ref 4.3.1, tab 4.14</p> <p>D. Incorrect. The question is about how the 'capacity and performance management' practice contributes to resilient operations. However, this answer describes how the 'deployment management' practice contributes to fast deployment. The 'deployment management' practice contributes to fast deployment by "automating the deployment of infrastructure, ensuring a faster and more repeatable and reliable deployment of both infrastructure and applications". Ref 4.2.1, tab 4.5</p>

Q	A	Syllabus Ref	Rationale
19	D	3.2.d	<p>A. Incorrect. This is a complex system, so the Toyota Kata approach is more appropriate than a pre-determined plan. "Circumstances are often unpredictable, making it difficult or even irresponsible to create and follow predetermined plans for large changes." Ref 3.2.3.3</p> <p>B. Incorrect. Defining metrics for the desired future state is part of the 'Where do we want to be?' step of the continual improvement model. This has already been done, and now the organization is trying to determine 'How do we get there?'. "Improvement objectives can be set, along with critical success factors (CSFs) and key performance indicators (KPIs)." Ref ITIL 4 Foundation 4.6.1.3</p> <p>C. Incorrect. "A minimum viable product or service is one that has just enough features to enable its early assessment and the collection of feedback for future development." This is an existing complex service that needs to be improved. Ref 4.1.2</p> <p>D. Correct. "Experiment towards the next target condition: come up with ideas to overcome an obstacle and run experiments with that idea. If possible, test only one hypothesis at a time." Ref 3.2.3.3</p>
20	C	3.1.a	<p>A. Incorrect. Service-dominant logic is a "mental model of an (economic) exchange in which organizations co-create value by applying their competencies and other resources for the benefit of each other." Ref 2.5.2.5</p> <p>B. Incorrect. Design thinking is "the set of cognitive and practical techniques by which design concepts are developed." Ref 3.2.1</p> <p>C. Correct. Ethics is a "system of principles that defines what is good for individuals and society". Education can be used to "make people aware of ethical consequences." Ref 3.2.1, 3.2.1.1</p> <p>D. Incorrect. Complexity thinking is "a systems thinking approach based on the recognition and understanding of the various levels of complexity inherent in the systems and the context in which they operate." Ref 3.2.3.1</p>

Q	A	Syllabus Ref	Rationale
21	B	4.6.a	<p>A. Incorrect. This answer describes a way of reducing the number of outages which occur, whereas the focus of the question is on the response to outages which have occurred. "MTBF measures how frequently the service fails" and "availability metrics and targets should accurately reflect how consumers are impacted by service unavailability". Ref Availability Management Practice Guide 2.1, 2.4.1.3</p> <p>B. Correct. When the service provider understands how its services are used, the targets and metrics can be created or adjusted in line with consumer expectations. "MTRS measures how quickly service is restored after a failure" and "availability is the most crucial service quality indicator because service customers typically lose money because of service outages. Availability metrics and targets should accurately reflect how consumers are impacted by service unavailability". Ref Availability Management Practice Guide 2.1, 2.4.1.3</p> <p>C. Incorrect. This is a contribution of the 'capacity and performance management' practice. "The purpose of the capacity and performance management practice is to ensure that services achieve the agreed and expected levels of performance and satisfy current and future demand in a cost-effective way." In addition, this contribution is an example of proactively preventing outages, whereas the focus of the question is on the response to outages which have occurred. Ref Capacity and Performance Management Practice Guide 2.1</p> <p>D. Incorrect. This is a contribution of the 'software development and management' practice. "Software should be designed and architected with sufficient resilience and redundancy." In addition, this contribution is an example of proactively preventing outages, whereas the focus of the question is on the response to outages which have occurred. Ref 4.3.2, tab 4.15</p>

Q	A	Syllabus Ref	Rationale
22	B	2.1.b	<p>A. Incorrect. "In HVIT environments, systems are often complex and therefore unpredictable. This makes it less likely that detailed processes, procedures, and work instructions will be useful, as they often will not be followed. It is also not useful or feasible to predict or dictate the sequence of steps in a value stream, and the activities within those steps, other than at a high level of abstraction. Instead, the sequence of activities and steps will often emerge during, and as a result of, the 'micro-interactions' that take place during execution." Ref 2.6.4</p> <p>B. Correct. HVIT organizations often are product/service-oriented and have multiple value streams that reflect the diversity of their products and services. Their operating models are therefore comprised of multiple value streams. Ref 2.6.4</p> <p>C. Incorrect. Value streams can be considered to be where things actually happen: where the ITIL practices are used and value is co-created. There is no set structure for value streams, and they are unique to each organization. Ref 2.6.4</p> <p>D. Incorrect. This option describes a service value chain. The service value chain describes the activities that are required to effectively manage products and services, whereas a value stream comprises an actual series of steps to create products and services and deliver them to consumers. Ref 2.6.4</p>

Q	A	Syllabus Ref	Rationale
23	B	4.2.a	<p>A. Incorrect. This answer does not address either of the stated goals. Having owners prioritize individual portfolios could lead to conflicting priorities across portfolios. Also, this option does not address the desire to obtain accurate data. Furthermore, it is not necessary to adopt a formalized approach to managing all portfolios. “High-level portfolios are generally more formal, often documented with a charter... Low-level portfolios may simply be a set of functionalities in a development pipeline that is continually assessed by the technical lead” and “the approach can be of varying formality depending on the organization’s scale and complexity”. Also, “large portfolios should be assigned an owner; an individual who is responsible for ensuring that the portfolio is reviewed, prioritized, and updated regularly.” Ref Portfolio Management Practice Guide 2.4, 2.4.1</p> <p>B. Correct. This option provides a consistent way of comparing all portfolio items and will provide information that can then be used to make sound investment decisions. A health check template “will allow comparison across portfolio items by requiring key information reports that indicate all the value realization indicators that are valid for the organization (for example, the fiscal and technical health, return on investment, level of strategic alignment, size of customer base, risks or technical debt, etc.).” Ref Portfolio Management Practice Guide 2.4.2</p> <p>C. Incorrect. This option could result in conflicting priorities across portfolios and it does not emphasize the need to consider strategic objectives. It also does not address the desire to obtain accurate data. “...there are often conflicting priorities within an organization. The portfolio management practice ensures that all internal and external stakeholder perspectives are included and prioritized. The most important initiatives are given adequate resources before additional initiatives are addressed” and “strategic alignment is crucial for investment prioritization.” Ref Portfolio Management Practice Guide 2.4.1</p> <p>D. Incorrect. This option only addresses new initiatives and does not address the desire to obtain accurate data. “All portfolio items, old and new, should be reviewed regularly. Because resource constraints generally apply to an entire portfolio, it is critical that all portfolio items are reviewed to enable resource redistribution and indicate new investment opportunities.” Ref Portfolio Management Practice Guide 2.4.2</p>

Q	A	Syllabus Ref	Rationale
24	B	4.5	<p>A. Incorrect. "An error budget is a control mechanism that allocates appropriate capacity to development work for stability, ensuring the right balance. When a service is close to its error budget, the product team should focus on improvements rather than new features." Ref 4.3.7</p> <p>B. Correct. "An error budget is a control mechanism that allocates appropriate capacity to development work for stability, ensuring the right balance. When a service is close to its error budget, the product team should focus on improvements rather than new features" and "an error budget is expressed as 100 per cent minus the service level objective (SLO) of the service. A 99.9 per cent SLO service has a 0.1 per cent error budget." Ref 4.3.7</p> <p>C. Incorrect. "An error budget is a control mechanism that allocates appropriate capacity to development work for stability, ensuring the right balance. When a service is close to its error budget, the product team should focus on improvements rather than new features." Ref 4.3.7</p> <p>D. Incorrect. "An error budget is expressed as 100 per cent minus the service level objective (SLO) of the service. A 99.9 per cent SLO service has a 0.1 per cent error budget." Ref 4.3.7</p>

Q	A	Syllabus Ref	Rationale
25	A	4.4.d	<p>A. Correct. "Ensuring that new and changed components, products, and services meet agreed criteria" is a practice success factor of Service Validation and Testing. Ref Service Validation and Testing Practice Guide 2.4.2</p> <p>B. Incorrect. "Ensuring that new and changed components, products, and services meet agreed criteria" is not a practice success factor of Business Analysis. It is a practice success factor of Service Validation and Testing. Ref Service Validation and Testing Practice Guide 2.4.2</p> <p>C. Incorrect. "Ensuring that new and changed components, products, and services meet agreed criteria" is not a practice success factor of Architecture management. It is a practice success factor of Service Validation and Testing. Ref Service Validation and Testing Practice Guide 2.4.2</p> <p>D. Incorrect. "Ensuring that new and changed components, products, and services meet agreed criteria" is not a practice success factor of Deployment management. It is a practice success factor of Service Validation and Testing. Ref Service Validation and Testing Practice Guide 2.4.2</p>
26	D	1.2	<p>A. Incorrect. High-velocity IT is "the application of digital technology for significant business enablement, where time to market, time to customer, time to change, and speed in general are crucial." Ref 2.1</p> <p>B. Incorrect. "High velocity does not come at the expense of the utility (value) or warranty of the solution, and high velocity equates with high performance in general", and "in HVIT, this is interpreted as doing the right thing. In other words, not only should the requirements of the high-velocity approach fulfilled, but the right decisions should be made regarding investment and sustainability." Ref 2.1</p> <p>C. Incorrect. Digital technology is "technology that digitizes something or processes digital data." Digitization is "the process of transforming something (e.g. text, sound, or images) from analogue to digital form by expressing the information in binary digits." The use of digital technology would support the move to high velocity IT. Ref 2.2</p> <p>D. Correct. Organizations "may choose not to try to increase velocity because they think the amount of cultural change involved would be too difficult to achieve, or unlikely to generate an acceptable return on investment." Ref 2.1</p>

Q	A	Syllabus Ref	Rationale
27	B	1.3.c	<p>A. Incorrect. The valuable investments objective involves identifying and justifying digital investments. "Making valuable investments is founded in market research and the development of new products. New digital products and services should be envisaged and evaluated in terms of profitability." "It is also important to continually evaluate investments after they have been justified and approved, because more valuable options for investment may exist. The sooner information about alternative investments is made available, the sooner current investments can be re-evaluated." Ref 4.1</p> <p>B. Correct. "The resilient operations objective includes ensuring that digital products are available for use whenever needed." "Information systems increasingly rely on so many components that behaviour often cannot be predicted or guaranteed. Failsafe systems are an illusion; organizations must be prepared for inevitable and unexpected failure. The emphasis is no longer on maintaining a long interval between failures; it is on restoring service quickly when inevitable issues do occur. This reduces the disruption to business operations." Ref 4.3</p> <p>C. Incorrect. "The fast development objective involves realizing new and improved digital products and services frequently, quickly, and reliably." "The sooner digital products are delivered, the sooner value can be realized." "Separating a single product into a series of incremental deliveries enables faster overall delivery, and allows users to realize value earlier than if they wait for the whole product." Ref 4.2</p> <p>D. Incorrect. "The assured conformance objective includes ensuring that service provision and service consumption comply with corporate and regulatory directives with respect to governance, risk, and compliance." There is no reference to corporate and regulatory directives in this question. Ref 4.5</p>

Q	A	Syllabus Ref	Rationale
28	A	3.2.b	<p>A. Correct. "In HVIT environments, it is crucial that people feel able to share their opinions and experiment with improvement without the fear of judgement or embarrassment." Ref 3.2.2.2</p> <p>B. Incorrect. Chaos engineering, through tools such as the Chaos Monkey "tests the resilience of IT systems". This would not detect errors in financial trading algorithms. Ref 4.3.2</p> <p>C. Incorrect. It is not possible to remove all errors in a high velocity IT environment. "These systems always contain multiple flaws and therefore latent issues. Continual changes to the system and its environment mean that the flaws also continually change." Ref 3.2.2.2</p> <p>D. Incorrect. This organization has invested in AI in order to co-create value. The IT staff need to support this capability. "In digital organizations, IT drives and enables the business." Ref 4.1</p>

Q	A	Syllabus Ref	Rationale
29	C	4.10.b	<p>A. Incorrect. Concepts such as risk capacity and risk appetite would have been considered as a part of risk analysis prior to defining the automated controls. While these concepts may be considered as a part of evaluating the ongoing effectiveness of the controls, this is not the BEST approach the organization can use to maintain existing controls. “All risk management activities require a clear understanding of the organization’s risk capacity and risk appetite. These cannot be defined by practitioners; they are critical aspects of organizational governance.” Ref Risk Management Practice Guide 2.4.1</p> <p>B. Incorrect. Risk analysis would have been performed prior to defining the automated controls, taking into consideration the organization’s risk policy. “The analysis of risks involves understanding the likelihood and potential impact of each risk. The analysis can be qualitative or quantitative.” Ref Risk Management Practice Guide 2.4.3</p> <p>C. Correct. When a decision is made to manage a risk, suitable controls need to be designed and implemented. “...controls must be maintained to ensure that they remain relevant, and that they are properly implemented to provide the agreed level of protection. For example... with regular reinforcement and audits.” Ref Risk Management Practice Guide 2.4.4</p> <p>D. Incorrect. In this case, the organization is using controls to manage the risks, not simply accepting the risks. “Even if a decision is made to accept a risk, this does not mean that no action will be taken. An accepted risk should be documented, communicated to relevant stakeholders, and reviewed regularly to ensure that changes to the probability, impact, or cost of controls are considered.” Ref Risk Management Practice Guide 2.4.4</p>

Q	A	Syllabus Ref	Rationale
30	C	4.4.b	<p>A. Incorrect. "The business analysis practice has traditionally been organized as a specialized function, coexisting with adjacent functions... In the agile context, the business analysis practice is associated less with a specific team or role, but is increasingly applied by multi-skilled practitioners performing roles such as product or service owner." Ref Business Analysis Practice Guide 2.1</p> <p>B. Incorrect. This approach still maintains business analysis as a specialized function. "The business analysis practice has traditionally been organized as a specialized function, coexisting with adjacent functions... In the agile context, the business analysis practice is associated less with a specific team or role, but is increasingly applied by multi-skilled practitioners performing roles such as product or service owner." Ref Business Analysis Practice Guide 2.1</p> <p>C. Correct. "In the agile context, the business analysis practice is associated less with a specific team or role, but is increasingly applied by multi-skilled practitioners performing roles such as product or service owner." Ref Business Analysis Practice Guide 2.1</p> <p>D. Incorrect. It is possible that software developers might do this work, and it should almost certainly be iterative, but it is still business analysis, even when it is done by a different person or team. "The business analysis practice is evolving to accommodate the challenging demands of digital organizations, for instance by adopting agile ways of working." Ref Business Analysis Practice Guide 2.1</p>
31	C	2.1.a	<p>A. Incorrect. "The 'value streams and processes' dimension represents abstract resources that are used as input for the design of value streams." Ref 2.6.6</p> <p>B. Incorrect. This dimension concerns how the "organizations (including finances and physical resources such as buildings) and people" relate to HVIT. Ref 2.6.6</p> <p>C. Correct. The 'information and technology' dimension includes "the information and technology that are used as 'production resources' to produce the information and technology that comprise digital products and services" and for example, monitoring tools provide real-time access to performance information". Ref 2.6.6.2</p> <p>D. Incorrect. The 'partners and suppliers' dimension concerns the involvement of external services providers within overall service provision. "HVIT environments typically make extensive use of cloud-based infrastructures, platforms, and other services." Ref 2.6.6.3</p>

Q	A	Syllabus Ref	Rationale
32	D	4.10.a	<p>A. Incorrect. This is an example of how the 'software development and management' practice contributes to achieving assured conformance. "Inspecting development work between peers to increase the quality of code to ensure that it effectively satisfies demand and performance expectations." Ref 4.5.3, tab 4.25</p> <p>B. Incorrect. This is an example of how the 'monitoring and event management' practice contributes to achieving assured conformance. "Configuring monitoring tools to continually scan for threats and vulnerabilities so that they can be escalated to the appropriate teams." Ref 4.5.2, tab 4.23</p> <p>C. Incorrect. This is an example of how the 'service configuration management' practice contributes to achieving assured conformance. "Standardized configurations to support security and audit requirements." Ref 4.5.1, tab 4.22</p> <p>D. Correct. "Information security management policies and plans may address the following aspects: ...remote access; suppliers' access to an organization's information and resources". This helps to achieve assured conformance by restricting access to the organization's resources to those who have authorization. Ref Information Security Practice Guide 2.4.1</p>
33	A	3.1.b	<p>A. Correct. Safety culture involves creating a climate in which people are comfortable being (and expressing) themselves, even in stressful situations such as in the event of a failure. "Be realistic about failure - Acknowledge that failure will happen and that people are not to blame, but the system". Ref 3.2.2.2</p> <p>B. Incorrect. Design thinking is a 'set of cognitive and practical processes by which design concepts are developed'. It benefits from the environment created by safety culture. Ref 3.2.1.2</p> <p>C. Incorrect. Service-dominant logic relates to a service provider involving a customer in the service delivery process to co-create value. "Service-dominant logic regards service as the process of doing something for and with another party. Value creation is a collaborative process. In service-dominant logic, value is always co-created." Ref 2.5.2.5</p> <p>D. Incorrect. Cynefin is a decision-making framework. "The Cynefin sense-making framework... offers a practical way of assessing complexity and determining appropriate courses of action." Ref 3.2.3.1</p>

Q	A	Syllabus Ref	Rationale
34	A	4.6.e	<p>A. Correct. This would NOT be a contribution. “Failsafe systems are an illusion; organizations must be prepared for inevitable and unexpected failure. The emphasis is no longer on maintaining a long interval between failures; it is on restoring service quickly when inevitable issues do occur.” Ref 4.3</p> <p>B. Incorrect. This would be a contribution of the ‘service continuity management’ practice. “The service continuity management practice includes the definition and management of controls to manage a wide range of risks.” Ref Service Continuity Management Practice Guide 2.4.2</p> <p>C. Incorrect. This would be a contribution of the ‘service continuity management’ practice. “Testing is therefore a critical part of service continuity management and the only way of ensuring that the selected strategy, implemented measures, and plans are actually working.” Ref Service Continuity Management Practice Guide 2.4.3</p> <p>D. Incorrect. This would be a contribution of the ‘service continuity management’ practice. “Continually monitoring continuity plans, measures, and mechanisms for resilience.” Ref 4.3.2, tab 4.15</p>

Q	A	Syllabus Ref	Rationale
35	D	4.6.c	<p>A. Incorrect. This is a reactive response to the situation, whereas an improvement to the design of the monitoring tools would help to detect the incidents before the user contacts the service desk. "When establishing or improving the monitoring and event management practice, the following aspects should be considered: identifying and prioritizing services and service components monitored". Ref Monitoring and Event Management Practice Guide 2.4.1</p> <p>B. Incorrect. This is a reactive response to the situation, whereas an improvement to the design of the monitoring tools would help to detect the incidents before the user contacts the service desk. "When establishing or improving the monitoring and event management practice, the following aspects should be considered: identifying and prioritizing services and service components monitored". Ref Monitoring and Event Management Practice Guide 2.4.1</p> <p>C. Incorrect. This option will not prevent the situation from recurring, whereas an improvement to the design of the monitoring tools would do so. "When establishing or improving the monitoring and event management practice, the following aspects should be considered: identifying and prioritizing services and service components monitored". Ref Monitoring and Event Management Practice Guide 2.4.1</p> <p>D. Correct. The organization should monitor end-to-end services as well as service components. "When establishing or improving the monitoring and event management practice, the following aspects should be considered: identifying and prioritizing services and service components monitored". Ref Monitoring and Event Management Practice Guide 2.4.1</p>

Q	A	Syllabus Ref	Rationale
36	D	1.3.d	<p>A. Incorrect. The valuable investments objective involves identifying and justifying digital investments. This stage is about research and development. "New digital products and services should be envisaged and evaluated in terms of profitability." "It is also important to continually evaluate investments after they have been justified and approved, because more valuable options for investment may exist." Ref 4.1</p> <p>B. Incorrect. Resilient operations involves ensuring that digital products are highly available for use. "Information systems increasingly rely on so many components that behaviour often cannot be predicted or guaranteed. Failsafe systems are an illusion; organizations must be prepared for inevitable and unexpected failure. The emphasis is no longer on maintaining a long interval between failures; it is on restoring service quickly when inevitable issues do occur. This reduces the disruption to business operations." Ref 4.3</p> <p>C. Incorrect. Fast development involves realizing new and improved digital products frequently, quickly and reliably. "In general, the sooner digital products are delivered, the sooner value can be realized. Sometimes, however, this is not the case, and the schedule should be amended accordingly; for example, an early delivery might not align with market demand. Separating a single product into a series of incremental deliveries enables faster overall delivery, and allows users to realize value earlier than if they wait for the whole product." Ref 4.2</p> <p>D. Correct. The aim of this objective is to co-create value from digital products in close collaboration between service provider and consumer. "A return on digital investments is only realized when decision-making, whether done by people, automation, or AI, is improved by information derived from automated information systems. Users, therefore, have to understand the digital products and information, and their uses in their context. They should understand the functionality well enough to use it appropriately, and be able to interpret the information correctly in order to improve decision-making." Ref 4.4</p>

Q	A	Syllabus Ref	Rationale
37	C	4.4.e	<p>A. Incorrect. The question states that in some cases the requirements are unclear and conflicting and so this would not be the BEST approach. “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</p> <p>B. Incorrect. While there may be some benefits to this approach, it does not directly address the unclear requirements and so is not the BEST approach. “Small, relatively independent, multi-functional, product-based development/maintenance teams in which a product owner manages the priority of the work to be done”. Ref Software Development and Management Practice Guide 2.4.1</p> <p>C. Correct. This approach uses fast feedback to address the unclear requirements and emphasizes the need to work on the highest priority items first. “Agile and Scrum approaches are a combination of incremental and iterative, focusing on close collaboration with the owner of the application in order to obtain fast feedback and achieve quick development of small increments from which the owner can derive value.” Ref Software Development and Management Practice Guide 2.2</p> <p>D. Incorrect. This is a good approach as it somewhat addresses the unclear requirements, but is not the BEST approach as it does not emphasize the need to work on the highest priority items first. “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</p>

Q	A	Syllabus Ref	Rationale
38	D	4.1	<p>A. Incorrect. This is an example of fast development. "Fast development can be measured in terms of the size of the application (change) per unit of time. The size of the application can be expressed in technical units, such as lines of code, or functional units, such as story points or function points." Ref 4.2</p> <p>B. Incorrect. This is an example of the resilient operations objective. "The resilient operations objective involves ensuring that digital products are available for use whenever needed. Resilience applies to all parts of the systems stack, and also to the organization that manages these component parts. It is only when every component is resilient that the consumer-facing parts are resilient." Ref 4.3</p> <p>C. Incorrect. This is an example of the assured conformance objective. "The assured conformance objective involves ensuring that service provision and service consumption comply with corporate and regulatory directives with respect to governance, risk, and compliance." Ref 4.5</p> <p>D. Correct. This is an example of an approach to making valuable investments. "Making valuable investments is founded in market research and the development of new products. New digital products and services should be envisaged and evaluated in terms of profitability." Ref 4.1</p>

Q	A	Syllabus Ref	Rationale
39	A	4.3	<p>A. Correct. “Loosely coupled information system architecture is based on relatively small, independent components. This architecture enables work to be done in small, relatively independent, product- or service-based teams and platform-based teams. By breaking a system down into parts that can be developed and managed relatively independently, teams can focus on their own part and limit their interactions with other teams.” Ref 4.2.2</p> <p>B. Incorrect. Continuous testing suggests that software is tested “throughout the entire software development lifecycle.” It does not define product architecture. Ref 4.2.6</p> <p>C. Incorrect. Continuous business analysis suggests using multiple feedback loops to “provide valuable information about the direction in which the product or service should be developed.” It does not define product architecture. Ref 4.2.4</p> <p>D. Incorrect. Infrastructure as code is “a way of managing and provisioning IT infrastructure and platforms by using machine-readable definition files rather than physically configuring hardware components.” It may support loosely-coupled architecture, but does not define or require it. Ref 4.2.1</p>

Q	A	Syllabus Ref	Rationale
40	C	1.1.c	<p>A. Incorrect. "Digital organizations are enabled by digital technology. Digital technology is a significant underpinning enabler for these organizations' internal processes, and is often part of their products and services." In this example there is a planned significant improvement, so it is a digital transformation, not just a description of a digital organization. Ref 2.3</p> <p>B. Incorrect. High-velocity IT is "the application of digital technology for significant business enablement, where time to market, time to customer, time to change, and speed in general are crucial." There is no indication in this situation that the transformation will be rapid. Ref 2.1</p> <p>C. Correct. Digital transformation is "the use of digital technology to enable a significant improvement in the realization of an organization's objectives that could not feasibly have been achieved by non-digital means." Ref 2.4</p> <p>D. Incorrect. "In organizations where business and IT are regarded as separate organizational functions, 'IT transformation' is often used to denote major change that improves how IT services are provided. IT transformation is focused on how IT services and information services are developed, run, and supported." This organization is planning to change the use of their systems, not just how they are developed run and supported. Ref 2.4.1</p>