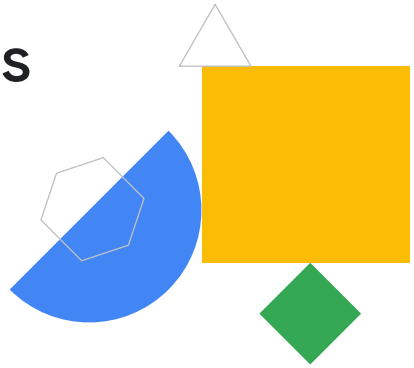
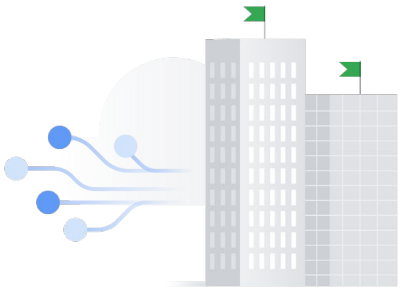
Google Cloud

Exam Review Questions

Cloud Digital Leader



Module 1
Digital Transformation with Google Cloud



01 Why cloud technology is transforming business

02 Fundamental cloud concepts

03 Cloud computing models and shared responsibility

Exam practice question

Question

As the world and business changes, organizations have to decide between embracing new technology and transforming, or keeping their technology and approaches the same. What risks might an organization face by not transforming as their market evolves?

A. Focusing on 'why' they operate can lead to inefficient use of resources and disruption.

B. Organizations risk losing market leadership if they spend too much time on digital transformation.

C. Focusing on 'how' they operate can prevent organizations from seeing transformation opportunities.

D. Embracing new technology can cause organizations to overspend on innovation.

Do: Read the question out loud. Ask the class to refrain from sharing their answers (either out loud or in the chat window) for about 10 seconds.

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Exam practice question

Answer

As the world and business changes, organizations have to decide between embracing new technology and transforming, or keeping their technology and approaches the same. What risks might an organization face by not transforming as their market evolves?

A. Focusing on ‘why’ they operate can lead to inefficient use of resources and disruption.

B. Organizations risk losing market leadership if they spend too much time on digital transformation.

C. Focusing on ‘how’ they operate can prevent organizations from seeing transformation opportunities.

D. Embracing new technology can cause organizations to overspend on innovation.

Say: The correct answer is C.

A. Focusing on ‘why’ they operate can lead to inefficient use of resources and disruption.
   - Why this is the **incorrect** answer: While important, a company's core purpose ("why") generally won't change radically. Overemphasis on this can lead to inefficiency, but this risk is secondary to failing to adapt their day-to-day operations and technology ("how") to meet evolving market needs.

B. Organizations risk losing market leadership if they spend too much time on digital transformation.
   - Why this is the **incorrect** answer: Organizations focused on maintaining current systems likely aren't spending an excessive amount of time on change initiatives to begin with. This highlights a danger of excessive transformation rather than not transforming at all.

C. Focusing on ‘how’ they operate can prevent organizations from seeing transformation opportunities.
   - Why this is the **correct** answer: This is the most significant risk faced by companies that refuse to adapt. Clinging to the status quo blinds them to potential improvements, changing consumer behaviors, and even threats from disruptive new competitors.

D. Embracing new technology can cause organizations to overspend on innovation.
   - Why this is the **incorrect** answer: Companies stagnating by sticking to

- old technology likely aren't guilty of innovation overspend – their primary risk is falling behind competitors who are investing in modern solutions.

Exam practice question

Question

An organization wants to move their collaboration software to the cloud, but due to limited IT staff one of their main drivers is having low maintenance needs. Which cloud computing model would best suit their requirements?

A. Infrastructure-as-a-Service (Iaas)

B. Software-as-a-Service (Saas)

C. Platform-as-a-Service (Paas)

D. IT-as-a-Service (ITaas)

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B. Software-as-a-Service (Saas) 

C. Platform-as-a-Service (Paas)

D. IT-as-a-Service (ITaas)

Say: The correct answer is B.

A. Infrastructure-as-a-Service (Iaas)
- Why this is the **incorrect** answer: While IaaS offers flexibility and control, it requires the organization to manage components like operating systems, middleware, and potentially parts of the application itself. This creates more maintenance responsibility than the company is likely seeking due to its limited IT team.

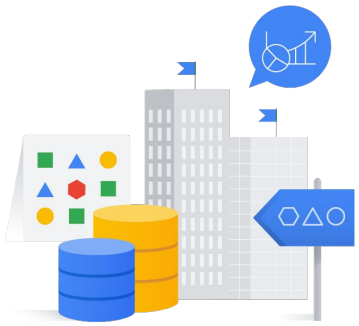
B. Software-as-a-Service (Saas)
- Why this is the **correct** answer: SaaS removes the most maintenance worries of any cloud model. The cloud provider handles hardware, software updates, and everything down to the application itself. This aligns perfectly with the company's goal of minimizing the maintenance load for their collaboration software.

C. Platform-as-a-Service (Paas)
- Why this is the **incorrect** answer: PaaS gives developers a ready-made environment to build and deploy applications. However, the organization would still need to manage the application software itself, increasing maintenance compared to a SaaS option.

D. IT-as-a-Service (ITaas)
- Why this is the **incorrect** answer: This is a broad model focused on outsourcing various IT functions to a third-party provider. While it might help with IT needs in general, it doesn't guarantee the low-maintenance aspect the organization requires for this specific collaboration

- software transition.

Module 2
Exploring Data Transformation with Google Cloud



01 The value of data

02 Google Cloud data management solutions

03 Making data useful and accessible

Exam practice question

Question

What are the two services that BigQuery provides?

A. Storage and analytics

B. Migration and analytics

C. Compute and analytics

D. Networking and storage

Do: Read the question out loud. Ask the class to refrain from sharing their answers (either out loud or in the chat window) for about 10 seconds.

Say: What are the two services that BigQuery provides?

A. Storage and analytics
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Exam practice question

Answer

What are the two services that BigQuery provides?

A. Storage and analytics 

B. Migration and analytics

C. Compute and analytics

D. Networking and storage

Say: The correct answer is A.

A. Storage and analytics
   - Why this is the **correct** answer: This is the correct description of BigQuery's core services. It provides a serverless data warehouse for storage and built-in capabilities for analyzing that data.

B. Migration and analytics
   - Why this is the **incorrect** answer: Although BigQuery supports data migration, it's not a primary offering like storage and analytics.

C. Compute and analytics
   - Why this is the **incorrect** answer: BigQuery handles the allocation of compute resources behind the scenes; users don't manage it as a distinct service.

D. Networking and storage
   - Why this is the **incorrect** answer: Networking and storage. Networking is essential to BigQuery but isn't a service that users interact with directly.

Exam practice question

Question

Which strategy describes when databases are migrated from on-premises and private cloud environments to the same type of database hosted by a public cloud provider?

A. Managed database migration

B. Refactoring

C. Remain on-premise

D. Lift & shift

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B. Refactoring

C. Remain on-premise

D. Lift & shift 

Say: The correct answer is D.

A. Managed database migration
- Why this is the **incorrect** answer: This is a broader term that can involve various strategies, including "lift and shift". However, it might also include changing the database engine (e.g., Oracle to PostgreSQL), which doesn't match the question's scenario.

B. Refactoring
- Why this is the **incorrect** answer: This approach involves significant code and architecture changes to optimize applications for the cloud environment. This goes beyond the scenario described in the question, implying only a change in hosting location.

C. Remain on-premise
- Why this is the **incorrect** answer: This clearly doesn't fit, as the question is about migrating to a public cloud setup.

D. Lift & shift
- Why this is the **correct** answer: Lift & shift describes moving applications and databases from on-premises or private cloud to a public cloud environment without major changes to the architecture. In this scenario, the database type remains the same, fitting this definition closely.

Module 3
Innovating with Google Cloud Artificial Intelligence

01 AI and ML fundamentals

02 Google Cloud's AI and ML solutions

Exam practice question

Question

How do data analytics and business intelligence differ from AI and ML?

A. Data analytics and business intelligence identify trends from historical data, whereas AI and ML use data to make decisions for future business.

B. Data analytics and business intelligence involve advanced algorithms for predicting future trends, whereas AI and ML focus on processing historical data.

C. Data analytics and business intelligence use automated decision-making processes, whereas AI and ML require human intervention and interpretation of data.

D. Data analytics and business intelligence are used only in small businesses, whereas AI and ML are used exclusively by large corporations.

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Say: The correct answer is A.

A. Data analytics and business intelligence identify trends from historical data, whereas AI and ML use data to make decisions for future business.
   - Why this is the **correct** answer: Data analytics and business intelligence (BI) primarily focus on understanding past events and trends using historical data. AI and machine learning (ML) build on this, analyzing data to create models that can predict future outcomes and even assist in decision-making processes.

B. Data analytics and business intelligence involve advanced algorithms for predicting future trends, whereas AI and ML focus on processing historical data.
   - Why this is the **incorrect** answer: This statement is partially accurate. Data analytics can indeed be used for predicting trends, but the prediction models may be less complex than the ones employed in AI and ML domains.

C. Data analytics and business intelligence use automated decision-making processes, whereas AI and ML require human intervention and interpretation of data.
   - Why this is the **incorrect** answer: This isn't a hard-and-fast rule. Automated decision-making can be used in AI and ML as well, and data analytics and business intelligence can be used to process historical data.

D. Data analytics and business intelligence are used only in small businesses,

A. whereas AI and ML are used exclusively by large corporations.
    - Why this is the **incorrect** answer: This statement is inaccurate. Businesses of all sizes can benefit from data analytics and BI. Larger corporations may have the resources to implement more complex AI and ML projects, but these are not exclusive to them.

Exam practice question

Question

What does the consistency dimension refer to when data quality is being measured?

A. Whether all the required information is present.

B. Whether the data is up-to-date and reflects the current state of the phenomenon that is being modeled.

C. Whether a dataset is free from duplicate values that could prevent an ML model from learning accurately.

D. Whether the data is uniform and doesn't contain any contradictory information.

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C. Whether a dataset is free from duplicate values that could prevent an ML model from learning accurately.

D. Whether the data is uniform and doesn't contain any contradictory information.

Say: The correct answer is D.

A. Whether all the required information is present.
- Why this is the **incorrect** answer: This refers to the data quality dimension of completeness, ensuring all necessary information is included.

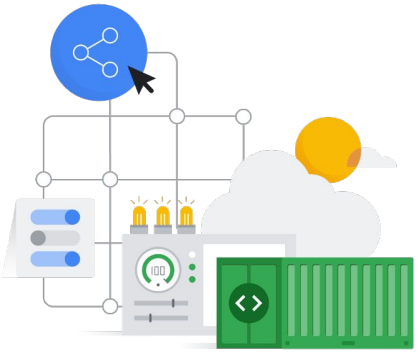
B. Whether the data is up-to-date and reflects the current state of the phenomenon that is being modeled.
- Why this is the **incorrect** answer: This describes the dimension of timeliness, addressing how recently the data was collected or updated.

C. Whether a dataset is free from duplicate values that could prevent an ML model from learning accurately.
- Why this is the **incorrect** answer: This is closer to the uniqueness dimension, focused on identifying and potentially removing redundancy that could interfere with analysis.

D. Whether the data is uniform and doesn't contain any contradictory information.
- Why this is the **correct** answer: Consistency means that the data follows a standard format, doesn't have discrepancies across different datasets, and the information within individual records makes logical sense.

Module 4

Modernize Infrastructure and Applications with Google Cloud



01 Important cloud migration terms

02 Modernizing infrastructure in the cloud

03 Modernizing applications in the cloud

Exam practice question

Question

What computing option automatically provisions resources, like compute power, in the background as needed?

A. Traditional on-premise computing

B. Serverless computing

C. Iaas (Infrastructure-as-a-service)

D. Paas (Platform-as-a-service)

Do: Read the question out loud. Ask the class to refrain from sharing their answers (either out loud or in the chat window) for about 10 seconds.

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Answer

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A. Traditional on-premise computing

B. Serverless computing 

C. Iaas (Infrastructure-as-a-service)

D. Paas (Platform-as-a-service)

Say: The correct answer is B.

A. Traditional on-premise computing
- Why this is the **incorrect** answer: In this model, provisioning of compute resources is a manual process. Organizations need to purchase and maintain physical servers, and scaling up or down requires time and planning.

B. Serverless computing
- Why this is the **correct** answer: This computing model excels at on-demand resource scaling. With serverless, developers write code, and the cloud provider handles resource allocation in the background, spinning up and down as needed to support changing workloads.

C. Iaas (Infrastructure-as-a-service)
- Why this is the **incorrect** answer: With IaaS, the user still has to manage resource allocation to some extent, determining when to bring more servers online or scale them back down.

D. Paas (Platform-as-a-service)
- Why this is the **incorrect** answer: Resource scaling may still require manual adjustments with some PaaS providers or depend on pre-set rules based on anticipated usage patterns.

Exam practice question

Question

In modern cloud application development, what name is given to independently deployable, scalable, and maintainable components that can be used to build a wide range of applications?

A. Containers

B. Monoliths

C. Microservices

D. DevOps

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A. Containers

B. Monoliths

C. Microservices 

D. DevOps

Say: The correct answer is C.

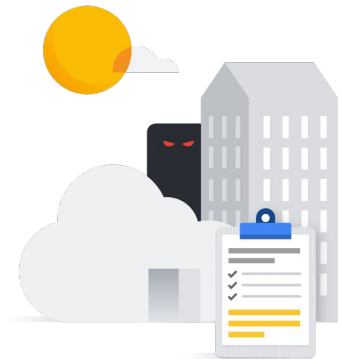
A. Containers
- Why this is the **incorrect** answer: Containers provide a way to package applications and their dependencies for portability and consistency. While microservices are often deployed inside containers, containers aren't a required feature of microservices and don't define the architecture itself.

B. Monoliths
- Why this is the **incorrect** answer: Monolithic architecture is the opposite of microservices. Applications are built as a single, large unit. This model can become complex and difficult to maintain in a cloud environment where agility and scalability are important.

C. Microservices
- Why this is the **correct** answer: Microservices are an architectural style where applications are broken into small, independent components. Each component has its own logic, data, and can be deployed, scaled, and updated independently, making them well-suited for cloud environments.

D. DevOps
- Why this is the **incorrect** answer: DevOps is a philosophy and set of practices focused on breaking down silos between development and operations. While microservices often align well with DevOps, DevOps itself is not a specific software component.

Module 5
Trust and Security with Google Cloud



01 Trust and security in the cloud

02 Google's trusted infrastructure

03 Google Cloud's trust principles and compliance

Exam practice question

Question

Which three essential aspects of cloud security form the foundation of the CIA triad?

A. Compliance, identity, and access management

B. Confidentiality, integrity, and availability

C. Containers, infrastructure, and architecture

D. Certificates, intelligence, and authentication

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A. Compliance, identity, and access management

B. Confidentiality, integrity, and availability 

C. Containers, infrastructure, and architecture

D. Certificates, intelligence, and authentication

Say: The correct answer is B.

A. Compliance, identity, and access management
   - Why this is the **incorrect** answer: These operate within the framework set by the CIA triad, but are not the foundation. For example, identity and access management directly supports confidentiality.

B. Confidentiality, integrity, and availability
   - Why this is the **correct** answer: Confidentiality, integrity, and availability form the CIA triad. It's a central model for information security, and cloud security specifically:
     i. Confidentiality: Ensuring only authorized individuals access sensitive data.
     ii. Integrity: The assurance that data remains accurate and hasn't been modified without authorization.
     iii. Availability: Systems and data remain accessible to authorized users when needed.

C. Containers, infrastructure, and architecture
   - Why this is the **incorrect** answer: These are components of cloud deployment. The CIA triad helps establish how you should design and configure these aspects to meet security goals.

D. Certificates, intelligence, and authentication
   - Why this is the **incorrect** answer: These are tools to maintain the CIA triad, but not the triad itself. Certificates aid in encryption

- availability), and authentication enforces access rules (confidentiality).

Exam practice question

Question

Which practice involves a combination of processes and technologies that help reduce the risk of data breaches, system outages, and other security incidents in the cloud?

A. Security operations (SecOps)

B. Site reliability engineering (SRE)

C. Zero trust security

D. Cloud security posture management (CSPM)

Do: Read the question out loud. Ask the class to refrain from sharing their answers (either out loud or in the chat window) for about 10 seconds.

Say: Which practice involves a combination of processes and technologies that help reduce the risk of data breaches, system outages, and other security incidents in the cloud?

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A. Security operations (SecOps)

B. Site reliability engineering (SRE)

C. Zero trust security

D. Cloud security posture management (CSPM)

Say: The correct answer is A.

A. Security operations (SecOps).
- Why this is the **correct** answer: Security Operations is all about protecting your organization's data and systems in the cloud. It involves a combination of processes and technologies that help reduce the risk of data breaches, system outages, and other security incidents.

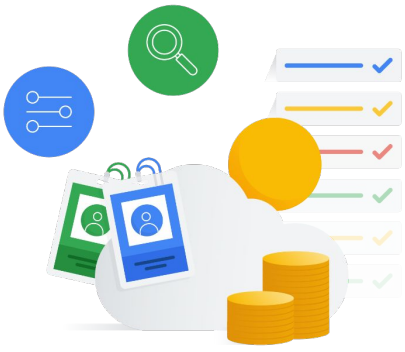
B. Site reliability engineering (SRE)
- Why this is the **incorrect** answer: Site reliability engineering ensures the reliability, availability, and efficiency of software systems and services deployed in the cloud.

C. Zero trust security
- Why this is the **incorrect** answer: Zero trust security is a strategic framework that establishes strict access controls based on the principle of continuous verification. Security operations focuses on the practical, day-to-day implementation of security measures, like threat detection, incident response, and monitoring.

D. Cloud security posture management (CSPM)
- Why this is the **incorrect** answer: Security operations encompasses the broad range of activities aimed at detecting, preventing, and responding to security threats across an organization's entire technology environment. Cloud Security Posture Management (CSPM) specifically focuses on identifying and correcting misconfigurations or vulnerabilities within your cloud infrastructure to maintain a strong

- security posture in the cloud.

Module 6
Scaling with Google Cloud Operations



01 Financial governance and managing cloud costs

02 Operational excellence and reliability at scale

03 Sustainability with Google Cloud

Exam practice question

Question

Why is it a benefit that the Google Cloud resource hierarchy follows inheritance and propagation rules?

A. Permissions set at higher levels of the resource hierarchy are automatically inherited by lower-level resources.

B. Inheritance in the hierarchy reduces the overall cost of cloud computing.

C. Resources at lower levels can improve the performance of cloud applications.

D. Faster propagation can simplify a cloud migration.

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C. Resources at lower levels can improve the performance of cloud applications.

D. Faster propagation can simplify a cloud migration.

Say: The correct answer is A.

A. Permissions set at higher levels of the resource hierarchy are automatically inherited by lower-level resources.
   - Why this is the **correct** answer: This is the core benefit of Google Cloud's resource hierarchy inheritance. It provides efficient and consistent permission management across a complex organization.

B. Inheritance in the hierarchy reduces the overall cost of cloud computing.
   - Why this is the **incorrect** answer: While centralized permission management can indirectly prevent some costly security misconfigurations, it isn't a direct cost-saving factor inherent to inheritance.

C. Resources at lower levels can improve the performance of cloud applications.
   - Why this is the **incorrect** answer: Performance relies on many factors (scaling, network optimization, code efficiency). Resource hierarchy organization influences management, not necessarily fundamental application performance.

D. Faster propagation can simplify a cloud migration.
   - Why this is the **incorrect** answer: Resource hierarchy can assist in organized migration, but the faster propagation you might allude to usually isn't about data moving, but permissions consistently flowing down.

Exam practice question

Question

What does the Cloud Profiler tool do ?

A. It collects and stores all application and infrastructure logs.

B. It identifies how much CPU power, memory, and other resources an application uses.

C. It counts, analyzes, and aggregates the crashes in running cloud services in real-time.

D. It provides a comprehensive view of your cloud infrastructure and applications.

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C. It counts, analyzes, and aggregates the crashes in running cloud services in real-time.

D. It provides a comprehensive view of your cloud infrastructure and applications.

Say: The correct answer is B.

A. It collects and stores all application and infrastructure logs.
- Why this is the **incorrect** answer: While Profiler might use logs for some analysis, the focus isn't log collection and storage. A tool like Cloud Logging specializes in that.

B. It identifies how much CPU power, memory, and other resources an application uses.
- Why this is the **correct** answer: This is the primary function of the Cloud Profiler. It's designed to analyze application code and pinpoint areas where resources (CPU, memory) are inefficiently used, contributing to performance bottlenecks.

C. It counts, analyzes, and aggregates the crashes in running cloud services in real-time.
- Why this is the **incorrect** answer: This sounds more like a crash reporting tool (and is handled by Google Cloud Error Reporting). Cloud Profiler's goal is improving general performance, not specifically crash analysis.

D. It provides a comprehensive view of your cloud infrastructure and applications.
- Why this is the **incorrect** answer: This is broad. Tools like Cloud Monitoring focus on the big-picture health of infrastructure and services. Profiler delves into the internal resource usage of specific applications.