CERT-PASS

Google GCP Professional Cloud Architect

Free Practice Questions Preview

Here are 35 sample questions to help you get started. Unlock the full exam to access all 1007+ questions with detailed explanations.

Question 1 : Designing and planning a cloud solution architecture

Case study: KnightMotives Automotive is designing a new stateless customer portal. Traffic is unpredictable, developers want container deployment, and the team wants to support rapid growth. What architecture should you recommend?

A. Cloud Storage static hosting for the API

B. A zonal managed instance group without autoscaling

C. Cloud Run behind a global external Application Load Balancer

D. A single Compute Engine VM with startup scripts

Answer: C
Cloud Run is a managed, autoscaling container platform and the global external Application Load Balancer adds resilient edge entry. The best distractor fails because a single VM or non-autoscaled zonal group does not meet elasticity and availability goals.

Question 2 : Designing and planning a cloud solution architecture

KnightMotives Automotive needs a globally distributed relational database for the field service app. The workload requires strong consistency, horizontal scale, and multi-region availability. What should you choose?

A. Cloud SQL for MySQL single zone

B. Memorystore for Redis with persistence

C. Cloud Spanner in a multi-region instance configuration

D. BigQuery with streaming inserts as the OLTP database

Answer: C
Cloud Spanner is the Google Cloud relational database designed for strong consistency and global scale. The best distractor fails because Cloud SQL is excellent for managed relational workloads but does not provide the same horizontal global consistency pattern.

Question 3 : Designing and planning a cloud solution architecture

EHR Healthcare wants to migrate 400 applications from a data center. Dependencies are unclear and leadership wants a low-risk migration roadmap before selecting target services. What should the architect do first?

A. Rewrite all applications before assessment

B. Create one shared service account with Owner permissions

C. Lift every server into one project using Migrate to Virtual Machines

D. Run discovery and assessment with Migration Center and group workloads into migration waves

Answer: D
Migration Center and wave planning expose dependencies, cost, and suitability before committing to target designs. The best distractor fails because big-bang migration ignores dependency mapping and increases outage risk.

Question 4 : Designing and planning a cloud solution architecture

TravelVista is planning storage for archive records that are rarely read but must be retained for seven years. Access can tolerate retrieval latency and cost must be minimized. Which storage class is best?

A. Cloud Storage Standard in one region

B. Cloud SQL with compressed tables

C. Cloud Storage Archive class with lifecycle management

D. Persistent Disk snapshots kept forever

Answer: C
Archive storage plus lifecycle policies matches long-term, rare-access retention at low storage cost. The best distractor fails because Standard storage costs more for data that is almost never accessed.

Question 5 : Designing and planning a cloud solution architecture

StreamFlow needs to expose private services from a producer VPC to many consumer VPCs without peering all networks or using public IP addresses. What should you design?

A. External load balancers with authorized networks

B. Private Service Connect endpoints

C. Cloud NAT for inbound producer access

D. VPC Network Peering between every project

Answer: B
Private Service Connect provides private, scalable service access across VPC boundaries. The best distractor fails because mesh peering creates operational complexity and transitive routing limitations.

Question 6 : Designing and planning a cloud solution architecture

Case study: EHR Healthcare wants a lakehouse analytics platform for petabyte-scale SQL reporting and ML feature exploration. Analysts should not manage clusters. What is the best core service?

A. BigQuery

B. Cloud SQL read replicas

C. Filestore Enterprise

D. Self-managed PostgreSQL on Compute Engine

Answer: A
BigQuery is serverless, highly scalable, and optimized for analytical SQL workloads. The best distractor fails because Cloud SQL targets transactional databases and cannot serve petabyte analytics with the same managed scale.

Question 7 : Designing and planning a cloud solution architecture

Cymbal Retail runs a latency-sensitive online gaming backend. It needs custom Kubernetes controllers, service mesh integration, and fine-grained node configuration. Which compute platform fits best?

A. App Engine standard only

B. Cloud Run jobs

C. Google Kubernetes Engine

D. Cloud Functions only

Answer: C
GKE is appropriate when Kubernetes control, mesh, and node-level capabilities are required. The best distractor fails because Cloud Run reduces ops but does not provide full Kubernetes control-plane flexibility.

Question 8 : Designing and planning a cloud solution architecture

PharmaTrust has fault-tolerant image rendering jobs that can restart from checkpoints. Management wants the lowest compute cost. Which compute option should you use? Choose the option that best meets the requirement with the least operational overhead.

A. Sole-tenant nodes for all workers

B. Largest standard VMs running continuously

C. Cloud SQL replicas for compute offload

D. Spot VMs in a managed instance group with retry/checkpoint logic

Answer: D
Spot VMs are cost-effective for interruptible, retryable batch workloads. The best distractor fails because sole-tenant nodes solve isolation needs, not low-cost interruptible batch.

Question 9 : Designing and planning a cloud solution architecture

MetroHealth is creating a landing zone for several business units with different compliance needs. What resource design is most appropriate?

A. Use an organization with folders for business units and separate projects for workloads

B. Create a new Google Cloud organization for each app

C. Place all workloads in one project

D. Avoid folders and manage access manually

Answer: A
Organization, folder, and project hierarchy supports governance, isolation, and policy inheritance. The best distractor fails because one project reduces separation of duties and makes policy boundaries unclear.

Question 10 : Designing and planning a cloud solution architecture

EduNext wants an enterprise support assistant over internal documents using generative AI. The team wants managed search, grounding, and low operations. Which solution is best?

A. Gemini Enterprise or Vertex AI Agent Builder with enterprise data connectors

B. Use only Cloud CDN to cache documents

C. Make all documents public and call a generic chatbot

D. Train a foundation model from scratch on Compute Engine

Answer: A
Managed GenAI application services reduce custom ML work and support grounded enterprise use cases. The best distractor fails because training from scratch is expensive, slow, and unnecessary for a document assistant.

Question 11 : Designing and planning a cloud solution architecture

Case study: EHR Healthcare needs global delivery of static assets and dynamic APIs with low latency. What should the architecture include?

A. One VM with a public IP in {reg}

B. Cloud NAT as the inbound entry point

C. Global external Application Load Balancer with Cloud CDN for cacheable content

D. Regional internal passthrough Network Load Balancer only

Answer: C
Global external load balancing and CDN improve availability and user latency for internet traffic. The best distractor fails because a single regional VM is a single point of failure and adds latency.

Question 12 : Designing and planning a cloud solution architecture

FinSecure has an RTO of 30 minutes and an RPO of 5 minutes for the mobile backend. What should guide the architecture? What is the most appropriate Google Cloud recommendation?

A. A tested HA/DR design with replication, backups, and recovery drills aligned to RTO/RPO

B. Increasing machine size for faster recovery

C. Relying on VM auto-restart in one zone

D. Daily manual exports only

Answer: A
RTO/RPO must drive region, replication, backup, and recovery testing decisions. The best distractor fails because daily exports cannot satisfy a five-minute RPO.

Question 13 : Designing and planning a cloud solution architecture

Cymbal Retail must select a workload disposition strategy for a legacy app with low business value and high maintenance cost. What is the most appropriate first recommendation?

A. Move the app unchanged and ignore licensing

B. Evaluate retirement, replacement, or replatforming before rebuilding

C. Rewrite immediately with microservices

D. Keep it on-premises forever without analysis

Answer: B
Disposition planning compares retire, retain, rehost, replatform, repurchase, and refactor against value and risk. The best distractor fails because rewriting first is costly and may not match business value.

Question 14 : Designing and planning a cloud solution architecture

Helicopter Racing League requires hybrid connectivity with predictable bandwidth and private RFC1918 traffic between its data center and Google Cloud. Which option is generally preferred for production?

A. Cloud Interconnect with Cloud Router

B. Public IP allowlists over the internet only

C. External HTTP(S) Load Balancer

D. Cloud DNS peering alone

Answer: A
Cloud Interconnect with dynamic routing is the production pattern for private, high-throughput hybrid connectivity. The best distractor fails because public IP allowlists do not provide private predictable hybrid networking.

Question 15 : Designing and planning a cloud solution architecture

TerramEarth wants to process streaming telemetry, support replay, and load curated analytics tables. What managed pipeline pattern should you choose? Choose the option that best meets the requirement with the least operational overhead.

A. Pub/Sub for ingestion, Dataflow for processing, and BigQuery for analytics

B. Direct writes from devices to BigQuery with no buffer

C. Cloud DNS logs as the event bus

D. Cron jobs copying files from VM disks

Answer: A
Pub/Sub decouples ingestion, Dataflow handles streaming transforms, and BigQuery supports analytics. The best distractor fails because direct-to-warehouse writes often lack buffering, replay, and back-pressure handling.

Question 16 : Designing and planning a cloud solution architecture

Case study: MediaForge is designing a new stateless content delivery site. Traffic is unpredictable, developers want container deployment, and the team wants to reduce licensing cost. What architecture should you recommend?

A. Cloud Run behind a global external Application Load Balancer

B. Cloud Storage static hosting for the API

C. A zonal managed instance group without autoscaling

D. A single Compute Engine VM with startup scripts

Answer: A
Cloud Run is a managed, autoscaling container platform and the global external Application Load Balancer adds resilient edge entry. The best distractor fails because a single VM or non-autoscaled zonal group does not meet elasticity and availability goals.

Question 17 : Designing and planning a cloud solution architecture

EHR Healthcare needs a globally distributed relational database for the order API. The workload requires strong consistency, horizontal scale, and multi-region availability. What should you choose?

A. Cloud Spanner in a multi-region instance configuration

B. BigQuery with streaming inserts as the OLTP database

C. Memorystore for Redis with persistence

D. Cloud SQL for MySQL single zone

Answer: A
Cloud Spanner is the Google Cloud relational database designed for strong consistency and global scale. The best distractor fails because Cloud SQL is excellent for managed relational workloads but does not provide the same horizontal global consistency pattern.

Question 18 : Designing and planning a cloud solution architecture

PharmaTrust wants to migrate 400 applications from a data center. Dependencies are unclear and leadership wants a low-risk migration roadmap before selecting target services. What should the architect do first?

A. Run discovery and assessment with Migration Center and group workloads into migration waves

B. Rewrite all applications before assessment

C. Lift every server into one project using Migrate to Virtual Machines

D. Create one shared service account with Owner permissions

Answer: A
Migration Center and wave planning expose dependencies, cost, and suitability before committing to target designs. The best distractor fails because big-bang migration ignores dependency mapping and increases outage risk.

Question 19 : Designing and planning a cloud solution architecture

KnightMotives Automotive needs to expose private services from a producer VPC to many consumer VPCs without peering all networks or using public IP addresses. What should you design?

A. Cloud NAT for inbound producer access

B. VPC Network Peering between every project

C. Private Service Connect endpoints

D. External load balancers with authorized networks

Answer: C
Private Service Connect provides private, scalable service access across VPC boundaries. The best distractor fails because mesh peering creates operational complexity and transitive routing limitations.

Question 20 : Designing and planning a cloud solution architecture

Case study: StreamFlow wants a lakehouse analytics platform for petabyte-scale SQL reporting and ML feature exploration. Analysts should not manage clusters. What is the best core service?

A. Cloud SQL read replicas

B. BigQuery

C. Filestore Enterprise

D. Self-managed PostgreSQL on Compute Engine

Answer: B
BigQuery is serverless, highly scalable, and optimized for analytical SQL workloads. The best distractor fails because Cloud SQL targets transactional databases and cannot serve petabyte analytics with the same managed scale.

Question 21 : Designing and planning a cloud solution architecture

BuildRight runs a latency-sensitive online gaming backend. It needs custom Kubernetes controllers, service mesh integration, and fine-grained node configuration. Which compute platform fits best? Choose the option that best meets the requirement with the least operational overhead.

A. App Engine standard only

B. Cloud Functions only

C. Google Kubernetes Engine

D. Cloud Run jobs

> **Answer: C**
> GKE is appropriate when Kubernetes control, mesh, and node-level capabilities are required. The best distractor fails because Cloud Run reduces ops but does not provide full Kubernetes control-plane flexibility.

Question 22 : Designing and planning a cloud solution architecture

Mountkirk Games has fault-tolerant image rendering jobs that can restart from checkpoints. Management wants the lowest compute cost. Which compute option should you use? What is the most appropriate Google Cloud recommendation?

A. Cloud SQL replicas for compute offload

B. Spot VMs in a managed instance group with retry/checkpoint logic

C. Sole-tenant nodes for all workers

D. Largest standard VMs running continuously

> **Answer: B**
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KnightMotives Automotive is creating a landing zone for several business units with different compliance needs. What resource design is most appropriate?

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C. Avoid folders and manage access manually

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> **Answer: D**
> Organization, folder, and project hierarchy supports governance, isolation, and policy inheritance. The best distractor fails because one project reduces separation of duties and makes policy boundaries unclear.

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EHR Healthcare wants an enterprise support assistant over internal documents using generative AI. The team wants managed search, grounding, and low operations. Which solution is best?

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B. Use only Cloud CDN to cache documents

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Case study: TravelVista needs global delivery of static assets and dynamic APIs with low latency. What should the architecture include?

A. Regional internal passthrough Network Load Balancer only

B. One VM with a public IP in {reg}

C. Global external Application Load Balancer with Cloud CDN for cacheable content

D. Cloud NAT as the inbound entry point

Answer: C
Global external load balancing and CDN improve availability and user latency for internet traffic. The best distractor fails because a single regional VM is a single point of failure and adds latency.

Question 26 : Designing and planning a cloud solution architecture

MetroHealth has an RTO of 30 minutes and an RPO of 5 minutes for the content delivery site. What should guide the architecture?

A. A tested HA/DR design with replication, backups, and recovery drills aligned to RTO/RPO

B. Increasing machine size for faster recovery

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D. Relying on VM auto-restart in one zone

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MediaForge requires hybrid connectivity with predictable bandwidth and private RFC1918 traffic between its data center and Google Cloud. Which option is generally preferred for production? Choose the option that best meets the requirement with the least operational overhead.

A. External HTTP(S) Load Balancer

B. Public IP allowlists over the internet only

C. Cloud DNS peering alone

D. Cloud Interconnect with Cloud Router

Answer: D
Cloud Interconnect with dynamic routing is the production pattern for private, high-throughput hybrid connectivity. The best distractor fails because public IP allowlists do not provide private predictable hybrid networking.

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A. A zonal managed instance group without autoscaling

B. A single Compute Engine VM with startup scripts

C. Cloud Run behind a global external Application Load Balancer

D. Cloud Storage static hosting for the API

Answer: C
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Question 31 : Designing and planning a cloud solution architecture

StreamFlow needs a globally distributed relational database for the document search assistant. The workload requires strong consistency, horizontal scale, and multi-region availability. What should you choose?

A. Cloud Spanner in a multi-region instance configuration

B. Memorystore for Redis with persistence

C. Cloud SQL for MySQL single zone

D. BigQuery with streaming inserts as the OLTP database

Answer: A
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Answer: D
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Question 33 : Designing and planning a cloud solution architecture

GlobalShop is planning storage for archive records that are rarely read but must be retained for seven years. Access can tolerate retrieval latency and cost must be minimized. Which storage class is best? What is the most appropriate Google Cloud recommendation?

A. Cloud Storage Archive class with lifecycle management

B. Cloud SQL with compressed tables

C. Persistent Disk snapshots kept forever

D. Cloud Storage Standard in one region

Answer: A
Archive storage plus lifecycle policies matches long-term, rare-access retention at low storage cost. The best distractor fails because Standard storage costs more for data that is almost never accessed.

Question 34 : Designing and planning a cloud solution architecture

TerramEarth needs to expose private services from a producer VPC to many consumer VPCs without peering all networks or using public IP addresses. What should you design?

A. VPC Network Peering between every project

B. External load balancers with authorized networks

C. Private Service Connect endpoints

D. Cloud NAT for inbound producer access

Answer: C
Private Service Connect provides private, scalable service access across VPC boundaries. The best distractor fails because mesh peering creates operational complexity and transitive routing limitations.

Question 35 : Designing and planning a cloud solution architecture

Case study: LogiMove wants a lakehouse analytics platform for petabyte-scale SQL reporting and ML feature exploration. Analysts should not manage clusters. What is the best core service?

A. Cloud SQL read replicas

B. Self-managed PostgreSQL on Compute Engine

C. Filestore Enterprise

D. BigQuery

Answer: D
BigQuery is serverless, highly scalable, and optimized for analytical SQL workloads. The best distractor fails because Cloud SQL targets transactional databases and cannot serve petabyte analytics with the same managed scale.

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