Planning and Configuring a Cloud Solution

**1.**

Which storage solution is a fully managed, NoSQL database built on Cloud Bigtable?

thumb\_up

thumb\_down

A

Cloud Spanner

B

BigQuery

C

Cloud Datastore

D

Cloud Storage

**Correct Answer: C**

**Why is this correct?**

Cloud Datastore is a fully managed, NoSQL database built on Bigtable. Like Bigtable, it uses a row key to look up data. It is suitable for web and mobile applications that do not require complex queries.

Video for reference: Comparing Storage Options

**2.**

Hardware configuration that can either be predefined by Google or customized is called:

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thumb\_down

A

virtual machine

B

preemptible instance

C

instance type

D

machine type

**Correct Answer: D**

**Why is this correct?**

Machine types define the hardware configuration concerning core, memory, and GPUs. There are machine types that are predefined by Google, or you can designate a custom machine type for more control.

Video for reference: Reviewing Compute Engine

**3.**

Which controller uses desired state configuration and allows us to specify the number of pod instances running on a cluster?

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A

Deployment

B

Replication

C

DaemonSet

D

CronJob

**Correct Answer: A**

**Why is this correct?**

Deployment controller is used to achieve a desired state of pods.

Video for reference: Reviewing Kubernetes Engine

**4.**

Which statement is **NOT** true regarding using the Google Cloud Price Calculator to estimate price?

thumb\_up

thumb\_down

A

Allows us to determine areas to cut back

B

Allows us to determine areas to rework codebase

C

Ensures services are affordable to use at scale

D

Provides a final, guaranteed price for cloud services

**Correct Answer: D**

**Why is this correct?**

The price estimates provided by Google Cloud Price Calculator are not binding or guaranteed. The actual price could differ from the estimate shown.

Video for reference: Estimating the Price of the Application

**5.**

Which of the following load balancers supports regional load balancing in the standard tier and global in the premium tier?

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A

TCP Proxy

B

SSL Proxy

C

HTTP(S)

D

Network TCP/UDP

**Correct Answer: D**

**Why is this correct?**

Network TCP/UDP supports regional load balancing and and global in the premium tier. It can also preserve the client IP.

Video for reference: Reviewing Networking Options

**6.**

What are some advantages of using the App Engine standard environment?

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thumb\_down

A

Managed and custom runtimes

B

Managed runtimes, inexpensive, fast startup

C

Can write to disk, inexpensive, fast startup

D

Managed runtimes, inexpensive, can write to local disk

**Correct Answer: B**

**Why is this correct?**

With the App Engine standard environment, we can use managed runtimes such as Python, Java, or Node.JS. The standard environment is designed to be affordable. Instances start up within seconds.

Video for reference: Reviewing App Engine

**7.**

In which scenario should we use unmanaged instance groups? Select the best response.

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thumb\_down

A

Instances in the group need different configurations.

B

We need to autoscale instances based on CPU usage.

C

Instances in the group need to have the same configuration.

D

We are building a stateless application.

**Correct Answer: A**

**Why is this correct?**

Unmanaged instance groups should be used for existing instances that use different configurations. Unmanaged instance groups should only be used when you cannot use a managed instance group.

Video for reference: Reviewing Compute Engine - Managed Instance Groups

**8.**

You are using the Google Cloud Price Calculator to estimate the price for App Engine. You enter one standard instance per hour and click "Add to Estimate", but price estimate does not change. What is the best reason for this?

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thumb\_down

A

Your usage is within the free tier.

B

App Engine instances are not billed.

C

The first five instances per hour are free.

D

The first three instances per hour are free.

**Correct Answer: A**

**Why is this correct?**

One instance per hour, or 730 instance hours per month, is within the free tier.

Video for reference: Estimating the Price of the Application

**9.**

What are some limitations of preemptible instances?

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thumb\_down

A

They are terminated after 24 hours.

B

They are only suited for stateful workloads.

C

They can be terminated at any time if that capacity is needed.

D

They are more expensive than regular VM instances.

E

They are terminated after 12 hours.

**Correct Answer: A**

**Why is this correct?**

Preemptible instances are considered short-lived because they are terminated after 24 hours.

Video for reference: Reviewing Compute Engine

**Correct Answer: C**

**Why is this correct?**

The primary characteristic of preemptible instances is that they can be terminated at any time if that capacity is needed.

Video for reference: Reviewing Compute Engine

**10.**

Which controller ensures that a copy of a pod runs on nodes in the cluster, allowing for node management?

thumb\_up

thumb\_down

A

CronJob

B

Replication

C

Deployment

D

DaemonSet

**Correct Answer: D**

**Why is this correct?**

DaemonSet controller ensures that a copy of a pod runs on nodes in the cluster, allowing for node management.

Video for reference: Reviewing Kubernetes Engine

**11.**

Which Google Cloud storage solution is suitable for unstructured data?

thumb\_up

thumb\_down

A

Cloud Storage

B

Cloud Bigtable

C

Cloud Datastore

D

Cloud Spanner

**Correct Answer: A**

**Why is this correct?**

Cloud Storage is the proper storage solution for unstructured data.

Video for reference: Comparing Storage Options

**12.**

Which statement is **NOT** true regarding managed instance groups?

thumb\_up

thumb\_down

A

They support autohealing.

B

They should only be used when load balancing existing instances.

C

They support autoscaling.

D

The instance group is created from an instance template.

**Correct Answer: B**

**Why is this correct?**

This statement is true for unmanaged instance groups, not managed instance groups. Unmanaged instance groups should be used when managed instance groups are not suitable, such as when grouping together dissimilar instances.

Video for reference: Reviewing Compute Engine - Managed Instance Groups

**13.**

Select the response that best describes an auto mode network for subnet creation.

thumb\_up

thumb\_down

A

Allows you to manually create subnets within predefined IP ranges

B

Automatically creates subnets in each region, each with a distinct IP range created by Google

C

Gives you complete control over the network's subnets and IP ranges

D

Automatically creates subnets using IP ranges that you specify

**Correct Answer: B**

**Why is this correct?**

When using an auto mode network, Google automatically creates subnets in each region using distinct, predefined IP ranges.

Video for reference: Reviewing Networking Options

**14.**

Your code needs to run in response to cloud events, you can develop in JavaScript, and you don't care about the underlying operating system. Which compute service should you use?

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thumb\_down

A

App Engine

B

Cloud Functions

C

Compute Engine

D

Kubernetes Engine

**Correct Answer: B**

**Why is this correct?**

Cloud Functions is best for event-triggered, Node.JS-based code. It is the best solution for this use case.

Video for reference: Comparing Compute Options

**15.**

Nodes run services that allow pods to do what?

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A

Ensure a copy of a pod runs on each node in the cluster

B

Communicate without using their individual IP address

C

Specify how many instances of a specific pod we want to run on the cluster

D

Communicate using their individual IP address

**Correct Answer: B**

**Why is this correct?**

Kubernetes gives each pod its own IP address. Services allow pods to communicate without using their individual IP address.

Video for reference: Reviewing Kubernetes Engine

**16.**

Which of the following statements are true regarding managed instance groups?

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A

Additional instances are removed 10 minutes after they are no longer required.

B

They are not suitable for batch processing workloads.

C

They are suitable for stateful applications.

D

Additional instances are removed 15 minutes after they are no longer required.

E

They offer high availability, autoscaling, and automatic updates.

**Correct Answer: A**

**Why is this correct?**

The number of instances in the group will grow and shrink to meet demand. Instances that are no longer required will be removed after a 10-minute stabilization period.

Video for reference: Reviewing Compute Engine - Managed Instance Groups

**Correct Answer: E**

**Why is this correct?**

Managed instance groups offer many benefits such as high availability, autoscaling, and automatic updates.

Video for reference: Reviewing Compute Engine - Managed Instance Groups