



Google Cloud Computing

(Jul-Oct 2024)

Assignment- Week 2

TYPE OF QUESTION: MCQ/MSQ

Number of questions: 10

Total mark: 10 X 1 = 10

QUESTION 1:

Which of the following GCP Services aid us to run Windows and Linux-based virtual machines?

- a) Compute engine
- b) Google App engine
- c) Kubernetes Engines
- d) All of the above

Correct Answer: (a)

Explanation: Compute engine is a type of GCP Service that aids us to run Windows and Linux-based virtual machines

QUESTION 2:

What is the maximum size of the persistent disc that can be attached to a virtual machine in Google Compute Engine?

- a) 32GB
- b) 32TB
- c) 64GB
- d) 64TB

Correct Answer: (d)

Explanation: Maximum 64TB of network storage can be attached to VMs as persistent disc.

QUESTION 3:

Containerized applications can be deployed, managed, and scaled on Google using which service?

- a) Compute engine
- b) Google App engine
- c) Kubernetes Engines
- d) None of the above



Correct Answer: (c)

Explanation: Containerized applications can be deployed, managed, and scaled on the Google Kubernetes engine.

QUESTION 4:

Say, five VMs are running in a managed group with CPU utilization of 80%, 70%, 75%, 85%, and 90% respectively. How many VMs would the autoscaler add if the targeted CPU utilization is 50%?

- a) 0
- b) 1
- c) 2
- d) 3

Correct Answer: (d)

Explanation: Here the actual utilization is $\{(80+70+75+85+90)/5\}\% = 80\%$. As the actual utilization is more than the targeted, autoscaler would add VMs.

If it adds one VM then the actual utilization would be $\{(80+70+75+85+90)/6\}\% = 66.67\%$.

If it adds two VMs then the actual utilization would be $\{(80+70+75+85+90)/7\}\% = 57.14\%$

If it adds three VMs then the actual utilization would be $\{(80+70+75+85+90)/8\}\% = 50\%$

The correct answer is 3 as the targeted utilization can be reached only after adding 3 VMs.

QUESTION 5:

Which of the following could be an event that can trigger cloud functions?

- a) Files added to the google storage
- b) A new virtual machine instance is created
- c) Changes occurred in database
- d) None of the above

Correct Answer: (a), (b), and (c)

Explanation: Google Cloud Functions can trigger cloud functions in case of events like file added to the storage, a new VM is created, changes occurred in database, request to http endpoints etc.



QUESTION 6:

Which cloud service model provides the most control over the computing environment while still abstracting the underlying hardware?

- a) IaaS (Infrastructure as a service)
- b) PaaS (Platform as a service)
- c) SaaS(Software as a service)
- d) FaaS (Function as a Service)

Correct Answer: (a)

Explanation: Infrastructure as a Service (IaaS) provides the most control over the computing environment because it offers virtualized computing resources over the internet. Users have control over operating systems, storage, and deployed applications, while the underlying hardware is abstracted and managed by the service provider. This allows for significant flexibility and customization compared to PaaS, SaaS, and FaaS.

QUESTION 7:

Consider the following statements:

1. Serverless computing abstracts infrastructure management tasks from the developer.
2. Serverless computing allows developers to run code without provisioning or managing servers.

Which of the following is correct?

- a) Only I
- b) Only II
- c) Both I and II
- d) None of them are correct

Correct Answer: (c)

Explanation: Serverless computing abstracts infrastructure management tasks from the developer, allowing them to focus on writing code. This model also enables developers to run code without provisioning or managing servers, as the cloud provider automatically handles the scaling and infrastructure management. This makes both statements correct.



QUESTION 8:

How can Cloud Functions integrate with other services in the Google Cloud Platform?

- a) Through direct API calls.
- b) By subscribing to events from services like Pub/Sub or Cloud Storage.
- c) By making SQL queries to managed databases.
- d) By accessing virtual machine instances using SSH.

Correct Answer: (b)

Explanation: Cloud Functions are event-driven, serverless functions that execute in response to specific events. By subscribing to events from services like Pub/Sub or Cloud Storage, Cloud Functions can automatically trigger and execute code based on events such as messages published to a Pub/Sub topic or object changes in a Cloud Storage bucket.

QUESTION 9:

Kubernetes is _____ and Docker is a _____.

- a) virtual operating system, container
- b) container, container orchestration tool
- c) container orchestration tool, container
- d) container, virtual operating system

Correct Answer: (c)

Explanation: Docker is a container, an open platform for developing, shipping, and running applications whereas Kubernetes is a container orchestration tool.

QUESTION 10:

Which statement best describes Google App Engine (GAE)?

- a) GAE allows you to manage virtual machines directly.
- b) GAE automatically scales your application based on incoming traffic.
- c) GAE supports only Python programming language.
- d) GAE requires you to manage the underlying infrastructure and scaling manually.

Correct Answer: (b)

Explanation: Google App Engine (GAE) is a serverless platform that automatically manages scaling based on incoming traffic. It abstracts away the underlying infrastructure, allowing developers to focus on writing code and deploying applications without worrying about managing virtual machines directly or scaling manually.



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