

CC Week 11

FaaS:

QUESTION 1:

Which of the following options is most appropriate for FaaS ?

Statement 1: Each function in the FaaS platform gets unlimited execution time.

Statement 2: Functions are always active and ready for execution.

- a. Statement 1 is correct but Statement 2 is incorrect.
- b. Statement 2 is correct but Statement 1 is incorrect.
- c. Both the statements are correct.
- d. Both the statements are incorrect.

Correct Answer: d

Detailed Solution: A function in FaaS typically **has limited execution time**. Functions are **not constantly active**. FaaS platform listens for the events that instantiate the functions. So, the correct option is (d).

FaaS stands for **Function as a Service**, which is a cloud computing service model where a cloud provider manages the infrastructure needed to run individual functions, **allowing developers to focus on writing code without worrying about server management**.

Functions are not always active and they are usually triggered by events or requests.

BigQuery is a cloud-based data warehouse provided by Google Cloud Platform (GCP).

QUESTION 2:

BigQuery is a fully-managed, serverless data warehouse by _____.

- a. AWS
- b. Google**
- c. Microsoft
- d. IBM

Correct Answer: b

Detailed Solution: BigQuery is a fully-managed, serverless data warehouse that enables scalable analysis over petabytes of data by Google. So, the correct option is (b).

QUESTION 3:

_____ are an important distribution mechanism for libraries and custom runtimes in AWS serverless ecosystem.

- a. Runtimes
- b. Lambda Layers**
- c. Log streams
- d. None of these

Correct Answer: b

Detailed Solution: Lambda layers are an important distribution mechanism for libraries, custom runtimes and other imp function dependencies in AWS serverless ecosystem. So, the correct option is (b).

Lambda Layers are a mechanism in AWS Lambda that allows you to centrally manage code and data that you want to share across multiple functions.

QUESTION 4:

Which of the following is not a category of research initiative on sustainable cloud computing?

- a. Renewable Energy
- b. Capacity planning
- c. Environment Sandboxing**
- d. None of these

Correct Answer: c

Detailed Solution: Environment Sandboxing is not a category of research initiative on sustainable cloud computing. The other two options are. So, the correct option is (c).

QUESTION 5:

AWS S3 is a fully managed proprietary NoSQL database service that supports key–value and document data structures and is offered by Amazon.com as part of the Amazon Web Services portfolio.

- a. True
- b. False**

Correct Answer: b

Detailed Solution: Amazon DynamoDB is a fully managed proprietary NoSQL database service that supports key–value and document data structures and is offered by Amazon.com as part of the Amazon Web Services portfolio. Whereas, Amazon S3 is a simple storage service . So, the correct option is (b).

QUESTION 6:

Which of the following is/are the goal of sustainable cloud computing? Choose appropriate option(s).

- ☒ a Minimizing the energy consumption.
- ☒ b Increasing reliability of CDCs.
- ☐ c Maximizing carbon footprint related cost.
- ☐ d Increasing network traffic

Correct Answer: a,b

Detailed Solution: Focus on minimizing the energy consumption and carbon footprint and ensuring reliability of CDCs is the goal of sustainable cloud computing.

Runtimes in AWS Lambda are responsible for running the function's code and handling requests and responses. They do not directly provide functionality for annotating function code with custom logging statements.

QUESTION 7:

Runtimes allows you to annotate your function code with custom logging statements which helps



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you to analyse the execution flow and performance of your AWS Lambda functions.

a. True

b. False

Correct Answer: b

Detailed Solution: Log stream allows you to annotate your function code with custom logging statements which helps you to analyse the execution flow and performance of your AWS Lambda functions. . So, the correct option is (b).

Log streams in AWS Lambda are a feature of Amazon CloudWatch Logs, which is the service used for monitoring and logging in AWS. When you create a Lambda function, AWS automatically creates a log stream for that function within CloudWatch Logs.

Log streams capture all the logs generated by the execution of your Lambda function.

Serverless computing is a cloud computing model where the cloud provider manages the infrastructure needed to run and scale applications, allowing

developers to focus solely on writing code and building applications without worrying about server management.

QUESTION 8:

Serverless covers a wide range of technologies that can be grouped into two categories

- a. BaaS and YaaS
- b. FaaS and BaaS
- c. FaaS and YaaS
- d. None of these

Correct Answer: b

Detailed Solution: Serverless covers a wide range of technologies that can be grouped into two categories FaaS and BaaS.

FaaS - function as a service

BaaS - Backend as a service

QUESTION 9:

Which of the following is/are challenges in serverless computing ?

- a. Functions sharing code
- b. Asynchronous calls
- c. Adoption of too many technologies
- d. All of the above

Correct Answer: d

Detailed Solution: Refer Slide 33.

QUESTION 10:

The focus of cloud computing was _____ and the serverless is _____.

- a. programmers, system administrators
- b. system administrators, programmers

Correct Answer: b

Detailed Solution: The focus of cloud computing was system administrators and the serverless is programmers.

QUESTION 1:

_____ are an important distribution mechanism for libraries and custom runtimes in AWS serverless ecosystem.

- a. Runtimes
- b. Lambda Layers
- c. Log streams
- d. None of these

Correct Answer: b

Detailed Solution: Lambda layers are an important distribution mechanism for libraries, custom runtimes and other imp function dependencies in AWS serverless ecosystem. So, the correct option is (b).

QUESTION 2:

_____ is a fully managed proprietary NoSQL database service that supports key-value and document data structures.

- a. Amazon DynamoDB
- b. AWS S3
- c. AWS Lambda
- d. Amazon EFS

Correct Answer: a

Detailed Solution: Amazon DynamoDB is a fully managed proprietary NoSQL database service that supports key-value and document data structures and is offered by Amazon.com as part of the Amazon Web Services portfolio. Whereas, Amazon S3 is a simple storage service .

QUESTION 3:

Which component(s) of CDCs contribute(s) to consumption of huge amount of energy ?

- a. Network



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- b. Storage
- c. Memory
- d. Cooling system

Correct Answer: a,b,c,d

Detailed Solution: All of these components mentioned are responsible for consumption of energy in CDCs.

QUESTION 5:

Runtimes allows you to annotate your function code with custom logging statements which helps you to analyse the execution flow and performance of your AWS Lambda functions.

- a. True
- b. False

Correct Answer: b

Detailed Solution: Log stream allows you to annotate your function code with custom logging statements which helps you to analyse the execution flow and performance of your AWS Lambda functions. . So, the correct option is (b).

QUESTION 7:

VMs can be migrated to a remote CDC to balance the load effectively as per sustainable cloud computing model.

- a. True
- b. False

Correct Answer: a

Detailed Solution: VMs and workloads can be migrated to a remote CDC to balance the load effectively as per sustainable cloud computing model.

This process, known as workload migration or load balancing, helps optimize resource utilization across multiple data centers, reducing energy consumption and improving overall efficiency

QUESTION 9:

In Google Cloud Functions, the code executes in a fully managed environment.

- a. True
- b. False

Correct Answer: a

Detailed Solution: In Google Cloud Function, the code executes in a fully managed environment. There is no need to provision any infrastructure.

Google Cloud Functions is a serverless compute service provided by Google Cloud Platform (GCP). It allows developers to write and deploy event-driven

functions that automatically scale in response to incoming events or requests.

QUESTION 1:

Which of the following statements is/are false ?

- ☒ a. Serverless computing allows the users with more control over the deployment environment compared to PaaS.
- ☐ b. Serverless computing is a form of cloud computing that allows users to run event driven granular applications.

Correct Answer: a

Detailed Solution: In PaaS the developer has more control over the deployment environment. So, the correct option is (a).

QUESTION 5:

AWS charges for the provisioned resources and executing Lambda.

- a. True
- ☒ b. False

Correct Answer: b

Detailed Solution: AWS charges only when the AWS lambda code executes. So, the correct option is (b).

AWS Lambda charges users based on the number of requests and the duration of execution, not for provisioned resources. Provisioned resources refer to the computing resources (such as CPU, memory, and storage) that are allocated or provisioned in advance for a particular application or service.

QUESTION 6:

In serverless computing the user has to manage the scalability needs of a function, unlike FaaS.

- a. True
- ☒ b. False

Correct Answer: b

Detailed Solution: In serverless computing the cloud service provider has to manage the scalability needs of a function. So, the correct option is (b).

QUESTION 7:

Which of the following is/are the goal of sustainable cloud computing? Choose the most appropriate option.

- a. Minimizing the energy consumption.
- b. Increasing reliability of CDCs.
- c. Minimizing carbon footprint related cost.
- d. Increasing network traffic

Correct Answer: a,b,c

Detailed Solution: Focus on minimizing the energy consumption and carbon footprint and ensuring reliability of CDCs is the goal of sustainable cloud computing.

QUESTION 9:

CDCs consist of a chassis and racks to place the servers to process the IT workloads.

- a. True
- b. False

Correct Answer: a

Detailed Solution: CDCs consist of a chassis and racks to place the servers to process the IT workloads. So, the correct option is (a).

Chassis: A chassis, also known as a server chassis or enclosure, is a physical structure that houses multiple server units. It provides a framework for mounting and organizing servers, power supplies, cooling systems, and other components.

Racks: Racks are metal frames with standardized mounting slots (rack units or "U") used to hold and organize IT equipment, including servers, networking devices, storage devices, and power distribution units (PDUs).