Cloud Computing

Assignment-Week 11

TYPE OF QUESTION: MCQ/MSQ

Number of questions: **10** **Total mark: 10 X 1 = 10**

QUESTION 1:

Which of the following best describes the key features of dew computing?

a. Independence and collaboration
b. Independence and centralization
c. Collaboration and decentralization
d. Connectivity and scalability

Correct Answer: a

Detailed Solution: The correct answer is a) Independence and collaboration because these are the core principles of dew computing, allowing local devices to operate autonomously while still connecting to the cloud for data synchronization when needed.

QUESTION 2:

Which of the following best describes serverless computing?
a. Developers manage scalability and orchestration of containers.
b. Developers run their logic as functions, and the cloud provider manages scalability
c. Developers handle all containerization and runtime environments.
d. Developers run their applications directly on dedicated servers.

Correct Answer: b

Detailed Solution: The correct answer is b) Developers run their logic as functions, and the cloud provider manages scalability because serverless computing allows developers to submit their code as functions without worrying about infrastructure. The cloud provider automatically handles the scaling and orchestration, enabling efficient parallel execution of tasks without the need for manual container management.

QUESTION 3:

Which of the following best describes Function-as-a-Service (FaaS)?

a) Functions run continuously and scale vertically.
b) Functions are triggered by events and executed in isolated environments.
c) Functions are always active and manage their own scaling.
d) Functions are large, continuously running parts of an application.

Correct Answer: (b)

Detailed Solution: The correct answer is B) Functions are triggered by events and executed in isolated environments because Function-as-a-Service (FaaS) is an event-driven model where functions are only activated in response to specific triggers, such as client requests or external events. These functions run in isolated environments provided by the FaaS platform, which also handles the horizontal scaling based on the volume of incoming events. Unlike traditional applications, FaaS functions are not constantly active, making them efficient for handling specific tasks within a broader application.

QUESTION 4:

How does Serverless Computing differ from traditional Cloud Computing?

a) It focuses on system administrators and exposes server management.
b) It targets programmers by abstracting server management and simplifying development.
c) It requires developers to handle all operational responsibilities.
d) It makes cloud software development more complicated.

Correct Answer: b

Detailed Solution: The correct answer is B) It targets programmers by abstracting server management and simplifying development because serverless computing removes the need for developers to manage servers, allowing them to focus on writing code. This shift makes cloud development easier and more accessible for programmers, while the cloud provider handles the operational responsibilities.

QUESTION 5:

What is a key benefit of using AWS Lambda for running code?

a) You need to manage AWS resources and scaling.
b) You have to focus on operating system management and provisioning.
c) You upload code and AWS Lambda handles execution and scaling based on events.
d) You must manually handle event sources and log streams.

Correct Answer: C

Detailed Solution: AWS Lambda allows you to focus on writing code while it manages execution, scaling, and resource provisioning based on event triggers, simplifying cloud computing tasks.

QUESTION 6:

What does Google Cloud Functions primarily handle in terms of execution environment?

a) Server-based environments with manual provisioning
b) Fully managed environments with automatic scaling
c) Local environments requiring extensive server management
d) Dedicated virtual machines for each function

Correct Answer: b

Detailed Solution: Google Cloud Functions operates in a fully managed environment, meaning developers do not need to provision or manage servers, and the platform automatically handles scaling.

QUESTION 7:

What is the primary focus of Azure Functions for developers?

a. Managing and maintaining servers

b. Writing code and configuring functions

c. Handling infrastructure scaling manually

d. Deploying compiled languages only

Correct Answer: b

Detailed Solution: Azure Functions allows developers to focus on writing code and configuring functions while it manages server maintenance and scaling..

QUESTION 8:

What is one major challenge of using renewable energy sources in cloud datacenters?

a) High capital costs and unpredictability
b) Increased server maintenance requirements
c) Higher energy consumption from non-renewable sources
d) Decreased system reliability

Correct Answer: (a)

Detailed Solution: Renewable energy sources face challenges such as high initial costs and unpredictability in supply, which can impact their implementation in cloud datacenters.

QUESTION 9:

What is the primary focus of the power manager component in a sustainable cloud computing datacenter?

a. Controlling the temperature of the datacenter
b. Managing the power supply from renewable and grid sources
c. Handling virtual machine migrations
d. Scheduling workloads to balance energy use

Correct Answer: b
Detailed Solution: The power manager in a sustainable cloud computing datacenter is primarily responsible for managing the power supply, including balancing energy sources from renewables and grid electricity.

QUESTION 10:
Which component of sustainable cloud computing aims to balance the temperature in cloud datacenters to enhance energy efficiency?

a. Application Design
b. Capacity Planning
c. Cooling Management
d. Renewable Energy

Correct Answer: c
Detailed Solution: Cooling Management focuses on maintaining the temperature within cloud datacenters to ensure energy efficiency, as excessive heat can increase energy consumption and affect performance.