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Module 4 Graded Quiz: Emergent Trends and Practices

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Graded Quiz due Jun 5, 2024 17:43 IST Completed

Question 1

1.0/1.0 point (graded)

Which of the following is a development principle for cloud native applications?

- ☐ Combine applications to create microservices with multiple functions.
- ☐ Bring the various single-function components of an application into one huge piece of software.
- ☐ Tightly couple the different functions of the application so that they can work together as a whole.
- ☒ Containerize the microservices for maximum flexibility, scalability, and portability.



Answer

Correct:

Each microservice in a cloud native application is packaged with its libraries and dependencies into individual containers.

Submit

Try again (1 attempt remaining) ⓘ

Question 2

1.0/1.0 point (graded)

Which of the following statements describes the DevOps approach and process?

- ☐ Eliminates the need to monitor performance and availability.
- ☐ Eliminates the need to provision servers, build middleware, and install application code.
- ☐ Allows teams to freely build, deploy, and manage cloud native applications according to an informal, loosely defined set of guidelines.
- ☒ A collaborative approach where business owners and development, operations, and quality assurance teams collaborate to deliver software continuously.



Answer

Correct:

The DevOps approach applies agile and lean thinking principles to all stakeholders in an organization who develop, operate, or benefit from the business’s software systems, including customers, suppliers, and partners.

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Try again (1 attempt remaining) ⓘ

Question 3

1.0/1.0 point (graded)

Which of the provided options encapsulates the complete application modernization journey?

- ☐ The journey from the waterfall and agile development methodologies to DevOps.
- ☐ The journey from monolithic and service-oriented architecture to microservices architecture.
- ☐ The journey from physical servers and VMs to cloud infrastructure

- ☒ The journey from monolithic and service-oriented architecture to microservices architecture, from physical servers and VMs to cloud infrastructure, and from the waterfall and agile methodology to DevOps.



Answer

Correct:
Application modernization involves the modernization of application architecture, infrastructure, and development and operations processes.

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Try again (1 attempt remaining) 

Question 4

1.0/1.0 point (graded)

How would a global flower delivery company leverage the Hybrid Multicloud architecture to meet its requirement of varying capacity demands across different geographies?

- ☐ By scaling up their on-premises architecture
- ☐ By using the automatic provisioning and de-provisioning of resources that cloud offers.
- ☒ By distributing their delivery service application across multiple cloud environments and providers, spread across multiple geographies.



Answer

Correct:
Moving their UI and Billing capabilities over to a North American Public Cloud Data Center, while their core application continues to reside in an on-premises data center in Europe, allowed the flower delivery company to scale up portions of their application in response to a surge in demand over the American holidays.

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Question 5

1.0/1.0 point (graded)

Which of the following statements describes the DevOps approach and process? Select two.

- ☐ Eliminates the need to provision servers, build middleware, and install application code.
- ☐ Eliminates the need to monitor performance and availability.
- ☒ DevOps process defines how people work together to build, deploy, and manage applications in a cloud native environment.
- ☒ A collaborative approach where business owners and development, operations, and quality assurance teams collaborate to continuously deliver software.



Answer

Correct:
Cloud native applications form a complex distributed system with multiple moving parts, independent tech stacks, and rapid release cycles. The DevOps defines the process that helps teams work in the cloud native environment.
DevOps approach applies agile and lean thinking principles to all stakeholders in an organization who develop, operate, or benefit from the business's software systems, including customers, suppliers, partners.

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Question 6

1.0/1.0 point (graded)

Which of these scenarios is NOT a good use case for serverless architecture?

☒ Workloads characterized by long-running processes

☐ Supporting microservices architecture

☐ Microservices that can be built as functions that are stateless

☐ Stream processing workloads



Answer

Correct:

For workloads characterized by long-running processes, managing a traditional server environment might be simpler and more cost-effective.

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Question 7

1.0/1.0 point (graded)

How can the microservices architecture approach be characterized?

☒ Decomposition of large applications into core functions to construct a comprehensive and functional application.

☐ Impact on the entire application when one microservice ceases to function.

☐ Compulsion to bundle all microservices for a specific task into a single container.

☐ Requirement to build every new functionality in a microservice from the ground up.



Answer

Correct:

This characteristic of microservices architecture involves breaking down a larger application into smaller, independent components, each responsible for specific core functions. This approach aims to enhance modularity, scalability, and maintainability.

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Question 8

1.0/1.0 point (graded)

Microservices architecture is an approach in which a single application is composed of many loosely coupled and independently deployable smaller components or services. True or False.

☒ True

☐ False



Answer

Correct:
These services typically have their own stack running on their own containers. They communicate with one another over a combination of APIs, event streaming, and message brokers.

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Question 9

1.0/1.0 point (graded)
A cloud native application consists of microservices working together as a whole to comprise an application, yet each can be independently scaled and iterated through automation and orchestration processes. True or False.

☒ True

☐ False

✓
Answer
Correct:
These microservices are often packaged in containers, which are executable units of software in which the application code is packaged along with its libraries and dependencies so that it can be run anywhere.

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Question 10

1.0/1.0 point (graded)
DevOps and Cloud share a _____ relationship.

☒ Symbiotic

☐ Customer

☐ Vendor

☐ General Partnership

✓
Answer
Correct:
DevOps and Cloud share a symbiotic relationship. With its near limitless compute power and available data and application services, cloud computing platforms come with their own risks and challenges

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