

## **AZ-900.prepaway.premium.exam.208q**

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**AZ-900**

**Microsoft Azure Fundamentals**

**Version 16.0**

### **Sections**

1. Describe Cloud Concepts
2. Describe Core Azure Services
3. Describe core solutions and management tools on Azure
4. Describe general security and network security features
5. Describe identity, governance, privacy, and compliance features
6. Describe Azure cost management and Service Level Agreements

## Exam A

### QUESTION 1 HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

Hot Area:

#### Answer Area

Statements	Yes	No
A platform as a service (PaaS) solution that hosts web apps in Azure provides full control of the operating systems that host applications.	<input type="radio"/>	<input type="radio"/>
A platform as a service (PaaS) solution that hosts web apps in Azure provides the ability to scale the platform automatically.	<input type="radio"/>	<input type="radio"/>
A platform as a service (PaaS) solution that hosts web apps in Azure provides professional development services to continuously add features to custom applications.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

## Answer Area

Statements	Yes	No
A platform as a service (PaaS) solution that hosts web apps in Azure provides full control of the operating systems that host applications.	<input type="radio"/>	<input checked="" type="radio"/>
A platform as a service (PaaS) solution that hosts web apps in Azure provides the ability to scale the platform automatically.	<input checked="" type="radio"/>	<input type="radio"/>
A platform as a service (PaaS) solution that hosts web apps in Azure provides professional development services to continuously add features to custom applications.	<input checked="" type="radio"/>	<input type="radio"/>

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

Box 1: No

A PaaS solution does not provide access to the operating system. The Azure Web Apps service provides an environment for you to host your web applications. Behind the scenes, the web apps are hosted on virtual machines running IIS. However, you have no direct access to the virtual machine, the operating system or IIS.

Box 2: Yes

A PaaS solution that hosts web apps in Azure does provide the ability to scale the platform automatically. This is known as autoscaling. Behind the scenes, the web apps are hosted on virtual machines running IIS. Autoscaling means adding more load balanced virtual machines to host the web apps.

Box 3: Yes

PaaS provides a framework that developers can build upon to develop or customize cloud-based applications. PaaS development tools can cut the time it takes to code new apps with pre-coded application components built into the platform, such as workflow, directory services, security features, search and so on.

References:

<https://azure.microsoft.com/en-gb/overview/what-is-paas/>

### QUESTION 2

#### HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### **Answer Area**

<b>Statements</b>	<b>Yes</b>	<b>No</b>
Azure provides flexibility between capital expenditure (CapEx) and operational expenditure (OpEx).	<input type="radio"/>	<input type="radio"/>
If you create two Azure virtual machines that use the B2S size, each virtual machine will always generate the same monthly costs.	<input type="radio"/>	<input type="radio"/>
When an Azure virtual machine is stopped, you continue to pay storage costs associated to the virtual machine.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

## Answer Area

Statements	Yes	No
Azure provides flexibility between capital expenditure (CapEx) and operational expenditure (OpEx).	<input checked="" type="radio"/>	<input type="radio"/>
If you create two Azure virtual machines that use the B2S size, each virtual machine will always generate the same monthly costs.	<input type="radio"/>	<input checked="" type="radio"/>
When an Azure virtual machine is stopped, you continue to pay storage costs associated to the virtual machine.	<input checked="" type="radio"/>	<input type="radio"/>

### Section: Describe Cloud Concepts Explanation

#### Explanation/Reference:

Explanation:

Box 1: Yes

Traditionally, IT expenses have been considered a Capital Expenditure (CapEx). Today, with the move to the cloud and the pay-as-you-go model, organizations have the ability to stretch their budgets and are shifting their IT CapEx costs to Operating Expenditures (OpEx) instead. This flexibility, in accounting terms, is now an option due to the "as a Service" model of purchasing software, cloud storage and other IT related resources.

Box 2: No

Two virtual machines using the same size could have different disk configurations. Therefore, the monthly costs could be different.

Box 3: Yes

When an Azure virtual machine is stopped, you don't pay for the virtual machine. However, you do still pay for the storage costs associated to the virtual machine. The most common storage costs are for the disks attached to the virtual machines. There are also other storage costs associated with a virtual machine such as storage for diagnostic data and virtual machine backups.

References:

<https://meritsolutions.com/capex-vs-opex-cloud-computing-blog/>

### QUESTION 3 HOTSPOT

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

### Answer Area

When you are implementing a Software as a Service (SaaS) solution, you are responsible for

- configuring high availability.
- defining scalability rules.
- installing the SaaS solution.
- configuring the SaaS solution.

Correct Answer:

### Answer Area

When you are implementing a Software as a Service (SaaS) solution, you are responsible for

- configuring high availability.
- defining scalability rules.
- installing the SaaS solution.
- configuring the SaaS solution.

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

When you are implementing a Software as a Service (SaaS) solution, you are responsible for configuring the SaaS solution. Everything else is managed by the cloud provider.

SaaS requires the least amount of management. The cloud provider is responsible for managing everything, and the end user just uses the software.

Software as a service (SaaS) allows users to connect to and use cloud-based apps over the Internet. Common examples are email, calendaring and office tools (such as Microsoft Office 365).

SaaS provides a complete software solution which you purchase on a pay-as-you-go basis from a cloud service provider. You rent the use of an app for your organization and your users connect to it over the Internet, usually with a web browser. All of the underlying infrastructure, middleware, app software and app data are located in the service provider's data center. The service provider manages the hardware and software and with the appropriate service agreement, will ensure the availability and the security of the app and your data as well.

Reference:

<https://azure.microsoft.com/en-in/overview/what-is-saas/>

<https://docs.microsoft.com/en-gb/learn/modules/principles-cloud-computing/5-types-of-cloud-services>

### QUESTION 4

You have an on-premises network that contains several servers.

You plan to migrate all the servers to Azure.

You need to recommend a solution to ensure that some of the servers are available if a single Azure data center goes offline for an extended period.

What should you include in the recommendation?

- A. fault tolerance
- B. elasticity
- C. scalability
- D. low latency

**Correct Answer: A**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Fault tolerance is the ability of a system to continue to function in the event of a failure of some of its components.

In this question, you could have servers that are replicated across datacenters.

Availability zones expand the level of control you have to maintain the availability of the applications and data on your VMs. Availability Zones are unique physical locations within an Azure region. Each zone is made up of one or more datacenters equipped with independent power, cooling, and networking. To ensure resiliency, there are a minimum of three separate zones in all enabled regions. The physical separation of Availability Zones within a region protects applications and data from datacenter failures.

With Availability Zones, Azure offers industry best 99.99% VM uptime SLA. By architecting your solutions to use replicated VMs in zones, you can protect your applications and data from the loss of a datacenter. If one zone is compromised, then replicated apps and data are instantly available in another zone.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability>

## QUESTION 5

### HOTSPOT

To complete the sentence, select the appropriate option in the answer area.

**Hot Area:**

**Answer Area**

An organization that hosts its infrastructure 

	▼
in a private cloud	
in a hybrid cloud	
in the public cloud	
on a Hyper-V host	

 no longer requires a data center .

**Correct Answer:**



## Answer Area

An organization that hosts its infrastructure 

	▼
in a private cloud	
in a hybrid cloud	
in the public cloud	
on a Hyper-V host	

 no longer requires a data center .

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

A private cloud is hosted in your datacenter. Therefore, you cannot close your datacenter if you are using a private cloud.

A public cloud is hosted externally, for example, in Microsoft Azure. An organization that hosts its infrastructure in a public cloud can close its data center.

Public cloud is the most common deployment model. In this case, you have no local hardware to manage or keep up-to-date – everything runs on your cloud provider's hardware.

Microsoft Azure is an example of a public cloud provider.

In a private cloud, you create a cloud environment in your own datacenter and provide self-service access to compute resources to users in your organization. This offers a simulation of a public cloud to your users, but you remain completely responsible for the purchase and maintenance of the hardware and software services you provide.

Reference:

<https://docs.microsoft.com/en-gb/learn/modules/principles-cloud-computing/4-cloud-deployment-models>

### QUESTION 6

What are two characteristics of the public cloud? Each correct answer presents a complete solution.

**NOTE:** Each correct selection is worth one point.

- A. dedicated hardware
- B. unsecured connections
- C. limited storage
- D. metered pricing
- E. self-service management

**Correct Answer:** DE

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

With the public cloud, you get pay-as-you-go pricing – you pay only for what you use, no CapEx costs.

With the public cloud, you have self-service management. You are responsible for the deployment and configuration of the cloud resources such as virtual machines or web sites. The underlying hardware that hosts the cloud resources is managed by the cloud provider.

Incorrect Answers:

A: You don't have dedicated hardware. The underlying hardware is shared so you could have multiple customers using cloud resources hosted on the same physical hardware.



B: Connections to the public cloud are secure.  
C: Storage is not limited. You can have as much storage as you like.

References:

<https://docs.microsoft.com/en-gb/learn/modules/principles-cloud-computing/4-cloud-deployment-models>

### QUESTION 7

#### HOTSPOT

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

#### Answer Area

When planning to migrate a public website to Azure,  
you must plan to

deploy a VPN.
pay monthly usage costs.
pay to transfer all the website data to Azure.
reduce the number of connections to the website.

Correct Answer:

#### Answer Area

When planning to migrate a public website to Azure,  
you must plan to

deploy a VPN.
pay monthly usage costs.
pay to transfer all the website data to Azure.
reduce the number of connections to the website.

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

When planning to migrate a public website to Azure, you must plan to pay monthly usage costs. This is because Azure uses the pay-as-you-go model.

### QUESTION 8

**Note:** This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company plans to migrate all its data and resources to Azure.

The company's migration plan states that only Platform as a Service (PaaS) solutions must be used in Azure.

You need to deploy an Azure environment that meets the company migration plan.

Solution: You create an Azure App Service and Azure SQL databases.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: A**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Azure App Service and Azure SQL databases are examples of Azure PaaS solutions. Therefore, this solution does meet the goal.

#### **QUESTION 9**

**Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.**

**After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.**

Your company plans to migrate all its data and resources to Azure.

The company's migration plan states that only Platform as a Service (PaaS) solutions must be used in Azure.

You need to deploy an Azure environment that meets the company migration plan.

Solution: You create an Azure App Service and Azure virtual machines that have Microsoft SQL Server installed.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Azure App Service is a PaaS (Platform as a Service) service. However, Azure virtual machines are an IaaS (Infrastructure as a Service) service. Therefore, this solution does not meet the goal.

#### **QUESTION 10**

**Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.**

**After you answer a question in this section, you will NOT be able to return to it. As a result, these**

**questions will not appear in the review screen.**

Your company plans to migrate all its data and resources to Azure.

The company's migration plan states that only Platform as a Service (PaaS) solutions must be used in Azure.

You need to deploy an Azure environment that meets the company migration plan.

Solution: You create an Azure App Service and Azure Storage accounts.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Azure App Service is a PaaS (Platform as a Service) service. However, Azure Storage accounts are an IaaS (Infrastructure as a Service) service. Therefore, this solution does not meet the goal.

#### **QUESTION 11**

Your company hosts an accounting application named App1 that is used by all the customers of the company.

App1 has low usage during the first three weeks of each month and very high usage during the last week of each month.

Which benefit of Azure Cloud Services supports cost management for this type of usage pattern?

- A. high availability
- B. high latency
- C. elasticity
- D. load balancing

**Correct Answer: C**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Elasticity in this case is the ability to provide additional compute resource when needed and reduce the compute resource when not needed to reduce costs. Autoscaling is an example of elasticity.

Elastic computing is the ability to quickly expand or decrease computer processing, memory and storage resources to meet changing demands without worrying about capacity planning and engineering for peak usage. Typically controlled by system monitoring tools, elastic computing matches the amount of resources allocated to the amount of resources actually needed without disrupting operations. With cloud elasticity, a company avoids paying for unused capacity or idle resources and doesn't have to worry about investing in the purchase or maintenance of additional resources and equipment.

References:

<https://azure.microsoft.com/en-gb/overview/what-is-elastic-computing/>

#### **QUESTION 12**

You plan to migrate a web application to Azure. The web application is accessed by external users.

You need to recommend a cloud deployment solution to minimize the amount of administrative effort used to manage the web application.

What should you include in the recommendation?

- A. Software as a Service (SaaS)
- B. Platform as a Service (PaaS)
- C. Infrastructure as a Service (IaaS)
- D. Database as a Service (DaaS)

**Correct Answer:** B

**Section:** Describe Cloud Concepts

**Explanation**

**Explanation/Reference:**

Explanation:

Azure App Service is a platform-as-a-service (PaaS) offering that lets you create web and mobile apps for any platform or device and connect to data anywhere, in the cloud or on-premises. App Service includes the web and mobile capabilities that were previously delivered separately as Azure Websites and Azure Mobile Services.

References:

<https://docs.microsoft.com/en-us/azure/security/fundamentals/paas-applications-using-app-services>

### QUESTION 13

#### HOTSPOT

Which cloud deployment solution is used for Azure virtual machines and Azure SQL databases? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Azure virtual machines:

Infrastructure as a service (IaaS)
Platform as a service (PaaS)
Software as a service (SaaS)

Azure SQL databases:

Infrastructure as a service (IaaS)
Platform as a service (PaaS)
Software as a service (SaaS)

**Correct Answer:**

## Answer Area

Azure virtual machines:

Azure SQL databases:

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

Box 1:

Azure virtual machines are Infrastructure as a Service (IaaS).

Infrastructure as a Service is the most flexible category of cloud services. It aims to give you complete control over the hardware that runs your application (IT infrastructure servers and virtual machines (VMs), storage, networks, and operating systems). Instead of buying hardware, with IaaS, you rent it.

Box 2:

Azure SQL databases are Platform as a Service (PaaS).

Azure SQL Database is a fully managed Platform as a Service (PaaS) Database Engine that handles most of the database management functions such as upgrading, patching, backups, and monitoring without user involvement. Azure SQL Database is always running on the latest stable version of SQL Server Database Engine and patched OS with 99.99% availability. PaaS capabilities that are built-in into Azure SQL database enable you to focus on the domain specific database administration and optimization activities that are critical for your business.

Reference:

<https://docs.microsoft.com/en-gb/learn/modules/principles-cloud-computing/5-types-of-cloud-services>

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-paas-index>

#### QUESTION 14

You have an on-premises network that contains 100 servers.

You need to recommend a solution that provides additional resources to your users. The solution must minimize capital and operational expenditure costs.

What should you include in the recommendation?

- A. a complete migration to the public cloud
- B. an additional data center
- C. a private cloud
- D. a hybrid cloud

**Correct Answer: D**

**Section: Describe Cloud Concepts**

## Explanation

### Explanation/Reference:

Explanation:

A hybrid cloud is a combination of a private cloud and a public cloud.

Capital expenditure is the spending of money up-front for infrastructure such as new servers.

With a hybrid cloud, you can continue to use the on-premises servers while adding new servers in the public cloud (Azure for example). Adding new servers in Azure minimizes the capital expenditure costs as you are not paying for new servers as you would if you deployed new server on-premises.

Incorrect Answers:

A: A complete migration of 100 servers to the public cloud would involve a lot of operational expenditure (the cost of migrating all the servers).

B: An additional data center would involve a lot of capital expenditure (the cost of the new infrastructure).

C: A private cloud is hosted on on-premises servers to this would involve a lot of capital expenditure (the cost of the new infrastructure to host the private cloud).

References:

<https://docs.microsoft.com/en-gb/learn/modules/principles-cloud-computing/4-cloud-deployment-models>

## QUESTION 15

### HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

#### Hot Area:

##### Answer Area

Statements	Yes	No
To achieve a hybrid cloud model, a company must always migrate from a private cloud model.	<input type="radio"/>	<input type="radio"/>
A company can extend the capacity of its internal network by using the public cloud.	<input type="radio"/>	<input type="radio"/>
In a public cloud model, only guest users at your company can access the resources in the cloud.	<input type="radio"/>	<input type="radio"/>

#### Correct Answer:

##### Answer Area

Statements	Yes	No
To achieve a hybrid cloud model, a company must always migrate from a private cloud model.	<input type="radio"/>	<input checked="" type="radio"/>
A company can extend the capacity of its internal network by using the public cloud.	<input checked="" type="radio"/>	<input type="radio"/>
In a public cloud model, only guest users at your company can access the resources in the cloud.	<input type="radio"/>	<input checked="" type="radio"/>

## Section: Describe Cloud Concepts

### Explanation

### Explanation/Reference:

Explanation:

Box 1: No

It is not true that a company must always migrate from a private cloud model to implement a hybrid cloud. You could start with a public cloud and then combine that with an on-premise infrastructure to implement a hybrid cloud.

Box 2: Yes

A company can extend the capacity of its internal network by using the public cloud. This is very common. When you need more capacity, rather than pay out for new on-premises infrastructure, you can configure a cloud environment and connect your on-premises network to the cloud environment by using a VPN.

Box 3: No

It is not true that only guest users can access cloud resources. You can give anyone with an account in Azure Active Directory access to the cloud resources. There are many authentication scenarios but a common one is to replicate your on-premises Active Directory accounts to Azure Active Directory and provide access to the Azure Active Directory accounts. Another commonly used authentication method is 'Federation' where authentication for access to cloud resources is passed to another authentication provider such as an on-premises Active Directory.

<https://azure.microsoft.com/en-gb/overview/what-is-hybrid-cloud-computing/>

#### QUESTION 16

You plan to migrate several servers from an on-premises network to Azure.

What is an advantage of using a public cloud service for the servers over an on-premises network?

- A. The public cloud is owned by the public, **NOT** a private corporation
- B. The public cloud is a crowd-sourcing solution that provides corporations with the ability to enhance the cloud
- C. All public cloud resources can be freely accessed by every member of the public
- D. The public cloud is a shared entity whereby multiple corporations each use a portion of the resources in the cloud

**Correct Answer:** D

**Section:** Describe Cloud Concepts

**Explanation**

#### **Explanation/Reference:**

Explanation:

The public cloud is a shared entity whereby multiple corporations each use a portion of the resources in the cloud. The hardware resources (servers, infrastructure etc.) are managed by the cloud provider. Multiple companies create resources such as virtual machines and virtual networks on the hardware resources.

Incorrect Answers:

A: The public cloud is not owned by the public. In the case of Microsoft Azure, the cloud is owned by Microsoft.

B: The public cloud is a not crowd-sourcing solution. In the case of Microsoft Azure, the cloud is owned by Microsoft.

C: It is not true that public cloud resources can be freely accessed by every member of the public. You pay for a cloud subscription and create accounts for your users to access your cloud resources. No one can access your cloud resources until you create user accounts and provide the appropriate access permissions.

#### QUESTION 17

HOTSPOT

To complete the sentence, select the appropriate option in the answer area.

**Hot Area:**



## Answer Area

Azure Site Recovery provides 

▼
fault tolerance
disaster recovery
elasticity
high availability

 for virtual machines.

**Correct Answer:**

## Answer Area

Azure Site Recovery provides 

▼
fault tolerance
disaster recovery
elasticity
high availability

 for virtual machines.

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

Azure Site Recovery helps ensure business continuity by keeping business apps and workloads running during outages. Site Recovery replicates workloads running on physical and virtual machines (VMs) from a primary site to a secondary location.

Reference:

<https://docs.microsoft.com/en-us/azure/site-recovery/site-recovery-overview>

#### QUESTION 18

In which type of cloud model are all the hardware resources owned by a third-party and shared between multiple tenants?

- A. private
- B. hybrid
- C. public

**Correct Answer: C**

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

Microsoft Azure, Amazon Web Services and Google Cloud are three examples of public cloud services. Microsoft, Amazon and Google own the hardware. The tenants are the customers who use the public cloud services.

#### QUESTION 19

HOTSPOT

To complete the sentence, select the appropriate option in the answer area.

**Hot Area:**

**Answer Area**

An Azure web app that queries an on-premises Microsoft SQL server is an example of a  cloud.

hybrid
multi-vendor
private
public

**Correct Answer:**

**Answer Area**

An Azure web app that queries an on-premises Microsoft SQL server is an example of a  cloud.

hybrid
multi-vendor
private
public

**Section: Describe Cloud Concepts**  
**Explanation**

**Explanation/Reference:**

Reference:

<https://azure.microsoft.com/en-gb/overview/what-is-hybrid-cloud-computing/>

**QUESTION 20**

You have 1,000 virtual machines hosted on the Hyper-V hosts in a data center.

You plan to migrate all the virtual machines to an Azure pay-as-you-go subscription.

You need to identify which expenditure model to use for the planned Azure solution.

Which expenditure model should you identify?

- A. operational
- B. elastic

- C. capital
- D. scalable

**Correct Answer:** A

**Section:** Describe Cloud Concepts

**Explanation**

**Explanation/Reference:**

Explanation:

One of the major changes that you will face when you move from on-premises cloud to the public cloud is the switch from capital expenditure (buying hardware) to operating expenditure (paying for service as you use it). This switch also requires more careful management of your costs. The benefit of the cloud is that you can fundamentally and positively affect the cost of a service you use by merely shutting down or resizing it when it's not needed.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/cloud-adoption/appendix/azure-scaffold>

## QUESTION 21

DRAG DROP

Match the Azure Cloud Services benefit to the correct description.

Instructions: To answer, drag the appropriate benefit from the column on the left to its description on the right. Each benefit may be used once, more than once, or not at all.

**NOTE:** Each correct match is worth one point.

**Select and Place:**

Answer Options	Answer Area	
Disaster recovery	A cloud service that remains available after a failure occurs	<input type="text"/>
Fault tolerance	A cloud service that can be recovered after a failure occurs	<input type="text"/>
Low latency	A cloud service that performs quickly when demand increases	<input type="text"/>
Dynamic scalability	A cloud service that can be accessed quickly from the Internet.	<input type="text"/>

**Correct Answer:**

Answer Options	Answer Area	
<input type="text"/>	A cloud service that remains available after a failure occurs	Fault tolerance
<input type="text"/>	A cloud service that can be recovered after a failure occurs	Disaster recovery
<input type="text"/>	A cloud service that performs quickly when demand increases	Dynamic scalability
<input type="text"/>	A cloud service that can be accessed quickly from the Internet.	Low latency

**Section:** Describe Cloud Concepts

## Explanation

### Explanation/Reference:

Explanation:

Box 1:

Fault tolerance is the ability of a service to remain available after a failure of one of the components of the service. For example, a service running on multiple servers can withstand the failure of one of the servers.

Box 2:

Disaster recovery is the recovery of a service after a failure. For example, restoring a virtual machine from backup after a virtual machine failure.

Box 3:

Dynamic scalability is the ability for compute resources to be added to a service when the service is under heavy load. For example, in a virtual machine scale set, additional instances of the virtual machine are added when the existing virtual machines are under heavy load.

Box 4:

Latency is the time a service to respond to requests. For example, the time it takes for a web page to be returned from a web server. Low latency means low response time which means a quicker response.

References:

<https://msdn.microsoft.com/en-us/magazine/mt422582.aspx>

<https://searchdisasterrecovery.techtarget.com/definition/cloud-disaster-recovery-cloud-DR>

<http://www.siasmsp.com/the-benefit-of-scalability-in-cloud-computing-2/>

<https://azure.microsoft.com/en-in/overview/what-is-cloud-computing/>

## QUESTION 22

### HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

Statements	Yes	No
To implement a hybrid cloud model, a company must first have a private cloud.	<input type="radio"/>	<input type="radio"/>
A company can extend the computing resources of its internal network by using a hybrid cloud.	<input type="radio"/>	<input type="radio"/>
In a public cloud model, only guest users at your company can access the resources in the cloud.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

### Answer Area

Statements	Yes	No
To implement a hybrid cloud model, a company must first have a private cloud.	<input type="radio"/>	<input checked="" type="radio"/>
A company can extend the computing resources of its internal network by using a hybrid cloud.	<input checked="" type="radio"/>	<input type="radio"/>
In a public cloud model, only guest users at your company can access the resources in the cloud.	<input type="radio"/>	<input checked="" type="radio"/>

**Section: Describe Cloud Concepts**  
**Explanation**

**Explanation/Reference:**  
Explanation:

Box 1: No

It is not true that a company must always migrate from a private cloud model or must first have a private cloud

to implement a hybrid cloud. You could start with a public cloud and then combine that with an on-premise infrastructure to implement a hybrid cloud.

Box 2: Yes

A company can extend the computing resources of its internal network by using the public cloud. This is very common. When you need more resources, rather than pay out for new on-premises infrastructure, you can configure a cloud environment and connect your on-premises network to the cloud environment by using a VPN.

Box 3: No

It is not true that only guest users can access cloud resources. You can give anyone with an account in Azure Active Directory access to the cloud resources. There are many authentication scenarios but a common one is to replicate your on-premises Active Directory accounts to Azure Active Directory and provide access to the Azure Active Directory accounts. Another commonly used authentication method is 'Federation' where authentication for access to cloud resources is passed to another authentication provider such as an on-premises Active Directory.

References:

<https://azure.microsoft.com/en-gb/overview/what-is-hybrid-cloud-computing/>

### QUESTION 23

#### HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

Hot Area:

#### Answer Area

Statements	Yes	No
A Platform as a Service (PaaS) solution provides full control of operating systems that host applications.	<input type="radio"/>	<input type="radio"/>
A Platform as a Service (PaaS) solution provides additional memory to apps by changing pricing tiers.	<input type="radio"/>	<input type="radio"/>
A Platform as a Service (PaaS) solution can automatically scale the number of instances.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

## Answer Area

Statements	Yes	No
A Platform as a Service (PaaS) solution provides full control of operating systems that host applications.	<input type="radio"/>	<input checked="" type="radio"/>
A Platform as a Service (PaaS) solution provides additional memory to apps by changing pricing tiers.	<input type="radio"/>	<input checked="" type="radio"/>
A Platform as a Service (PaaS) solution can automatically scale the number of instances.	<input checked="" type="radio"/>	<input type="radio"/>

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

### QUESTION 24

Your company has an on-premises network that contains multiple servers.

The company plans to reduce the following administrative responsibilities of network administrators:

- Backing up application data
- Replacing failed server hardware
- Managing physical server security
- Updating server operating systems
- Managing permissions to shared documents

The company plans to migrate several servers to Azure virtual machines.

You need to identify which administrative responsibilities will be eliminated after the planned migration.

Which two responsibilities should you identify? Each correct answer presents a complete solution.

**NOTE:** Each correct selection is worth one point.

- A. Replacing failed server hardware
- B. Backing up application data
- C. Managing physical server security
- D. Updating server operating systems
- E. Managing permissions to shared documents

**Correct Answer:** AC

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

Azure virtual machines run on Hyper-V physical servers. The physical servers are owned and managed by Microsoft. As an Azure customer, you have no access to the physical servers. Microsoft manage the replacement of failed server hardware and the security of the physical servers so you don't need to.



Incorrect Answers:

B: Microsoft have no control over the applications you run on the virtual machines. Therefore, it is your responsibility to ensure that application data is backed up.

D: Microsoft do not manage the operating systems you run on the virtual machines. Therefore, it is your responsibility to ensure that the operating systems are updated.

E: Microsoft have no control over the shared folders you host on the virtual machines. Therefore, it is your responsibility to ensure that folder permissions are configured appropriately.

## QUESTION 25

### HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

## Answer Area

Statements	Yes	No
Azure Pay-As-You-Go pricing is an example of CapEx.	<input type="radio"/>	<input type="radio"/>
Azure Reserved VM instances are an example of OpEx.	<input type="radio"/>	<input type="radio"/>
Deploying your own datacenter is an example of CapEx.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

## Answer Area

Statements	Yes	No
Azure Pay-As-You-Go pricing is an example of CapEx.	<input type="radio"/>	<input checked="" type="radio"/>
Azure Reserved VM instances are an example of OpEx.	<input type="radio"/>	<input checked="" type="radio"/>
Deploying your own datacenter is an example of CapEx.	<input checked="" type="radio"/>	<input type="radio"/>

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

One of the major changes that you will face when you move from on-premises cloud to the public cloud is the switch from capital expenditure (buying hardware) to operating expenditure (paying for service as you use it).

Box 1: No

With the pay-as-go model, you pay for services as you use them. This is Opex (Operational Expenditure), not CapEx (Capital Expenditure). CapEx is where you pay for something upfront. For example, buying a new physical server.

Box 2: No

A reserved instance is where you pay upfront for the use of a virtual machine for a period of time (1 or 3 years). This can save you money as you receive a discount on the cost of a VM if you pay upfront for a reserved instance. However, as this is an upfront payment, it will be classed as CapEx, not OpEx.

Box 3: Yes

Deploying your own datacenter is an example of CapEx. This is because you need to purchase all the infrastructure upfront before you can use it.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/cloud-adoption/appendix/azure-scaffold>

### QUESTION 26

You plan to provision Infrastructure as a Service (IaaS) resources in Azure.

Which resource is an example of IaaS?

- A. an Azure web app
- B. an Azure virtual machine
- C. an Azure logic app
- D. an Azure SQL database

**Correct Answer:** B

**Section:** Describe Cloud Concepts

**Explanation**

**Explanation/Reference:**

Explanation:

An Azure virtual machine is an example of Infrastructure as a Service (IaaS).

Azure web app, Azure logic app and Azure SQL database are all examples of Platform as a Service (PaaS).

References:

<https://azure.microsoft.com/en-gb/overview/what-is-iaas/>

<https://azure.microsoft.com/en-gb/overview/what-is-paas/>

#### **QUESTION 27**

To which cloud models can you deploy physical servers?

- A. private cloud and hybrid cloud only
- B. private cloud only
- C. private cloud, hybrid cloud and public cloud
- D. hybrid cloud only

**Correct Answer:** A

**Section:** Describe Cloud Concepts

**Explanation**

**Explanation/Reference:**

Explanation:

A private cloud is on-premises so you can deploy physical servers.

A hybrid cloud is a mix of on-premise and public cloud resources. You can deploy physical servers on-premises.

Reference:

<https://azure.microsoft.com/en-gb/overview/what-is-hybrid-cloud-computing/>

#### **QUESTION 28**

**DRAG DROP**

Match the cloud model to the correct advantage.

Instructions: To answer, drag the appropriate cloud model from the column on the left to its advantage on the right. Each cloud model may be used once, more than once, or not at all.

**NOTE:** Each correct match is worth one point

**Select and Place:**

**Cloud model****Work Area**

No required capital expenditure.

Provides complete control over security.

Provides a choice to use on-premises or cloud-based resources.

**Correct Answer:****Cloud model****Work Area**

No required capital expenditure.

Provides complete control over security.

Provides a choice to use on-premises or cloud-based resources.

**Section: Describe Cloud Concepts****Explanation****Explanation/Reference:**

Explanation:

Box 1: Public Cloud

With a public cloud, there is no capital expenditure on server hardware etc. You only pay for cloud resources that you use as you use them.

Box 2: Private Cloud

A private cloud exists on premises, so you have complete control over security.

Box 3: Hybrid Cloud

A hybrid cloud is a mix of public cloud resources and on-premises resources. Therefore, you have a choice to use either.

**QUESTION 29****HOTSPOT**

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

## Answer Area

Statements	Yes	No
A company can extend a private cloud by adding its own physical servers to the public cloud.	<input type="radio"/>	<input type="radio"/>
To build a hybrid cloud, you must deploy resources to the public cloud.	<input type="radio"/>	<input type="radio"/>
A private cloud must be disconnected from the internet.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

## Answer Area

Statements	Yes	No
A company can extend a private cloud by adding its own physical servers to the public cloud.	<input type="radio"/>	<input checked="" type="radio"/>
To build a hybrid cloud, you must deploy resources to the public cloud.	<input checked="" type="radio"/>	<input type="radio"/>
A private cloud must be disconnected from the internet.	<input type="radio"/>	<input checked="" type="radio"/>

### Section: Describe Cloud Concepts

#### Explanation

#### Explanation/Reference:

Explanation:

Box 1: No

You cannot add physical servers to the public cloud. You can only deploy virtual servers in the public cloud.

You can extend a private cloud by deploying virtual servers in a public cloud. This would create a hybrid cloud.

Box 2: Yes

A hybrid cloud is a combination of a private cloud and public cloud. Therefore, to create a hybrid cloud, you must deploy resources to a public cloud.

Box 3: No.

It is not true that a private cloud must be disconnected from the Internet. Private clouds can be and most commonly are connected to the Internet. "Private cloud" means that the physical servers are managed by you.

It does not mean that it is disconnected from the Internet.

References:

<https://azure.microsoft.com/en-gb/overview/what-are-private-public-hybrid-clouds/>

### QUESTION 30

You have 50 virtual machines hosted on-premises and 50 virtual machines hosted in Azure. The on-premises

virtual machines and the Azure virtual machines connect to each other.

Which type of cloud model is this?

- A. hybrid
- B. private
- C. public

**Correct Answer:** A

**Section:** Describe Cloud Concepts

**Explanation**

**Explanation/Reference:**

References:

<https://azure.microsoft.com/en-gb/overview/what-is-hybrid-cloud-computing/>

### QUESTION 31

#### HOTSPOT

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

Statements	Yes	No
A platform as a service (PaaS) solution that hosts web apps in Azure provides full control of the operating systems that host applications.	<input type="radio"/>	<input type="radio"/>
A Platform as a Service (PaaS) solution that hosts web apps in Azure can be provided with additional memory by changing the pricing tier.	<input type="radio"/>	<input type="radio"/>
A Platform as a Service (PaaS) solution that hosts web apps in Azure can be configured to automatically scale the number of instances based on demand.	<input type="radio"/>	<input type="radio"/>

Correct Answer:

### Answer Area

Statements	Yes	No
A platform as a service (PaaS) solution that hosts web apps in Azure provides full control of the operating systems that host applications.	<input type="radio"/>	<input checked="" type="radio"/>
A Platform as a Service (PaaS) solution that hosts web apps in Azure can be provided with additional memory by changing the pricing tier.	<input checked="" type="radio"/>	<input type="radio"/>
A Platform as a Service (PaaS) solution that hosts web apps in Azure can be configured to automatically scale the number of instances based on demand.	<input checked="" type="radio"/>	<input type="radio"/>

#### Section: Describe Cloud Concepts

##### Explanation

##### Explanation/Reference:

Explanation:

Box 1: No

A PaaS solution does not provide access to the operating system. The Azure Web Apps service provides an environment for you to host your web applications. Behind the scenes, the web apps are hosted on virtual machines running IIS. However, you have no direct access to the virtual machine, the operating system or IIS.

Box 2: Yes

Box 3: Yes

A PaaS solution that hosts web apps in Azure does provide the ability to scale the platform automatically. This is known as autoscaling. Behind the scenes, the web apps are hosted on virtual machines running IIS. Autoscaling means adding more load balanced virtual machines to host the web apps.

References:

<https://azure.microsoft.com/en-gb/overview/what-is-paas/>

#### QUESTION 32

**Note:** This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have



more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company plans to migrate all its data and resources to Azure.

The company's migration plan states that only Platform as a Service (PaaS) solutions must be used in Azure.

You need to deploy an Azure environment that meets the company migration plan.

Solution: You create an Azure virtual machines, Azure SQL databases, and Azure Storage accounts.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Platform as a service (PaaS) is a complete development and deployment environment in the cloud. PaaS includes infrastructure — servers, storage, and networking — but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application lifecycle: building, testing, deploying, managing, and updating.

However, virtual machines are examples of Infrastructure as a service (IaaS). IaaS is an instant computing infrastructure, provisioned and managed over the internet.

References:

<https://azure.microsoft.com/en-us/overview/what-is-paas/>

<https://azure.microsoft.com/en-us/overview/what-is-iaas/>

### QUESTION 33

Your company plans to deploy several custom applications to Azure. The applications will provide invoicing services to the customers of the company. Each application will have several prerequisite applications and services installed.

You need to recommend a cloud deployment solution for all the applications.

What should you recommend?

- A. Software as a Service (SaaS)
- B. Platform as a Service (PaaS)
- C. Infrastructure as a Service (IaaS)

**Correct Answer: C**

**Section: Describe Cloud Concepts**

**Explanation**

**Explanation/Reference:**

Explanation:

Infrastructure as a service (IaaS) is an instant computing infrastructure, provisioned and managed over the internet. The IaaS service provider manages the infrastructure, while you purchase, install, configure, and