Microsoft Azure Fundamentals [AZ-900] - Practice Set 1 - Results

Return to review
Attempt 1
All knowledge areas
All questions
Question 1:

Skipped

What is the Service Level Agreement (SLA) for two or more Azure Virtual Machines (VMs) that have been manually placed into different Availability Zones (AZs) in the same Region?

Select the correct option.

- **99.95%**
- **99.99%** **(Correct)**
- **99.9%**
- **99.94%**

Explanation
Keywords: *Multiple Availability Zones => 99.99% SLA*

Correct answer is option **99.99%**

For all Virtual Machines that have two or more instances deployed across two or more Availability Zones in the same Azure region, Azure guarantees you will have Virtual Machine Connectivity to at least one instance at least 99.99% of the time.

Reference: https://azure.microsoft.com/en-us/support/legal/sla/virtual-machines/v1_9/

Other options are incorrect.

Question 2: **Incorrect**
You have an on-premises network that contains several servers. You plan to migrate all the servers to Azure and need to recommend a solution to ensure that some of the servers are available if a single Azure data center goes offline.

What should you include in the recommendation?

- **Low Latency**
- **Elasticity**
- **Scalability** **(Incorrect)**
- **Fault Tolerance** **(Correct)**

Explanation
Keywords: *datacenter outage, the resource should be available => Fault Tolerance*

Correct answer is option ***Fault Tolerance***

Fault tolerance is the ability to remain up and running even in the event of a component (or service) no longer functioning. Typically, redundancy is built into cloud services architecture, so if one component fails, a backup component takes its place. This type of service is said to be tolerant of faults.
Azure can help make your app highly available through Availability Zones with 99.99% Azure SLA. If one zone in a region goes down, other Availability Zones in the region continue to work.

Other options are not correct.

Option ***Elasticity*** is incorrect - *Elasticity* is the ability to automatically or dynamically increase or decrease resources as needed.
Reference: https://azure.microsoft.com/en-us/overview/what-is-elastic-computing/

Option ***Scalability*** is incorrect - *Scalability* is the ability to increase or decrease resources for any given workload. You can add additional resources to service a workload (known as scaling out) or add additional capabilities to manage an increase in demand to the existing resource (known as scaling up).

Option ***Low Latency*** is incorrect - *Low latency* describes a computer network that is optimized to process a very high volume of data messages with minimal delay (latency).

Question 3: **Correct**
Which cloud model provides the greatest degree of ownership and control?

Select the correct option.

- **Private Cloud** **(Correct)**
- **Hybrid Cloud**
- **Public Cloud**

Explanation
Keywords: *greatest degree of ownership => Private Cloud*

Correct answer is option ***Private Cloud***

The private cloud provides the greatest degree of ownership and control. With *Private Cloud,* you will have more control of physical resources, which brings more ownership to users.
Reference: https://azure.microsoft.com/en-us/overview/what-is-a-private-cloud/

Cloud's degree of ownership and control:
Private Cloud (highest) > Hybrid Cloud > Public Cloud (least)

Other options are not correct.

Option ***Public Cloud*** is incorrect - Public cloud is a computing service offered by third-party providers (***e.g., Azure***) over the public Internet, making them available to anyone who wants to use or purchase them. Public cloud provides the least degree of ownership as physical infrastructure is owned and managed by public cloud provides (*e.g., Azure or AWS*)
Reference: https://azure.microsoft.com/en-us/overview/what-is-a-public-cloud/

Option ***Hybrid Cloud*** is incorrect - *Hybrid Cloud* is a computing environment that combines *public cloud* and *private cloud* by allowing data and applications to be shared between them. Hybrid cloud provides less degree of ownership comparing to the private cloud.
Reference: https://azure.microsoft.com/en-us/overview/what-is-hybrid-cloud-computing/

Question 4: **Incorrect**
Which of the following statement is not correct for the Azure Monitor service?

Select the correct option.

- **Azure Monitor can monitor both cloud and on-premises environments**
- **You can configure the Azure Active Directory (Azure AD) activity logs to appear in Azure Monitor (Incorrect)**
- **You can create alerts from Azure Monitor**
- **Azure Monitor can send alerts to Azure Active Directory security groups**
- **Azure Monitor can trigger alerts based on data in an Azure Log Analytics workspace**
- **You can use Azure Monitor to monitor resources across multiple Azure subscriptions (Correct)**

Explanation
This question requires you to select the incorrect statement. Azure Monitor cannot monitor resources in multiple subscriptions, so the correct option is ***You can use Azure Monitor to monitor resources across multiple Azure subscriptions***
Reference: https://docs.microsoft.com/en-us/azure/active-directory/reports-monitoring/concept-activity-logs-azure-monitor

Other options are incorrect, as all others are valid statements.

Question 5: **Incorrect**

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1. Exam note:
2. - Each correct selection is worth one point in the main exam.
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Which of the following statements are correct in the context of factors that affect cost in Azure?

Select three correct options.

- ☐ **By copying several GBs of data from Azure to an on-premises network over a VPN, additional data transfer costs are incurred (Correct)**
- ☑ **When using a general-purpose v2 Azure Storage account, you pay for the amount of data stored and for all read and write operations performed (Correct)**
- ☐ **By copying several GBs of data to Azure from an on-premises network over a VPN, additional data transfer costs are incurred**
- ☑ **By Creating additional Resource Groups in an Azure Subscription, additional costs are incurred (Incorrect)**
- ☑ **When Azure virtual machine is stopped, you continue to pay storage costs associated with the Virtual Machine (Correct)**
- ☐ **If you create two Virtual Machines of B2B size, each virtual machine will always generate the same cost**

Explanation
Correct answers are

- Option ***By copying several GBs of data from Azure to an on-premises network over a VPN, additional data transfer costs are incurred*** - Data coming into Azure is free, you pay only for data leaving Azure cloud.

- Option ***When Azure virtual machine is stopped, you continue to pay storage costs associated with the Virtual Machine -*** When a virtual machine is stopped (deallocated), the virtual machine is unloaded/dismounted from the physical server in Azure. In this state, you are not charged for the virtual machine itself. However, you are still charged for the storage costs of the virtual hard disks attached to the virtual machine.
If the virtual machine is stopped but not deallocated (this happens if you shut down the virtual machine from the operating system of the virtual machine), the virtual machine is still mounted on the physical server in Azure, and you are charged for the virtual machine itself as well as the storage costs. To ensure that a virtual machine is 'stopped (deallocated)', you need to stop the virtual machine in the Azure portal.

Reference: https://docs.microsoft.com/en-us/archive/blogs/uspartner_ts2team/azure-virtual-machines-stopping-versus-stopping-deallocating

- Option ***When using a general-purpose v2 Azure Storage account, you pay for the amount of data stored and for all read and write operations performed*** - You are charged for reading and write operations in general-purpose v2 storage accounts. You would be charged for the read operations of the source storage account and write operations in the destination storage account.

Other options are incorrect.

- ***By copying several GBs of data to Azure from an on-premises network over a VPN, additional data transfer costs are incurred*** is incorrect as Data coming into Azure is free, you pay only for data leaving Azure cloud.

- By Creating additional Resource Groups in an Azure Subscription, additional costs are incurred is incorrect as several resources are free to use in Azure, like Resource Groups, Virtual Network, Subnets.

- ***If you create two Virtual Machines of B2B size, each virtual machine will always generate the same*** cost is incorrect. There are other factors that influence the cost of a virtual machine such as the virtual hard disks attached to the virtual machine, Static IP address.

Question 6: **Correct**
You are planning to deploy Azure security services using Multi-factor Authentication (MFA) in your cloud solution.

How does MFA enhance security in Azure?

- **It requires a smart card**
- **It requires you to change the password after every successful login**
- **It requires approval through the Microsoft Authenticator app** **(Correct)**
- **It requires password complexity**

Explanation
Correct answer is option ***It required approval through the Microsoft Authenticator app***

A push notification is sent to the *Microsoft Authenticator app* on your mobile device. The user views the notification and selects **Approve** to complete verification. This is the most reliable and secure option because the app uses a data connection rather than telephony.
Reference: https://docs.microsoft.com/en-us/azure/active-directory/authentication/overview-authentication#azure-ad-multi-factor-authentication

Other options are not correct.

Option ***It requires you to change the password after every successful login*** is incorrect - For multifactor authentication, a user needs to use at least two modes for authentication, changing the password is not considered as multifactor authentication.

Option ***It requires password complexity*** is incorrect - For multifactor authentication, a user needs to use at least two modes for authentication, Complex password is not considered as multifactor authentication.

Option ***It requires a smart card*** is incorrect - Smart cards are used for IoT and not for authentication purposes.

Question 7: **Correct**
Which of the following cloud services provides development collaboration tools including high-performance pipelines, free private Git repositories, and configurable Kanban boards?

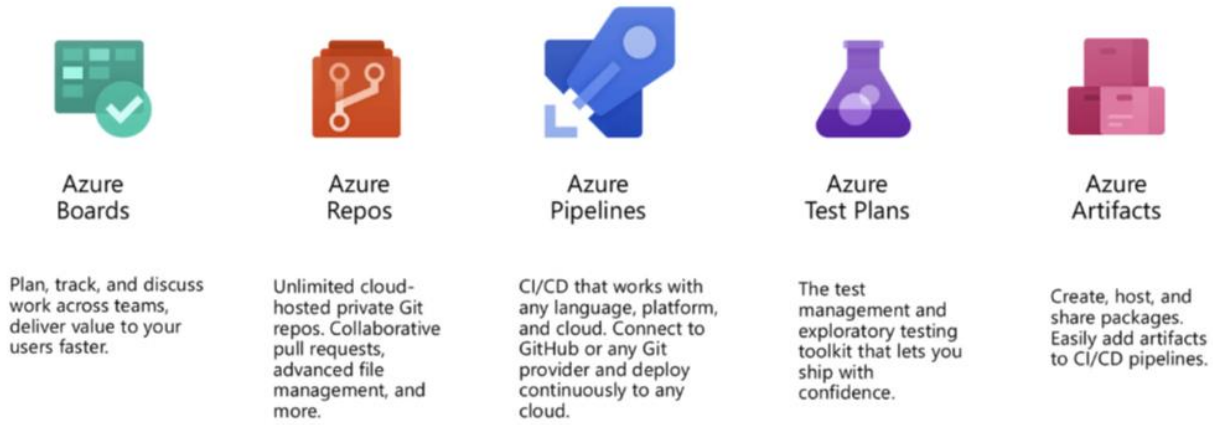
Select the correct option.

- **Azure Event Grid**
- **Azure DevTest Labs**
- **Azure DevOps Services** **(Correct)**
- **Azure HDInsight**

Explanation
Keywords: *collaboration tools, pipelines, Git repositories, Kanban boards => Azure DevOps*

Correct answer is option ***Azure DevOps Services***

Azure DevOps Services provides development collaboration tools including high-performance pipelines, private Git repositories, configurable Kanban boards, and extensive automated and cloud-based load testing. DevOps services provide the following tools



Reference: https://docs.microsoft.com/en-us/azure/devops/user-guide/what-is-azure-devops

Other options are not correct.

Option ***Azure Event Grid*** is incorrect - *Azure Event Grid* allows you to easily build applications with event-based architectures.
Reference: https://docs.microsoft.com/en-us/azure/event-grid/overview

Option ***Azure HDInsight*** is incorrect - *Azure HDInsight* is an open-source analytics service for enterprises to process massive amounts of data. HDInsight allows you to run popular frameworks such as **Apache Spark, Apache Hadoop, Apache Kafka.**
Reference: https://docs.microsoft.com/en-us/azure/hdinsight/hadoop/apache-hadoop-introduction

Option ***Azure DevTest Labs*** is incorrect - *Azure DevTest Labs* provides self-service cloud environments (Windows/Linux) for demo/training purposes to speed up the development process. One of the primary scenarios involves using DevTest Labs to host development machines for developers.
Reference: https://docs.microsoft.com/en-us/azure/devtest-labs/devtest-lab-overview

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Question 8: **Incorrect**

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1. Exam notes:
2. - For each of the following statements, check the checkbox if the statement is
   correct.
3. - Each correct selection is worth one point in the main exam.
```

	Statements	Yes	No
1.	Azure Security Center can monitor Azure resources and on-premises resources.	○	○
2.	All Azure Security Center features are free.	○	○
3.	From Azure Security Center, you can download Regulatory Compliance reports.	○	○

- ☑ **Azure Security Center can monitor Azure resources and on-premises resources.** **(Correct)**
- ☑ **All Azure Security Center features are free.** **(Incorrect)**
- ☐ **From Azure Security Center, you can download Regulatory Compliance reports.** **(Correct)**

Explanation

Statement ***Azure Security Center can monitor Azure resources and on-premises resources*** is correct - Azure Security Center is a unified infrastructure security management system that strengthens the security posture of your data centers and provides advanced threat protection across your hybrid workloads in the cloud - whether they're in Azure or on-premises.

Statement ***From Azure Security Center, you can download Regulatory Compliance reports*** is correct - The advanced monitoring capabilities in Security Center also let you track and manage compliance and governance over time. The overall compliance provides you with a measure of how much your subscriptions are compliant with policies associated with your workload.

Reference: https://docs.microsoft.com/en-us/azure/security-center/security-center-intro

Statement ***All Azure Security Center features are free*** is incorrect - Only two features, Continuous assessment and security recommendations, and Azure secure score are free.

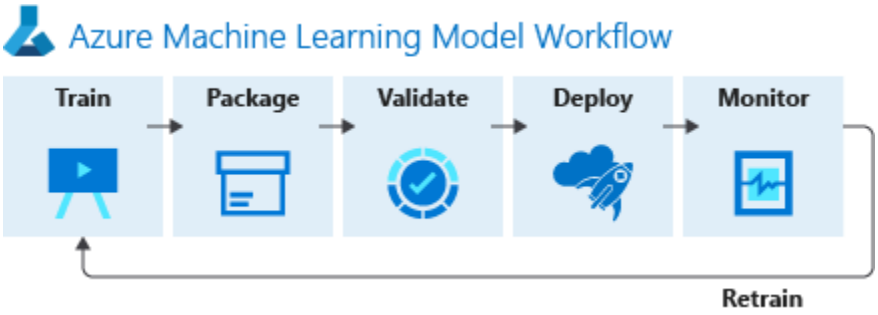
Question 9: **Correct**
Which of the following is part of the Azure Artificial Intelligence service?

Select the correct option.

- **Azure Machine Learning service** **(Correct)**
- **Azure Logic Apps**
- **Azure HDInsight**
- **Azure DevTest Labs**

Explanation
Correct answer is option ***Azure Machine Learning service***

Machine Learning service provides a cloud-based environment that can be used to develop, train, test, deploy, manage, and track machine learning models to implement Artificial Intelligence (AI).
Reference: https://azure.microsoft.com/en-in/services/machine-learning/



Other options are not correct.

Option ***Azure HDInsight*** is incorrect - *Azure HDInsight* is an **open-source analytics service** for enterprises to process massive amounts of data. HDInsight allows you to run popular frameworks such as **Apache Spark**, **Apache Hadoop**, **Apache Kafka.**
Reference: https://docs.microsoft.com/en-us/azure/hdinsight/hadoop/apache-hadoop-introduction

Option ***Azure DevTest Labs*** is incorrect - *Azure DevTest Labs* provides self-service cloud environments (Windows/Linux) for demo/training purposes to speed up the development process.
Reference: https://docs.microsoft.com/en-us/azure/devtest-labs/devtest-lab-overview

Option ***Azure Logic Apps*** is incorrect - *Azure Logic Apps* helps you to **automate and orchestrate *tasks, business processes, and workflows.*** Logic Apps are designed in a web-based designer and can execute logic triggered by Azure services without writing any code.
Reference: https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-overview

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Question 10: **Incorrect**

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1. Exam notes:
2. - Drag the appropriate term from the row on the top to its description on the
   bottom.
3. - Udemy does not support drag & drop, but in the actual exam, you will be
   allowed.
4. - Each correct selection is worth one point in the main exam.
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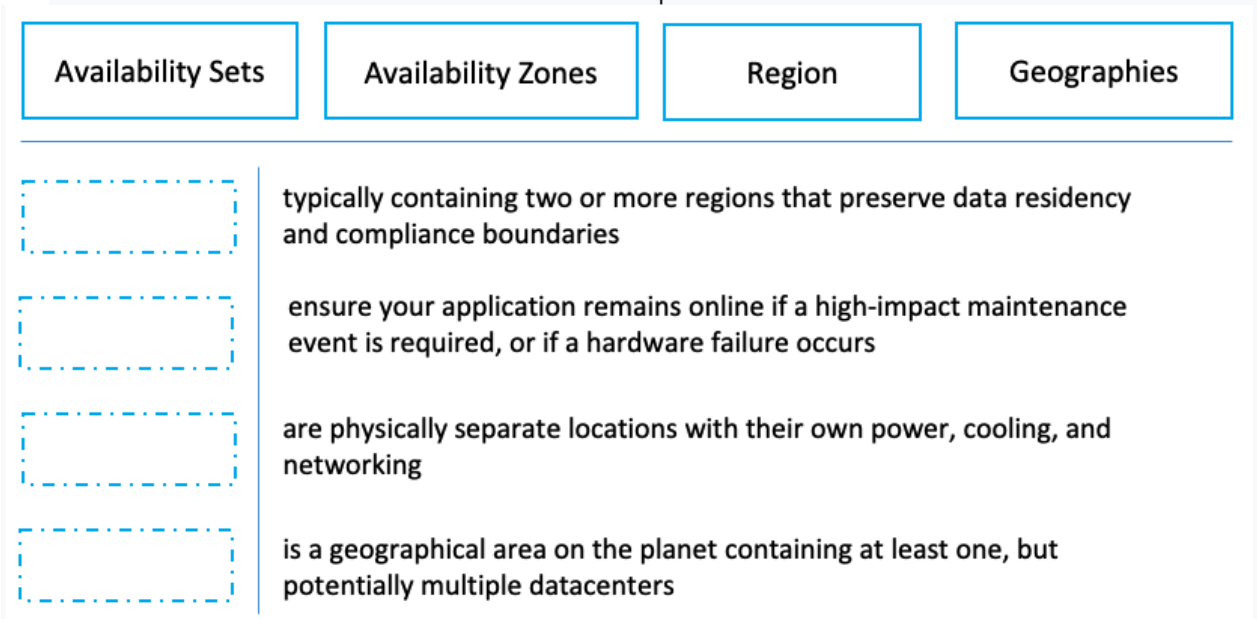


- ***Availability Sets*** **- ensure your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs**
  Availability Zones **- is a geographical area on the planet containing at least one, but potentially multiple datacenters**
  Region **- are physically separate locations with their own power, cooling, and networking**
  Geographies **- typically containing two or more regions that preserve data residency and compliance boundaries** **(Incorrect)**
- ***Availability Sets*** **- typically containing two or more regions that preserve data residency and compliance boundaries**
  Availability Zones **- is a geographical area on the planet containing at least one, but potentially multiple datacenters**
  Region **- ensure your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs**
  Geographies **- are physically separate locations with their own power, cooling, and networking**
- ***Availability Sets*** **- ensure your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs**
  Availability Zones **- are physically separate locations with their own power, cooling, and networking**

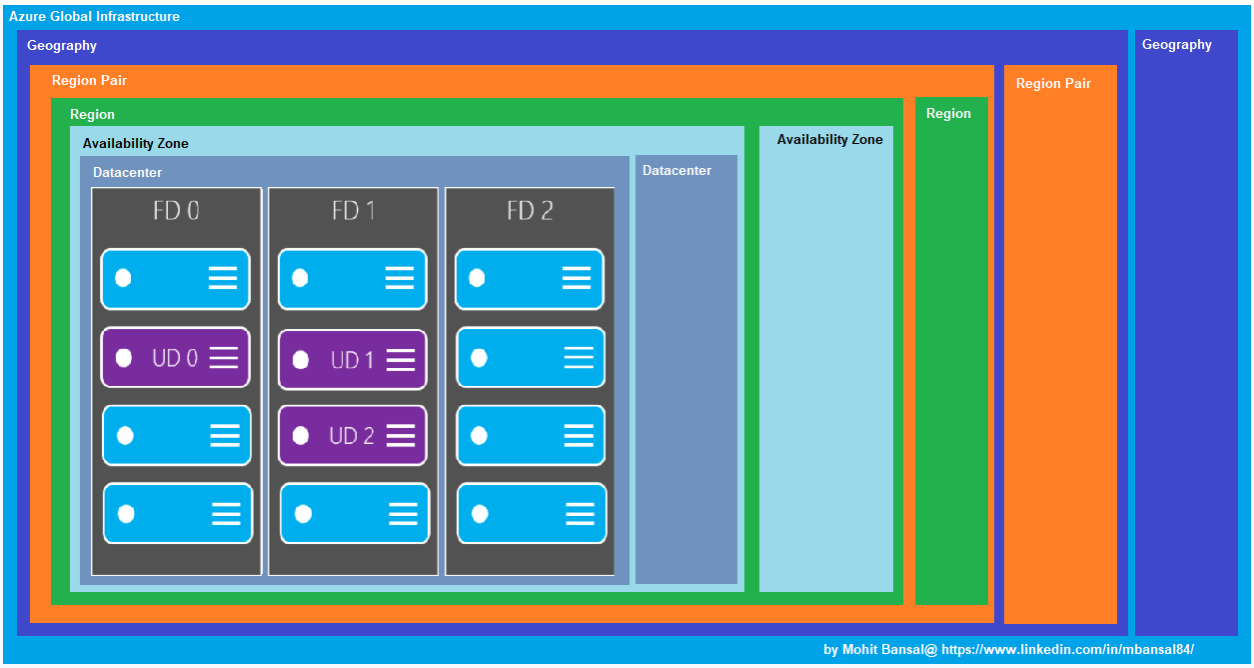
Region **- is a geographical area on the planet containing at least one, but potentially multiple datacenters**
Geographies **- typically containing two or more regions that preserve data residency and compliance boundaries** **(Correct)**

- ***Availability Sets*** **- typically containing two or more regions that preserve data residency and compliance boundaries**
Availability Zones **- ensure your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs**
Region **- is a geographical area on the planet containing at least one, but potentially multiple datacenters**
Geographies **- are physically separate locations with their own power, cooling, and networking**

Explanation
Correct answer is option
Availability Sets - ensure your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs
Availability Zones - are physically separate locations with their own power, cooling, and networking
Region - is a geographical area on the planet containing at least one, but potentially multiple datacenters
Geographies - typically containing two or more regions that preserve data residency and compliance boundaries

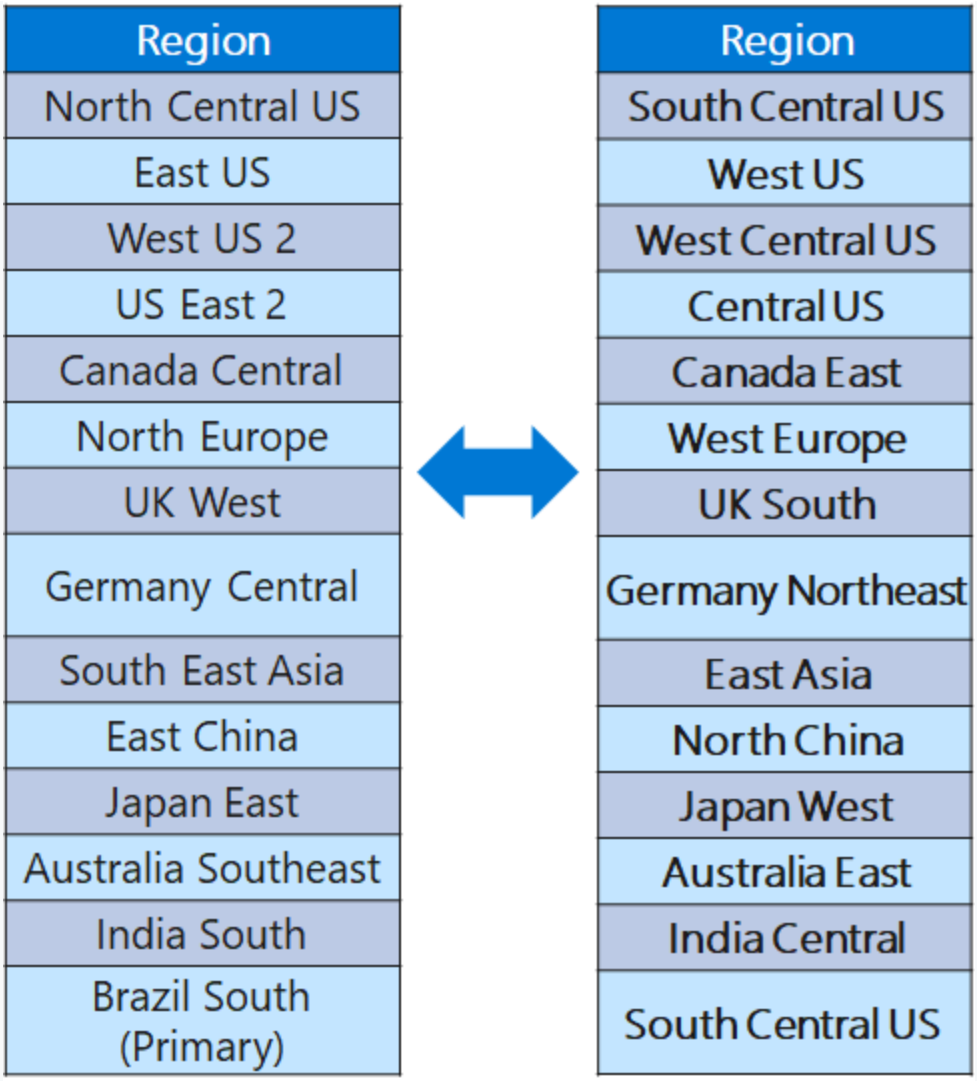
Detailed explanation:

Check this diagram to understand, how Azure global Infrastructure is placed.



Azure divides the world into the following geographies: America, Europe, Asia Pacific, Middle East, and Africa

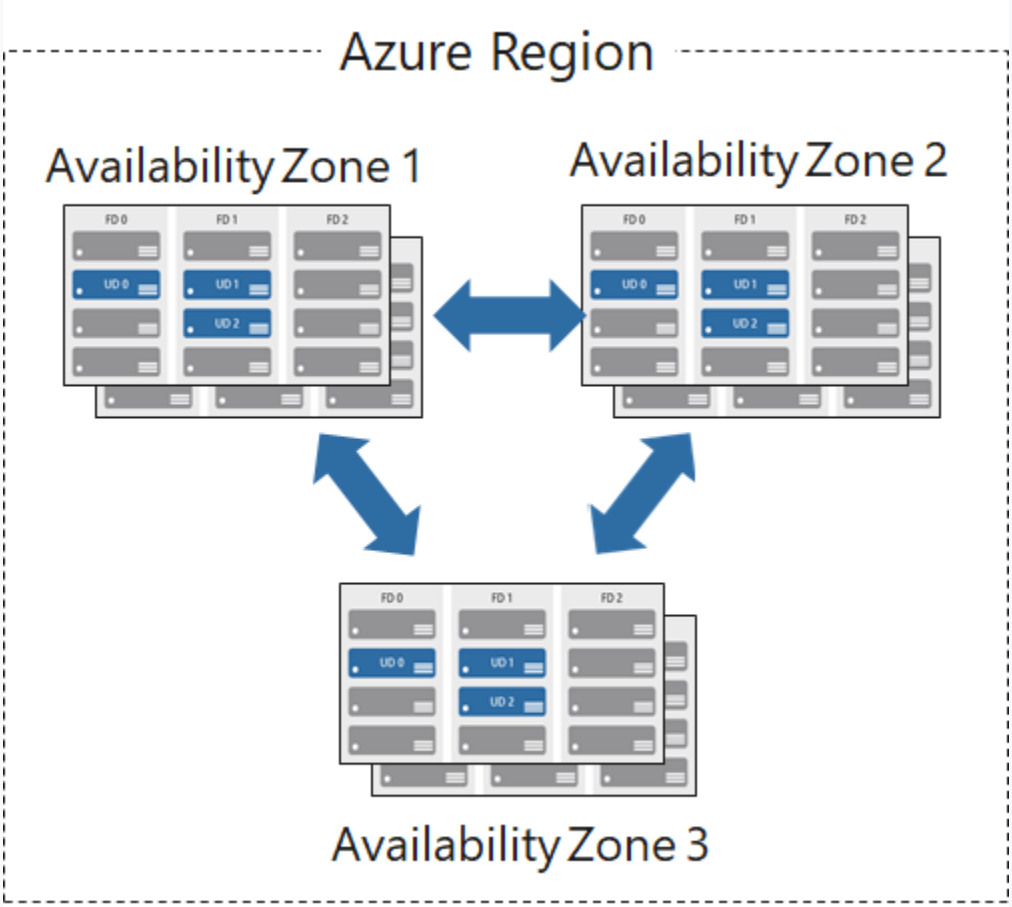
Geographies contain region-pairs. Each Azure region is paired with another region within the same geography at least 300 miles away, which together make a region pair. Region pair helps in case of a large disaster, which causes an outage large enough to affect even two datacenters.



Refernce: https://docs.microsoft.com/en-us/learn/modules/discuss-core-azure-architectural-components/3-explore-region-pairs

Region is a geographical area on the planet containing at least one, but potentially multiple datacenters that are in close proximity and networked together with a low-

latency network. The region contains Availability Zones.



Reference: https://docs.microsoft.com/en-us/learn/modules/discuss-core-azure-architectural-components/7-define-availability-zones

Each Availability Zone contains data centers. You can use ***Availability Sets*** in a data center to ensure your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs with 99.95% Azure SLA. Availability sets are made up of **Update domains (UD)** and **Fault domains (FD)**.

Other options are not correct.

Question 11: **Correct**

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1. Exam notes:
2. - This question requires you to select the correct option from the dropdown.
3. - Udemy does not support dropdown selection, but in the actual exam, you will
   be allowed to use dropdown.
4. - Each correct selection is worth one point in the main exam.
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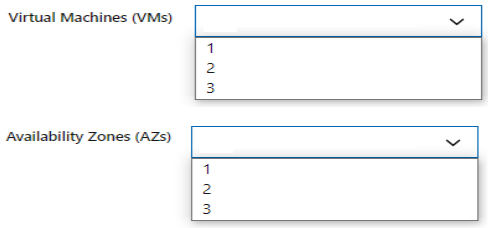
You are planning to deploy a critical line-of-business application to Azure. The application will run on an Azure virtual machine. You need to recommend a deployment solution for the application. The solution must provide a guaranteed availability of 99.99 percent.

What is the minimum number of resources you should recommend for the deployment?



- **Virtual Machines (VMs): 2**
  Availability Zones (AZs): 2 (Correct)
- **Virtual Machines (VMs): 3**
  Availability Zones (AZs): 3
- **Virtual Machines (VMs): 1**
  Availability Zones (AZs): 1
- **Virtual Machines (VMs): 3**
  Availability Zones (AZs): 2

Explanation
Keywords: guaranteed availability of 99.99% *=> Min 2 AZs, Min 2 Resource (1 resource/AZ)*

Correct answer is option
Virtual Machines (VMs): 2
Availability Zones (AZs): 2

To achieve High Availability (99.99%), it's advised to deploy the same set of resources in at least two Availability Zone. In this scenario, you will need 1 VM per AZ, which means, you will need a minimum of *2 VMs & 2 AZs*.

Other options are not correct.

Question 12: **Correct**

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Exam notes:
- For each of the following statements, check the checkbox if the statement is correct.
- Each correct selection is worth one point in the main exam.
```

	Statements	Yes	No
1.	Storing 1TB of data in Azure blob storage will always cost the same, regardless of the Azure region in which the data is located.	○	○
2.	When you use a general-purpose v2 Azure Storage account, you are only charged for the amount of data that is stored. All read and write operations are free.	○	○
3.	Transferring data between Azure storage accounts in different Azure regions is free.	○	○

- ☑ **All statements are incorrect.** **(Correct)**
- ☐ **Transferring data between Azure storage accounts in different Azure regions is free.**
- ☐ **When you use a general-purpose v2 Azure Storage account, you are only charged for the amount of data that is stored. All read and write operations are free.**
- ☐ **Storing 1TB of data in Azure blob storage will always cost the same, regardless of the Azure region in which the data is located.**

Explanation

Statement ***Storing 1TB of data in Azure blob storage will always cost the same, regardless of the Azure region in which the data is located*** is incorrect - The price of Azure storage varies by region. If you use the Azure storage pricing page, you can select different regions and see how the price changes per region.

Statement ***When you use a general-purpose v2 Azure Storage account, you are only charged for the amount of data that is stored. All read and write operations are free*** is incorrect - You are charged for read and write operations in general-purpose v2 storage accounts.

Statement ***Transferring data between Azure storage accounts in different Azure regions is free*** is incorrect - You would be charged for the read operations of the source storage account and write operations in the destination storage account.

You're billed for Azure Storage based on your storage account usage. All objects in a storage account are billed together as a group. Storage costs are calculated according to the following factors:

- ***Region*** refers to the geographical region in which your account is based.
- ***Account type*** refers to the type of storage account you're using.
- ***Access tier*** refers to the data usage pattern you've specified for your general-purpose v2 or Blob storage account.
- ***Storage Capacity*** refers to how much of your storage account allotment you're using to store data.
- ***Replication determines*** how many copies of your data are maintained at one time, and in what locations.
- ***Transactions*** refer to all read and write operations to Azure Storage.
- ***Data egress*** refers to any data transferred out of an Azure region.

References:

- https://docs.microsoft.com/en-us/azure/storage/common/storage-account-overview
- https://azure.microsoft.com/en-gb/pricing/details/storage/blobs/

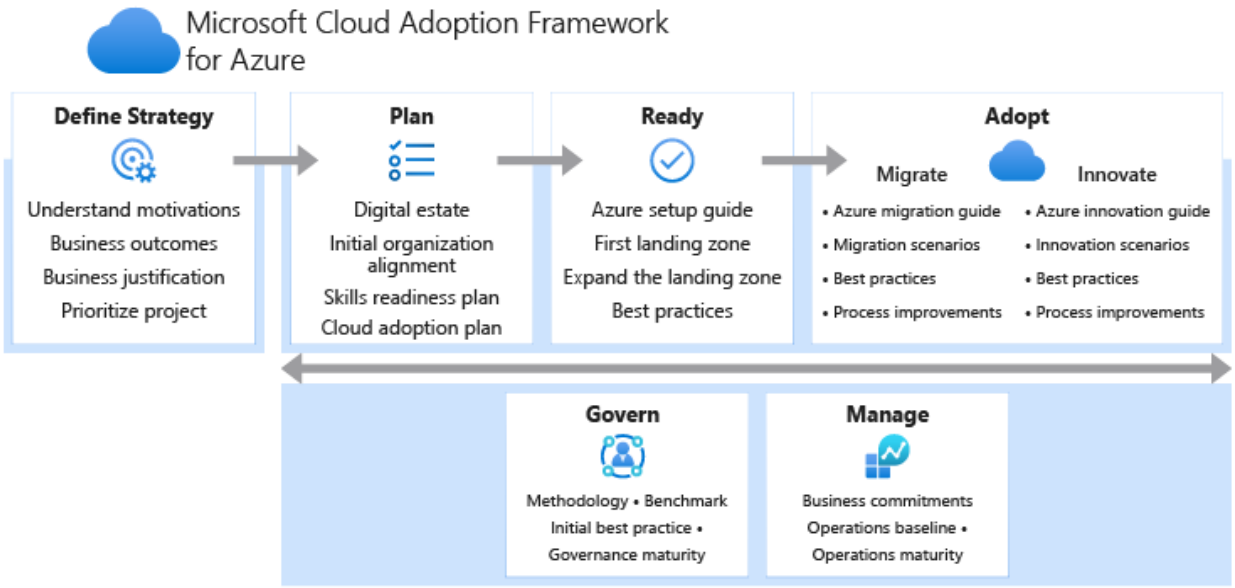
Question 13: **Correct**
What's the correct sequence of the *cloud adoption framework*?

Select the correct option.

- **Adopt -> Plan -> Strategy -> Ready**
- **Plan -> Strategy -> Ready -> Adopt**
- **Strategy -> Plan -> Ready -> Adopt** **(Correct)**
- **Strategy -> Adopt -> Plan -> Ready**

Explanation
Correct answer is option ***Strategy -> Plan -> Ready -> Adopt***

Cloud Adoption Framework for Azure provides you with proven guidance to help with your cloud adoption journey. The Cloud Adoption Framework helps you create and implement the business and technology strategies needed to succeed in the cloud. The Cloud Adoption Framework includes these stages:



Reference: https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/

Other options are not correct.

Question 14: **Incorrect**
A company wants to build a new voting kiosk for sales to governments around the world.

Which IoT technologies should the company choose to ensure the highest degree of security?

- **IoT Central** **(Incorrect)**
- **IoT Hub**
- **Azure Cognitive Services**
- **Azure Sphere** **(Correct)**

Explanation
Keywords: *voting kiosk (many devices), collect data securely => Azure Sphere*

Correct answer is option ***Azure Sphere***

Azure Sphere creates an end-to-end, highly secure IoT solution for customers that encompasses everything from the hardware and operating system on the device to the secure method of sending messages from the device to the message hub. Azure Sphere has built-in communication and security features for internet-connected devices, that provides the highest degree of security to ensure the device has not been tampered with.

Reference: https://azure.microsoft.com/services/azure-sphere/
Other options are not correct.

Option ***IoT Hub*** is incorrect - *IoT hub* allows bi-directional communication between IoT applications and the devices it manages. IoT Hub will not ensure the security of the IoT device.

Option ***IoT Central*** is incorrect - *Azure IoT Central* builds on top of IoT Hub by adding a dashboard that allows you to connect, monitor, and manage your IoT devices. IoT Central will not ensure the security of the IoT device.

Option ***Azure Cognitive Services*** is incorrect - *Cognitive services* are a collection of domain-specific pre-trained AI models that can be customized with your data. They are categorized broadly into vision, speech, language, and search. Cognitive services are not an IoT service.

Question 15: **Correct**
Which of the following give all azure customers a chance to test the beta and other pre-release features?

Select the correct option.

- **Public Preview** **(Correct)**
- **Private Preview**
- **General Availability (GA)**
- **General Preview**

Explanation
Keywords: *all customers, test, beta, pre-release => Public Preview*

Correct answer is option ***Public Preview***.

Public preview means that an Azure feature, which is in the beta phase, is available to all Azure customers for evaluation purposes.
Reference: https://azure.microsoft.com/en-in/support/legal/preview-supplemental-terms/

Other options are not correct.

Option ***Private preview*** is incorrect - For service in private preview, the customer needs to request to use it. So private preview service is not available to all customers for testing or evaluation purposes.

Option ***General Availability (GA)*** is incorrect - A service in GA means that it has passed the beta phase and is now production-ready.

Option ***General Preview*** is incorrect - this is not a preview option available in Azure.

Question 16: **Incorrect**

```
Exam notes:
- For each of the following statements, check the checkbox if the statement is correct.
- Each correct selection is worth one point in the main exam.
```

	Statements	Yes	No
1.	General Data Protection Regulation (GDPR) defines data protection and privacy rules.	○	○
2.	General Data Protection Regulation (GDPR) applies to companies that offer goods or services to individuals in the EU.	○	○
3.	Azure can be used to build a General Data Protection Regulation (GDPR) compliant infrastructure.	○	○

- ☑ **General Data Protection Regulation (GDPR) applies to companies that offer goods or services to individuals in the EU.** **(Correct)**
- ☐ **Azure can be used to build a General Data Protection Regulation (GDPR) compliant infrastructure.** **(Correct)**
- ☑ **General Data Protection Regulation (GDPR) defines data protection and privacy rules.** **(Correct)**

Explanation

All statements are correct in the context of GDPR

- General Data Protection Regulation (GDPR) defines data protection and privacy rules.

- General Data Protection Regulation (GDPR) applies to companies that offer goods or services to individuals in the EU.

- Azure can be used to build a General Data Protection Regulation (GDPR) compliant infrastructure.

Reference: https://azure.microsoft.com/en-gb/blog/new-capabilities-to-enable-robust-gdpr-compliance/

Question 17: **Incorrect**

```
1. Exam note:
2. - Each correct selection is worth one point in the main exam.
```

Your company has an Azure subscription that contains the following unused resources:

- 20 user accounts in Azure Active Directory (Azure AD)
- Five groups in Azure AD
- 10 public IP addresses
- 10 network interfaces
- 10 Virtual Machines

Which options you will select to reduce the Azure cost for the company? Select two correct options.

- ☑ **Remove the unused network interfaces** **(Incorrect)**
- ☑ **Remove the unused public IP addresses** **(Correct)**
- ☐ **Remove the unused Virtual Machines** **(Correct)**
- ☐ **Remove the unused user accounts**

Explanation
Correct answers are:

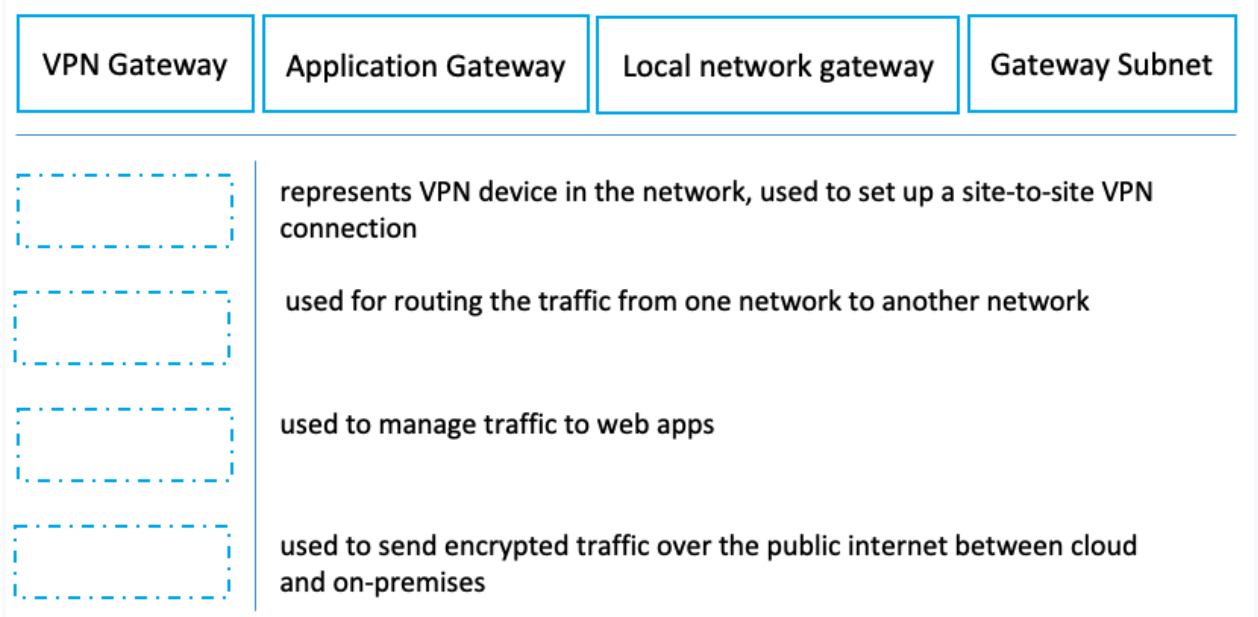
- Option ***Remove the unused public IP addresses***
- Option ***Remove the unused Virtual Machines***

Public IPs and ***Virtual Machines*** incur a cost in Azure, so removing unused *public IPs* or *Virtual machines* will help you to save costs.

Other options are not correct as using ***network interfaces*** or ***user accounts/AD groups*** are not chargeable in Azure.

Question 18: **Correct**

```
1. Exam notes:
2. - Drag the appropriate term from the row on the top to its description on the
   bottom.
3. - Udemy does not support drag & drop, but in the actual exam, you will be
   allowed.
4. - Each correct selection is worth one point in the main exam.
```



- ***VPN Gateway*** **- represents VPN device in the network, used to set up a site-to-site VPN connection**
  Application Gateway **- used to manage traffic to web apps**
  Gateway Subnet **- used for routing the traffic from one network to another network**
  local network gateway **- used to send encrypted traffic over the public internet between cloud and on-premises**
- ***VPN Gateway*** **- represents VPN device in the network, used to set up a site-to-site VPN connection**
  Application Gateway **- used for routing the traffic from one network to another network**
  Gateway Subnet **- used to manage traffic to web apps**
  local network gateway **- used to send encrypted traffic over the public internet between cloud and on-premises**
- ***VPN Gateway*** **- used to send encrypted traffic over the public internet between cloud and on-premises**
  Application Gateway **- used to manage traffic to web apps**
  Gateway Subnet **- used for routing the traffic from one network to another network**

local network gateway **- represents VPN device in the network, used to set up a site-to-site VPN connection** **(Correct)**

- ***VPN Gateway*** **- used for routing the traffic from one network to another network**
  Application Gateway **- represents VPN device in the network, used to set up a site-to-site VPN connection**
  Gateway Subnet **- used to manage traffic to web apps**
  local network gateway **- used to send encrypted traffic over the public internet between cloud and on-premises**

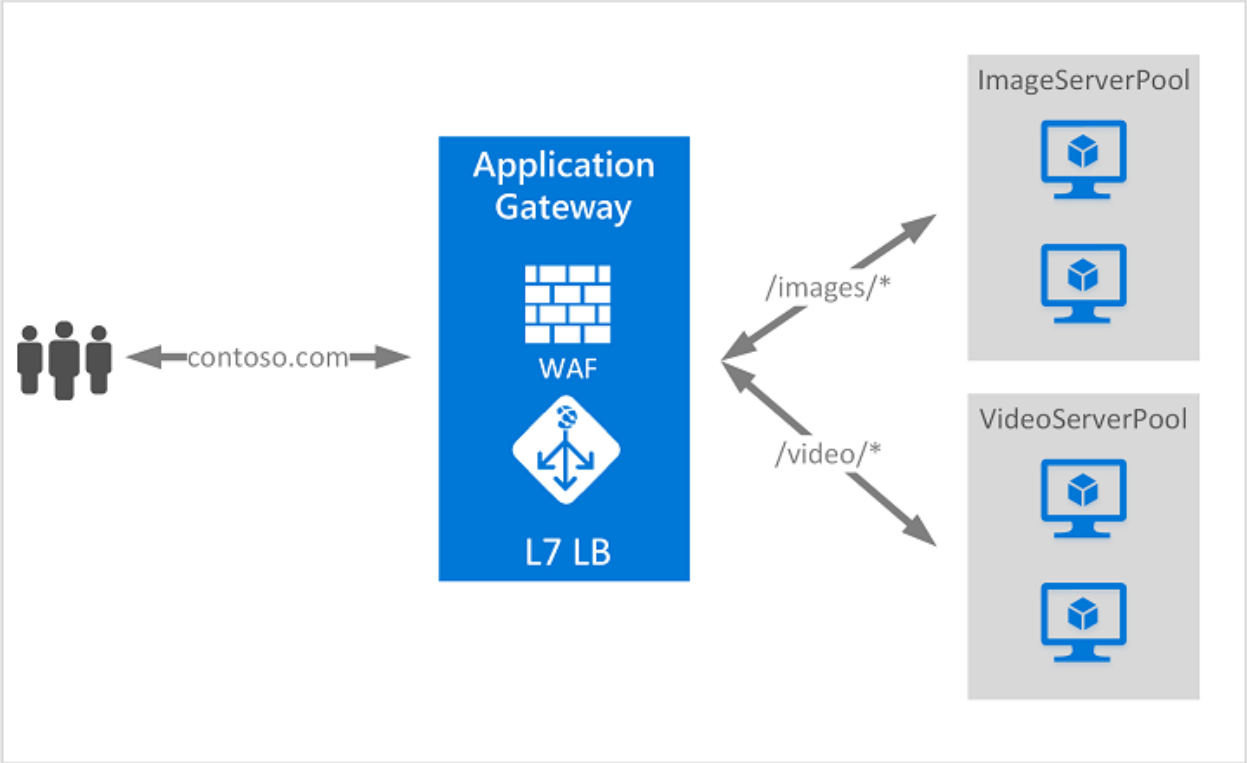
Explanation
Correct answer is option
VPN Gateway - used to send encrypted traffic over the public internet between cloud and on-premises
Application Gateway - used to manage traffic to web apps
Gateway Subnet - used for routing the traffic from one network to another network
local network gateway - represents VPN device in the network, used to set up a site-to-site VPN connection

Detailed explanation:

Azure Virtual Private Network (VPN) gateway is used to send encrypted traffic between an Azure Virtual Network and an on-premises location over the public internet. It provides a more secure connection from on-premises to Azure over the internet.
Reference: https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-vpngateways

Local network gateway represents the hardware or software VPN device in your local network. It's used to set up a site-to-site VPN connection between an Azure virtual network and your local network.
Reference: https://azuremarketplace.microsoft.com/en-us/marketplace/apps/Microsoft.LocalNetworkGateway-ARM

Azure Application Gateway is a web traffic load balancer that enables you to manage traffic to your web applications & also perform URL based routing. It is the connection through which users connect to your application.
Reference: https://docs.microsoft.com/en-us/azure/application-gateway/overview



Gateway subnet - The virtual network gateway uses a specific subnet called the gateway subnet, which is used for routing the traffic from one network to another network.

Other options are not correct.

Question 19: **Correct**

```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

[*Azure Databricks]* is an Apache Spark-based analytics service.

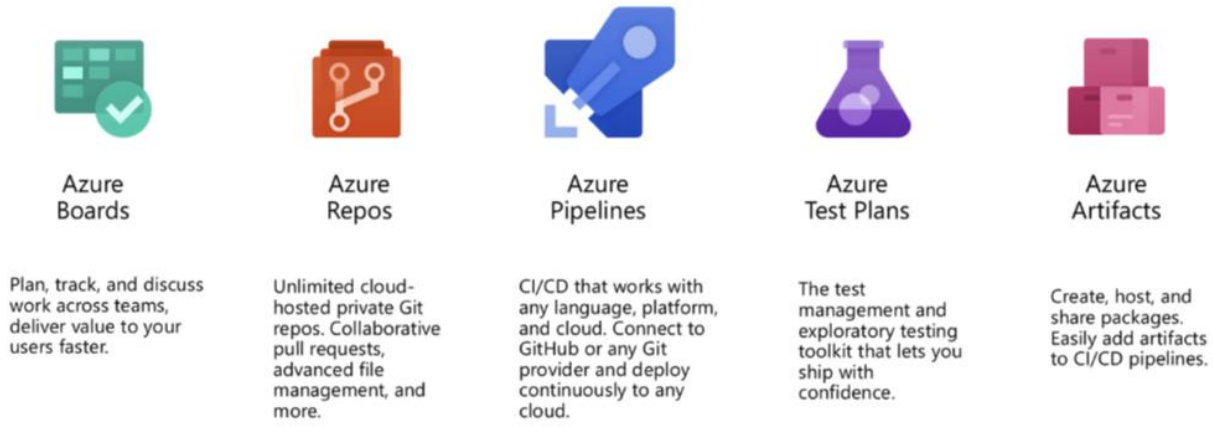
- **Azure Data Factory**
- **No change needed** **(Correct)**
- **Azure DevOps**

Explanation
Correct Answer is ***No change needed*** i.e.. ***Azure Databricks***

Azure Databricks is an Apache Spark-based analytics platform optimized for the Microsoft Azure cloud services platform. Databricks is integrated with Azure to provide a one-click setup, streamlined workflows, and an interactive workspace that enables collaboration between data scientists, data engineers, and business analysts.
Reference: https://docs.microsoft.com/en-us/azure/databricks/scenarios/what-is-azure-databricks#apache-spark-based-analytics-platform

Other options are not correct.

Option ***Azure DevOps*** is incorrect - *Azure DevOps Services* provides development collaboration tools including high-performance pipelines, private Git repositories, configurable Kanban boards, and extensive automated and cloud-based load testing. DevOps services provide the following tools



Reference: https://docs.microsoft.com/en-us/azure/devops/user-guide/what-is-azure-devops

Option ***Azure Data Factory*** is incorrect - *Azure Data Factory* is described as a data integration service and not a Spark-based analytics service. The purpose of Azure Data Factory is to retrieve data from one or more data sources and convert it into a format that you process.

Question 20: **Incorrect**
Which one of the following approaches would be the most efficient way to ensure that a naming convention is followed across a Subscription?

Select the correct option.

- **Give all other users read-only access to the subscription. Have all requests to create resources sent back to you, so the names can be reviewed while assigned to resources, and then create them. (Incorrect)**
- **Use Azure Lock**
- **Create a policy with the naming requirements and assign it to the scope of the subscription (Correct)**
- **Send out an email with the details of the naming conventions and hope it is followed**

Explanation
Keywords: *ensure naming convention => Azure Policy*

Correct answer is option ***Create a policy with the naming requirements and assign it to the scope of the subscription***

Azure Policy helps to enforce rules at the resource group, or subscription level. You can create a policy to validate the naming requirement and apply this policy on Subscription. All resources created under the subscription will be checked if the policy rule is fulfilled or not to enforce the users to follow the naming convention.
Reference*:* https://docs.microsoft.com/en-us/azure/governance/policy/overview

Other options are not correct.

Option ***Send out an email with the details of the naming conventions and hope it is followed*** is incorrect, as this will not enforce the users to follow the naming convention.

Option ***Give all other users read-only access to the subscription. Have all requests to create resources sent back to you, so the names can be reviewed while assigned to resources, and then create them*** is incorrect, you will become a bottleneck as all requests will come to you.

Option ***Use Azure Lock*** is incorrect - *Azure Lock* allows locking Azure Resources like subscription, resource group, or other resources to prevent other users in your organization from *accidentally deleting or modifying critical resources*.

Question 21: **Correct**

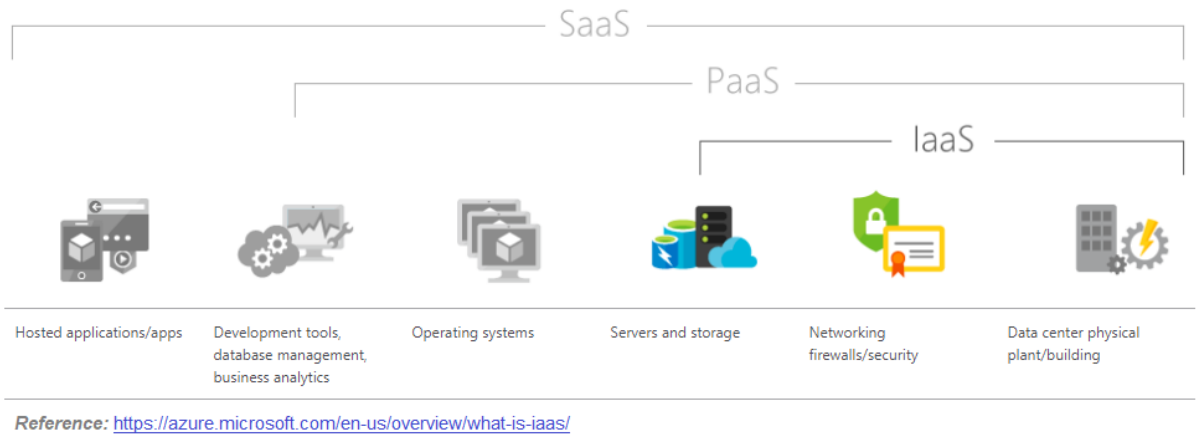
```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

Microsoft Skype, Outlook, Office 365 are examples of *[Infrastructure as a Service (IaaS)]* cloud service.

- **No change needed**
- **Function as a Service (FaaS)**
- **Software as a Service (SaaS)** **(Correct)**
- **Platform as a Service (PaaS)**

Explanation
Correct answer is option ***Software as a Service (SaaS)***

SaaS allows users to connect to and use cloud-based apps over the Internet. You are required to do a basic configuration to start using SaaS tools. Common examples are email, calendaring, and office tools (such as Microsoft Skype, Outlook, Microsoft Office 365).
Reference: https://azure.microsoft.com/en-us/overview/what-is-saas/



Other options are not correct.

Option ***No change needed*** ie. ***Infrastructure as a Service (IaaS)*** is incorrect - *IaaS* is an instant computing infrastructure, provisioned, and managed over the internet. IaaS requires you to manage the operating systems, applications hosted on it, network security, and other aspects.
Reference: https://azure.microsoft.com/en-us/overview/what-is-iaas/

Option ***Platform as a Service (PaaS)*** is incorrect - PaaS allows you to manage the applications and services you develop, and the cloud service provider typically manages everything else.
Reference: https://azure.microsoft.com/en-us/overview/what-is-paas/

Option ***Function as a Service (FaaS)*** is incorrect - *FaaS or Azure function* is a serverless implementation, provides a runtime environment to execute code, written in any language the user is comfortable. Based on the language chosen, an appropriate platform is provided to users for bringing their own code.
Reference: https://azure.microsoft.com/en-us/services/functions/

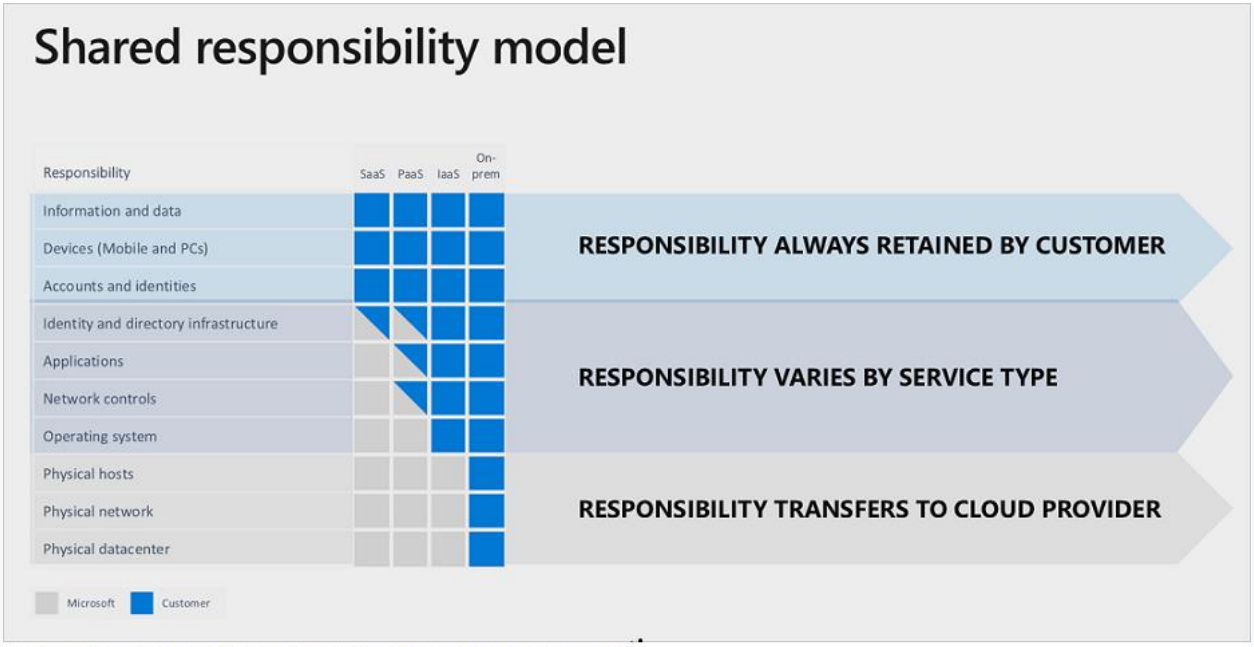
Question 22: **Incorrect**
Which of the following is the responsibility of Microsoft, while using Azure Virtual Machines?

Select the correct option.

- **Identity and Access Management** **(Incorrect)**
- **Application Controls**
- **Physical Security** **(Correct)**
- **Network Controls**

Explanation
Correct answer is option ***Physical Security***

Physical Security of Datacenters is the responsibility of Microsoft as per the ***Shared Responsibility model***.



Reference: https://docs.microsoft.com/en-us/azure/security/fundamentals/shared-responsibility

Other options are not correct as the following responsibilities are aligned with Azure customer, to manage a Virtual Machine, ie. IaaS:

- Identity and Access Management.
- Application Controls
- Network Controls

Reference: https://docs.microsoft.com/en-us/azure/security/fundamentals/shared-responsibility

Question 23: **Correct**
Your on-premises network contains an Active Directory with 100K user accounts. You are planning to migrate all network resources to Azure to decommission the on-premises data center. You need to recommend a solution to minimize the impact on users after the planned migration.

What should you recommend?

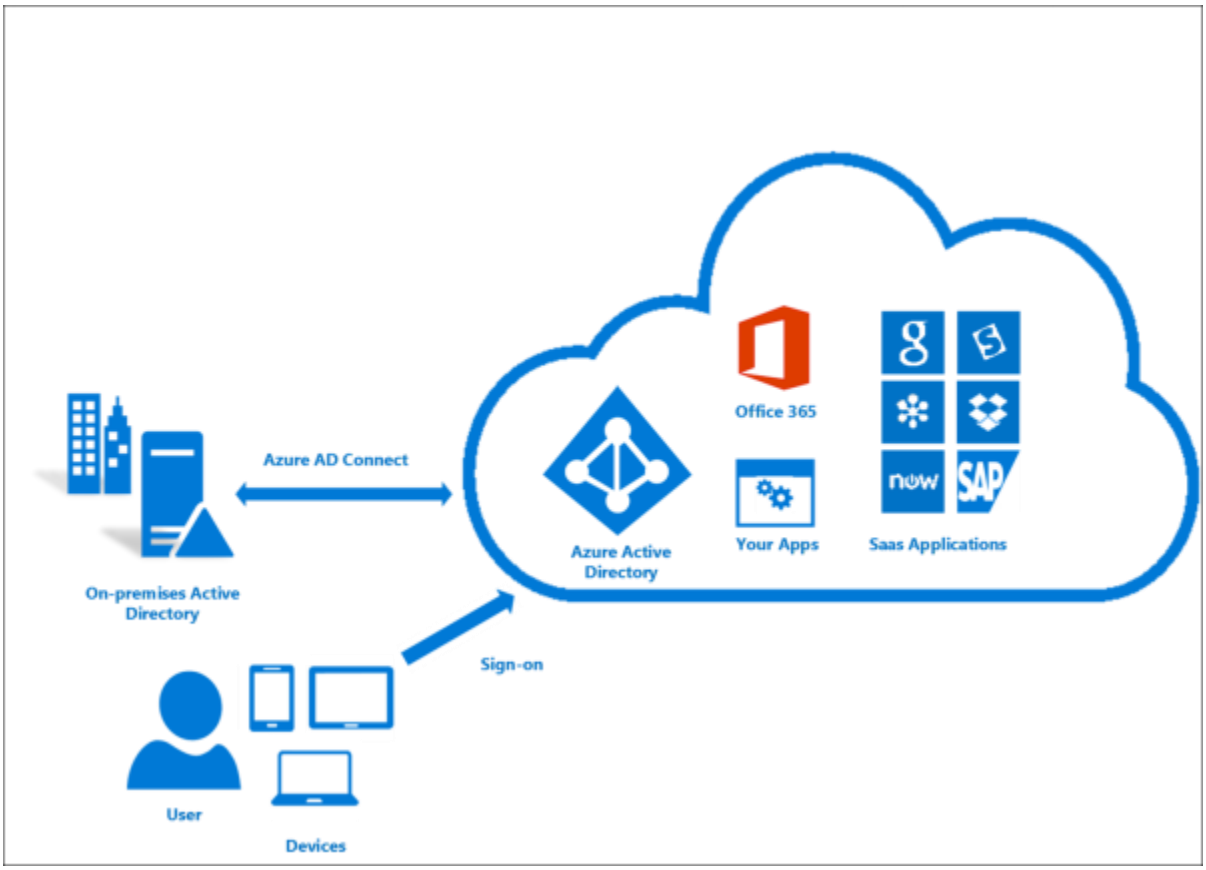
- **Create a guest user account in Azure Active Directory (Azure AD) for each user**
- **Sync all the Active Directory user accounts to Azure Active Directory (Azure AD)** **(Correct)**
- **Implement Azure Multi-Factor Authentication (MFA)**

- **Instruct all users to change their password**

Explanation
Correct answer is option ***Sync all the Active Directory user accounts to Azure Active Directory (Azure AD)***

Migrating users to Azure AD is the best solution with no impact, user data and credentials will also remain same.

Active Directory (AD) is a cloud-based identity and access management service. Azure AD helps employees of an organization sign in and access resources.



Reference: https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-whatis

Other options are not correct.

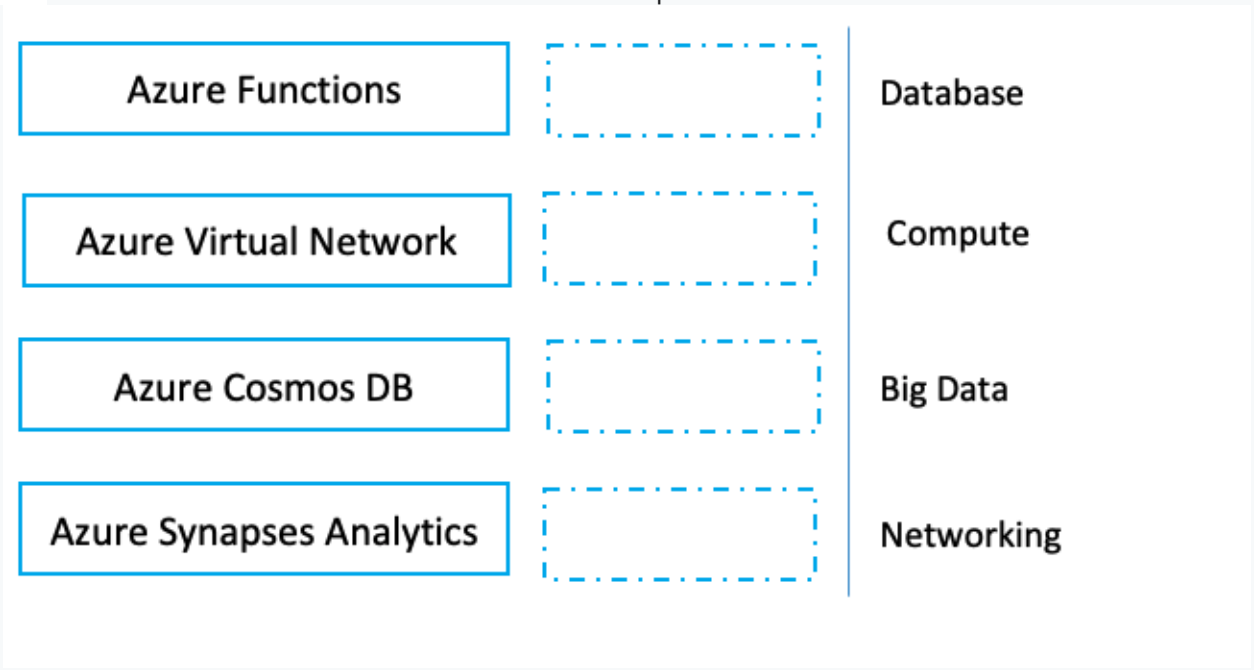
Option ***Instruct all users to change their password*** is incorrect - this step will not solve the problem, as users need to be migrated from on-premises to Azure.

Option ***Implement Azure Multi-Factor Authentication (MFA)*** is incorrect - MFA provides additional security for your identities by requiring two or more elements for full authentication. This option will not solve the problem of user migration.

Option ***Create a guest user account in Azure Active Directory (Azure AD) for each user*** is incorrect - this step will not solve the problem, as users need to be migrated from on-premises to Azure. Creating a guest account will not migrate existing users and their details.

Question 24: **Correct**

```
1. Exam notes:
2. - Drag the appropriate term from the column on the left to its description on
   the right.
3. - Udemy does not support drag & drop, but in the actual exam, you will be
   allowed.
4. - Each correct selection is worth one point in the main exam.
```



- ***Azure Functions*** - **Compute**
  Azure Virtual Network - **Big Data**
  Azure Cosmos DB - **Database**
  Azure Synapses Analytics - **Networking**
- ***Azure Functions*** - **Networking**
  Azure Virtual Network - **Big Data**
  Azure Cosmos DB - **Database**
  Azure Synapses Analytics - **Compute**
- ***Azure Functions*** - **Compute**
  Azure Virtual Network - **Networking**

***Azure Cosmos DB* - Database**
***Azure Synapses Analytics* - Big Data** **(Correct)**

- ***Azure Functions* - Compute**
***Azure Virtual Network* - Networking**
***Azure Cosmos DB* - Big Data**
***Azure Synapses Analytics* - Database**

Explanation
Correct answer is option
***Azure Functions* -** Compute
***Azure Virtual Network* -** Networking
***Azure Cosmos DB* -** Database
***Azure Synapses Analytics* -** Big Data

Detailed explanation:

Azure function is a serverless compute service, provides a runtime environment to execute code, written in any language the user is comfortable with. Based on the language chosen, an appropriate platform is provided to users for bringing their own code.
Reference: https://azure.microsoft.com/en-us/services/functions/

Azure Virtual Network (VNet) is a networking service that enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other.
Reference: https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-overview

Azure Cosmos DB is a schema-less database that enables you to elastically and independently scale throughput and storage across any number of Azure's geographic regions.
Reference: https://docs.microsoft.com/en-in/azure/cosmos-db/introduction

Azure Synapse is a big-data analytics service that accelerates time to insight across data warehouses and big data systems. Azure Synapse brings together the best of **SQL** technologies used in enterprise data warehousing, **Spark** technologies used for big data, **Pipelines** for data integration and ETL/ELT, and deep integration with other Azure services such as **Power BI**, **CosmosDB**, and **AzureML**.
Reference: https://docs.microsoft.com/en-us/azure/synapse-analytics/overview-what-is

Other options are not correct.

Question 25: **Incorrect**
Which of the following services enables you to store passwords and secrets in Azure so you can centrally manage them for your services and applications?

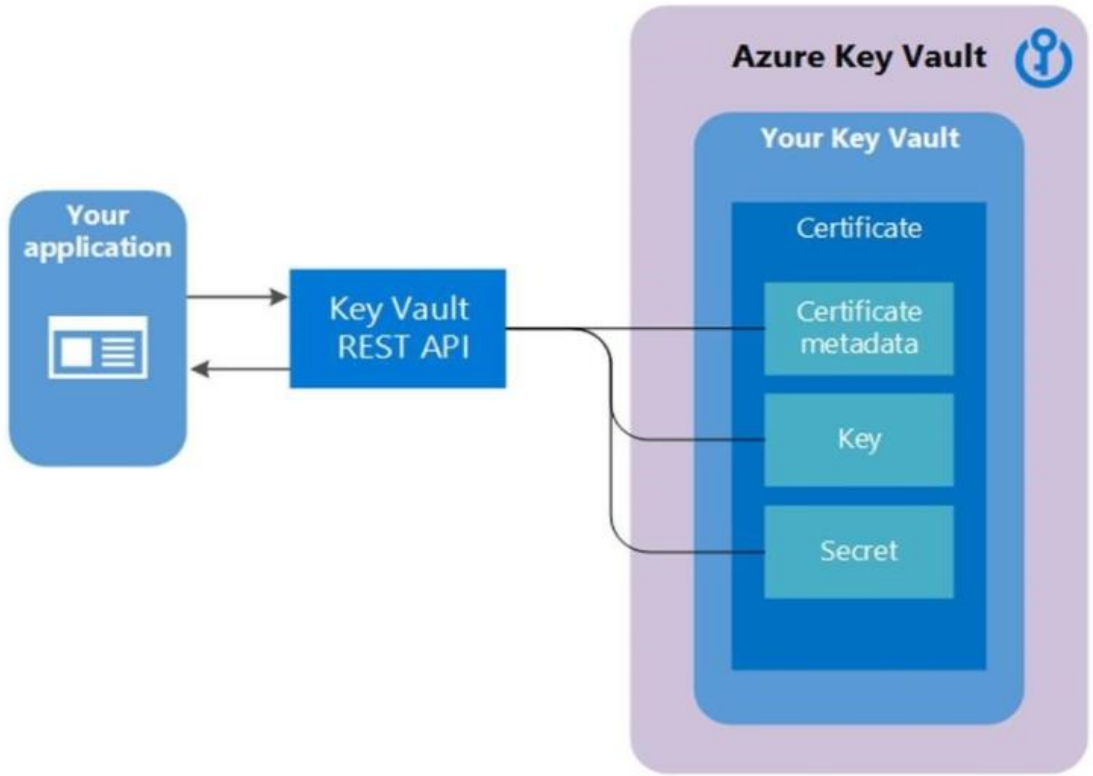
Select the correct option.

- **Azure Security Center**
- **Azure Advanced Threat Protection (ATP)** **(Incorrect)**
- **Azure Key Vault** **(Correct)**
- **Azure Information Protection (AIP)**

Explanation
Keywords: *store passwords, secrets => Azure Key Vault*

Correct answer is option ***Azure Key Vault***

Azure Key Vault is a centralized cloud service for storing your applications' passwords and secrets by keeping them in a single, central location and by providing secure access, permissions control, and access logging capabilities.
Reference: https://docs.microsoft.com/en-us/azure/key-vault/general/overview

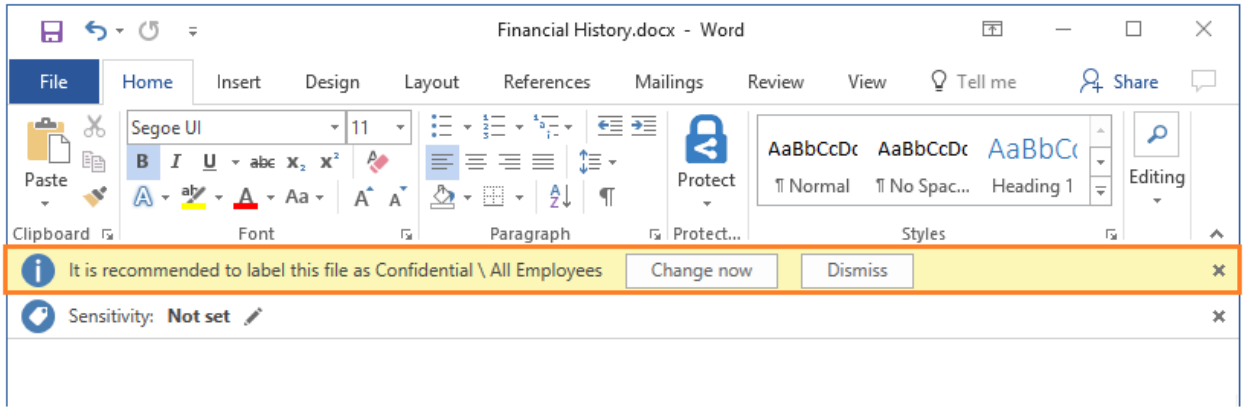


Other options are not correct.

Option ***Azure Security Center*** is incorrect - *Azure Security Center* is a monitoring service that provides threat protection across all of your services both in Azure and on-premises. It's not used for password or secrets management.
Reference: https://docs.microsoft.com/en-us/azure/security-center/security-center-introduction

Option ***Azure Advanced Threat Protection (ATP)*** is incorrect - *Azure Advanced Threat Protection* is a cloud-based security solution that identifies, detects, and helps you investigate advanced threats, compromised identities, and malicious insider actions directed at your organization. It's not used for password or secrets management.
Reference: https://docs.microsoft.com/en-us/azure-advanced-threat-protection/what-is

Option ***Azure Information Protection (AIP)*** is incorrect - *Azure Information Protection* is a cloud-based solution that helps organizations **classify and protect its documents and emails** by applying labels.
Reference: https://docs.microsoft.com/en-us/azure/information-protection/what-is-information-protection



Reference: https://docs.microsoft.com/en-us/learn/modules/review-security-tools-features/6-define-azure-information-protection

Question 26: **Incorrect**
Which is the most efficient way for the testing team to save costs on virtual machines on weekends when testers are not at work?

Select the correct option.

- **Delete the virtual machines before the weekend and create a new set the following week** **(Incorrect)**
- **Just let everything run. Azure bills you only for the CPU time that you use**
- **Deallocate virtual machines when they're not in use** **(Correct)**

Explanation
Correct answer is option ***Deallocate virtual machines when they're not in use***

The best way to save costs is to *Deallocate virtual machines when they're not in use.* When you deallocate virtual machines, the associated hard disks and data are still kept in Azure. But you don't pay for CPU or network consumption, which can help save costs.
Other options are not correct.

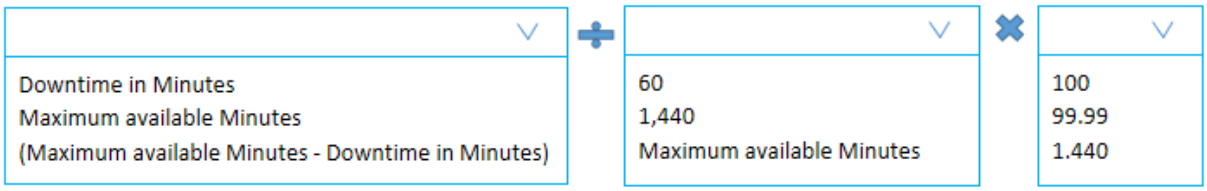
Option ***Delete the virtual machines before the weekend and create a new set the following week*** is incorrect - Its, not an efficient solution as you can delete your virtual machines when they're not in use, you also lose any associated hard disks. It can take some time to re-create the environment at the start of each week.

Option ***Just let everything run. Azure bills you only for the CPU time that you use*** is incorrect - Usage meters track not only CPU time but also network traffic and the number of disk operations, so you will keep paying for the weekend without using resources.

Question 27: **Incorrect**

```
1. Exam notes:
2. - This question requires you to select the correct option from the dropdown.
3. - Udemy does not support dropdown selection, but in the actual exam, you will
   be allowed to use dropdown.
4. - Each correct selection is worth one point in the main exam.
```

How should you calculate the monthly uptime percentage?



- **(Maximum Available Minutes - Downtime in Minutes) / 1,440 x 99.99** **(Incorrect)**
- **(Maximum Available Minutes - Downtime in Minutes) / Maximum Available Minutes x 100** **(Correct)**
- **Downtime in Minutes / 60 x 100**
- **Maximum Available Minutes / Maximum Available Minutes x 99.99.**

Explanation

Correct answer is option ***(Maximum Available Minutes - Downtime in Minutes) / Maximum Available Minutes x 100***

"*Monthly Uptime Percentage*" for service is calculated as *Maximum Available Minutes* less *Downtime* divided by *Maximum Available Minutes x 100*, where

- ***"Maximum Available Minutes"*** is the total accumulated minutes during a billing month.
- ***"Downtime"*** is the total accumulated minutes that are part of Maximum Available Minutes where a system is unavailable.

```
The Monthly Uptime Percentage is represented by the following formula:
Monthly Uptime % = (Maximum Available Minutes-Downtime) / Maximum Available Minutes x
100
```

Reference: https://azure.microsoft.com/en-au/support/legal/sla/cloud-services/v1_0/

Other options are not correct.

Question 28: **Incorrect**

```
1. Exam note:
2. - Each correct selection is worth one point in the main exam.
```

An Azure administrator plans to run a PowerShell script that creates Azure resources. You need to recommend which computer configuration to use to run the script.

Which four computers can run the script?

- ☑ **a computer that runs Linux and has the Azure CLI tools installed. (Incorrect)**
- ☑ **a computer that runs Windows 10 and has the Azure PowerShell module installed. (Correct)**
- ☑ **a computer that runs Chrome OS and uses Azure Cloud Shell. (Correct)**
- ☐ **a computer that runs Linux and has the Azure PowerShell module installed. (Correct)**
- ☐ **a computer that runs macOS and has PowerShell Core 6.0 installed. (Correct)**

Explanation

Microsoft released the new AZ PowerShell module, and since then, that is the recommended way to connect to Microsoft Azure using PowerShell. When using macOS and Linux, the PowerShell Core 6.x is the minimum requirement for that new module.

So Correct answers are:
- Option ***a computer that runs Windows 10 and has the Azure PowerShell module installed*** **-** With the PowerShell module installed on a Windows machine, you can create Azure resources.

- Option ***a computer that runs Linux and has the Azure PowerShell module installed*** **-** With the PowerShell module installed on a Linux machine, you can create Azure resources.

- Option ***a computer that runs Chrome OS and uses Azure Cloud Shell*** **-** from a chrome browser you can connect to Azure Portal and execute Azure PowerShell commands.

Option ***a computer that runs macOS and has PowerShell Core 6.0 installed*** is correct - Microsoft sees PowerShell Core as an evolution of PowerShell. The former is available as a cross-platform application, the latter only for Windows. The cross-platform nature of PowerShell Core means that scripts that you write will run on any supported operating system. You can write PowerShell Core scripts on Windows and use them on supported Mac OS X or Linux devices.

Other options are incorrect.

Option ***a computer that runs Linux and has the Azure CLI tools installed*** is incorrect - with Azure CLI you can't execute PowerShell script.

References:

- https://docs.microsoft.com/en-us/powershell/scripting/components/ise/how-to-write-and-run-scripts-in-the-windows-powershell-ise
- https://docs.microsoft.com/en-us/azure/cloud-shell/quickstart-powershell

Question 29: **Incorrect**

```
1. Exam notes:
2. - For each of the following statements, check the checkbox if the statement is
   correct.
3. - Each correct selection is worth one point in the main exam.
```

	Statements	Yes	No
1.	Virtual machines can be moved to the new Subscription.	○	○
2.	Virtual machines can be moved to the new subscription, only if they are all in the same resource group.	○	○
3.	Trial subscriptions can be converted to paid.	○	○
4.	Multiple subscriptions can not be created within an azure account.	○	○
5.	An Azure Resource group contains multiple Azure subscriptions.	○	○

- ☑ **Virtual machines can be moved to the new Subscription, only if they are all in the same resource group.**

  (Incorrect)

- ☐ **Virtual machines can be moved to the new Subscription.**

  (Correct)

- ☐ **Trial subscriptions can be converted to paid.**

  (Correct)

- ☑ **Multiple subscriptions cannot be created within an Azure account.**

  (Incorrect)

- ☑ **An Azure Resource group contains multiple Azure subscriptions.**

  (Incorrect)

Explanation
Statement ***Virtual machines can be moved to the new Subscription*** is correct - You can move VMs from one subscription to another subscription using the Azure dashboard or scripts.

Statement ***Trial subscriptions can be converted to paid*** is correct - Azure allows you to try its free services for 12 months & paid services for one month (with US$200 cap), then you can convert trial subscription to paid subscription.

Statement ***Virtual machines can be moved to the new Subscription, only if they are all in the same resource group*** is incorrect - A subscription can have multiple Resource Groups, and VMs are tagged with RG. You can move VMs from one subscription to another subscription using the Azure dashboard or scripts, does not matter if they are in the same RG or different RG.

Statement ***Multiple subscriptions cannot be created within an Azure account*** is incorrect - You can create any number of subscriptions per Azure account.
Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/azure-subscription-service-limits

Statement ***An Azure Resource group contains multiple Azure subscriptions*** is incorrect - Azure subscriptions actually contain multiple Resource groups.

Question 30: **Incorrect**
Your company hosts a billing application that is used by all the customers of the company. This application 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?

- **Elasticity (Correct)**
- **High Availability (Incorrect)**
- **Fault tolerance**
- **Economies of scale**

Explanation
Keywords: *unpredictable usage, cost-saving => Elasticity*

Correct answer is option ***Elasticity***

Elasticity is the ability to automatically or dynamically increase or decrease resources as needed. Elastic resources match the current needs and resources are added or removed automatically to meet future needs when it's needed.
Reference: https://azure.microsoft.com/en-us/overview/what-is-elastic-computing/

Other options are not correct.

Option ***Economies of scale*** is incorrect - *Economies of scale* is the ability to reduce costs and gain efficiency when operating at a larger scale in comparison to operating at a smaller scale. Cloud providers such as Microsoft, Google, and Amazon are large businesses and are able to leverage the benefits of economies of scale, and then pass those benefits on to their customers.
Reference: https://www.microsoft.com/en-au/microsoft-365/business-insights-ideas/resources/how-economies-of-scale-affect-small-businesses

Option ***Fault tolerance*** is incorrect - Fault tolerance is the ability to remain up and running even in the event of a component (or service) no longer functioning. Typically, redundancy is built into cloud services architecture, so if one component fails, a backup component takes its place, which requires you to invest extra cost.

Option ***High Availability*** is incorrect - High Availability is the ability to keep services up and running for long periods of time, with very little downtime. Workloads are typically spread across different virtual machines to gain high throughput, performance, and to

create redundancy in case a service is impacted due to an update or other event.
Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/availability

Question 31: **Correct**
You have an on-premises application that sends email notifications automatically based on a rule. You plan to migrate the application to Azure and need a serverless computing solution for the application.

What should you include in the recommendation?

- **Logic App** **(Correct)**
- **Azure Functions**
- **Azure Synapse**
- **Web App**

Explanation
Correct answer is option ***Logic App***

Azure Logic Apps is a serverless cloud service that helps you automate and orchestrate *tasks, business processes, and workflows*. You can use Logic Apps to send email notification based on predefined rules without writing code.
Reference: https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-overview

Other options are not correct.

Option ***Web App*** is incorrect - *Azure App Service* enables you to quickly and easily build web and mobile apps for any platform or device. Azure App Service is a Platform as a Service (PaaS) solution.
Reference: https://docs.microsoft.com/en-us/azure/app-service/overview

Option ***Azure Functions*** is incorrect - *Azure function* is a serverless implementation, provides a runtime environment to execute code, written in any language the user is comfortable. Based on the language chosen, an appropriate platform is provided to users for bringing their own code. You can send emails using Azure function, but it will need you to write and manage code, which can be achieved using Logic App configuration.
Reference: https://azure.microsoft.com/en-us/services/functions/

Option ***Azure Synapse*** is incorrect - *Azure Synapse Analytics* is a limitless analytics service that brings together enterprise data warehousing and big data analytics. It gives you the freedom to query data on your terms, using either serverless on-demand or provisioned resources - at scale.

Reference: https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-overview-what-is

Question 32: **Incorrect**
What Azure tool gives you the ability to manage multiple subscriptions into nested hierarchies?

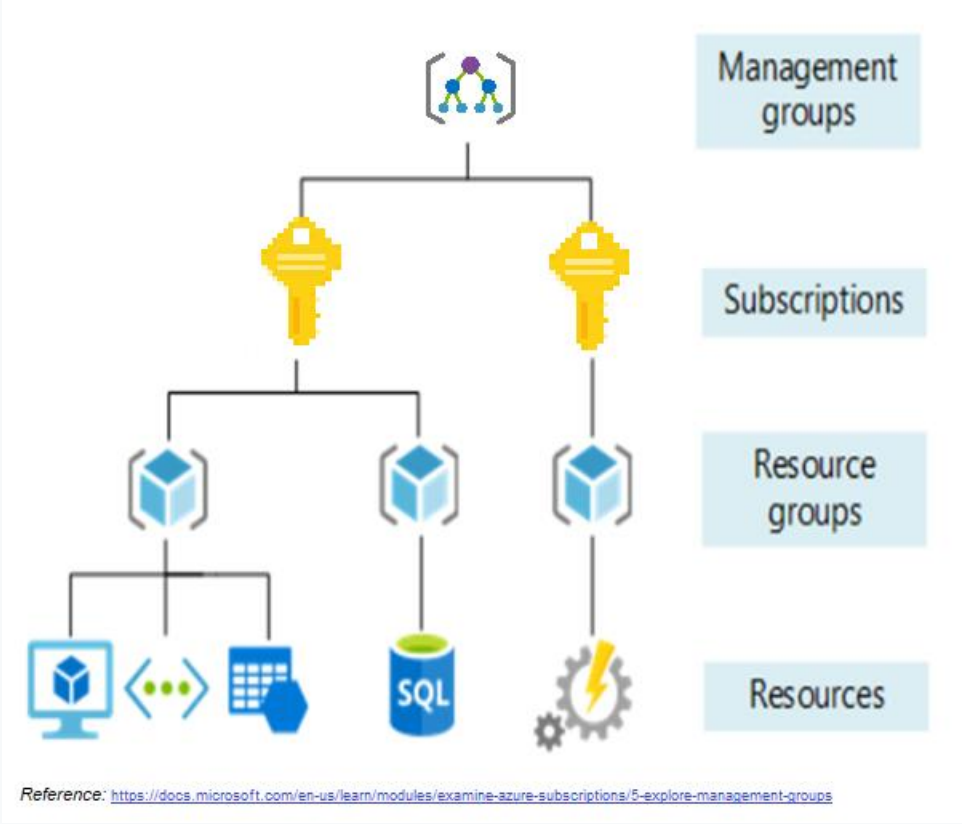
Select the correct option.

- **Management Groups** **(Correct)**
- **Role-Based Access Control (RBAC)**
- **Resource Groups** **(Incorrect)**
- **Azure Active Directory (AD)**

Explanation
Keywords: *manage, subscriptions, hierarchies => Management Groups*

Correct answer is option ***Management Groups***

Management groups are containers that help you manage access, policy, and compliance for *multiple subscriptions*. All subscriptions in a management group automatically inherit the conditions applied to the management group.
Further Details: https://docs.microsoft.com/en-us/azure/governance/management-groups/overview



Other options are not correct.

Option ***Resource Groups*** is incorrect - *Resource Group* allows you to logically group Azure Resources together. Resource groups are created under subscriptions (*see the diagram above*), so it can't be used to manage subscriptions.
Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/overview#resource-groups

Option ***Azure Active Directory (AD)*** is incorrect - *Azure Active Directory* is an access management service, to helps employees of an organization sign in and access resources. ADs are not used to manage subscriptions.
Reference: https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-whatis

Option ***Role-Based Access Control (RBAC)*** is incorrect - *Role-based access control* provides fine-grained access management for Azure resources, enabling you to grant users only the rights they need to perform their jobs. It's not used to manage subscriptions.
Reference: https://docs.microsoft.com/en-us/azure/role-based-access-control/overview

Question 33: **Correct**
While away from the office on a business trip, there is a need to restart a virtual machine and one of the Azure web apps. You only have access to your Android phone.

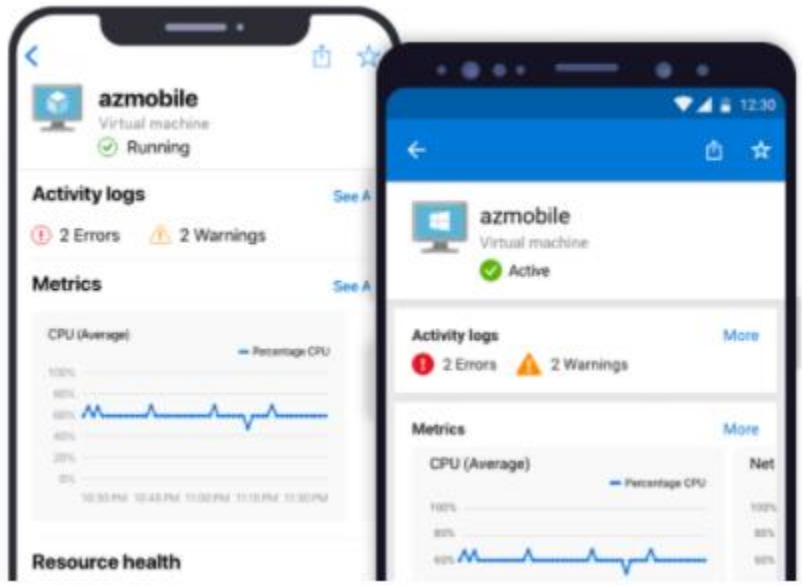
What tool will let you connect to Azure and restart these two items?

- **Azure Bash**
- **Azure PowerShell**
- **Azure Mobile App** **(Correct)**
- **Azure CLI**

Explanation
Keywords: *access, mobile phone => Azure Mobile App*

Correct answer is option ***Azure Mobile App***

Azure Mobile App keeps you connected to your Azure resources - anytime, anywhere. While it's technically possible to open the Azure portal in your browser on your phone, it is not a better option than using the mobile app. You can also run ad hoc Azure CLI or PowerShell commands from the Azure mobile app.
Reference: https://azure.microsoft.com/en-us/features/azure-portal/mobile-app/

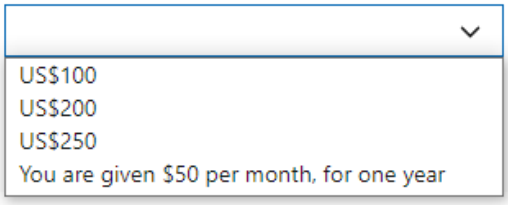


Other Options ***Azure CLI, PowerShell & Bash*** *are not correct as you can't use these tools from mobile devices without Azure mobile app.*

Question 34: **Correct**

```
1. Exam notes:
2. - This question requires you to select the correct option from the dropdown.
3. - Udemy does not support dropdown selection, but in the actual exam, you will
   be allowed to use dropdown.
```

When you first create an Azure Free account, the default amount of credit is

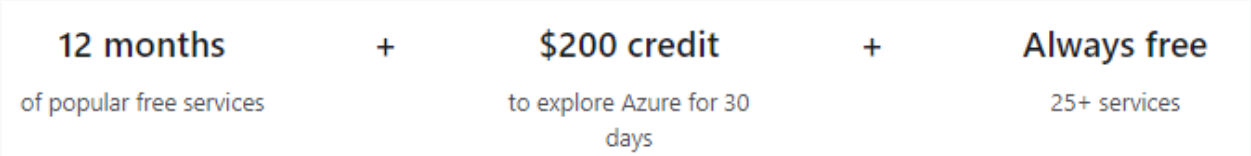


- **US$200 (Correct)**
- **US$250**
- **You are given $50 per month, for one year towards Azure services**
- **US$100**

Explanation

Correct answer is option ***US$200***

With your Azure free account, you get all of this and you won't be charged until you choose to upgrade.



Reference: https://azure.microsoft.com/en-us/free/

Other options are not correct.

Question 35: **Correct**
Which of the following is an optimized storage service for storing massive amounts of unstructured data, such as videos and images?

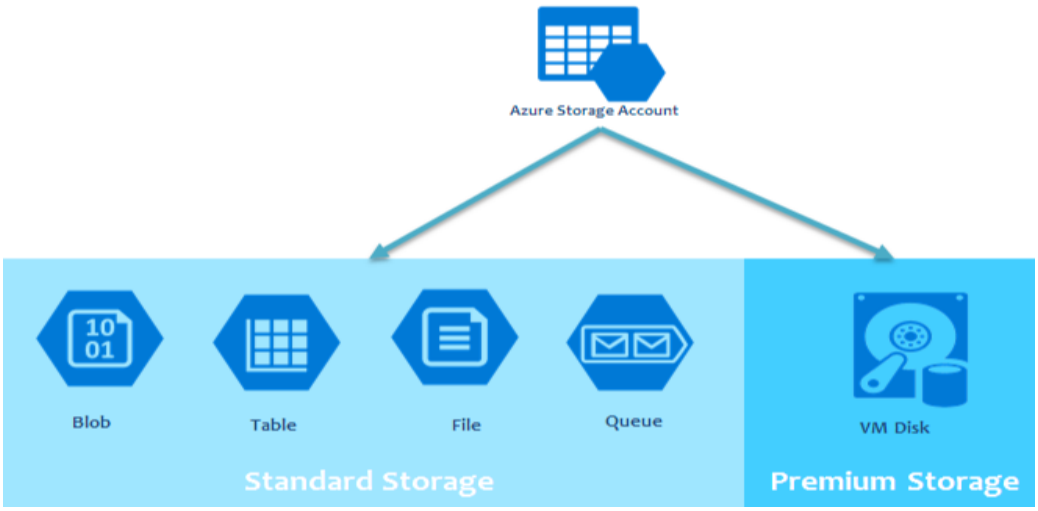
Select the correct option.

- **Queues**
- **Tables**
- **Files**
- **Blobs** **(Correct)**

Explanation
Keywords: *storing, unstructured data => blobs*

Correct answer is option ***Blobs***

Azure Blob storage is Microsoft's object storage solution for the cloud, optimized for storing massive amounts of unstructured data, such as text, videos, images, or other binary data. Blob storage is ideal for:
o Serving images or documents directly to a browser.
o Storing files for distributed access.
o Streaming video and audio.
o Storing data for backup and restore disaster recovery, and archiving.
o Storing data for analysis by an on-premises or Azure-hosted service.
Reference: https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blobs-introduction



Other options are not correct.

Option ***Files*** is incorrect - *Azure Files* enables you to set up highly available network file shares that can be accessed by using the standard Server Message Block (SMB) protocol. That means that multiple VMs can share the same files with both read and write access.
Reference: https://azure.microsoft.com/en-in/services/storage/files/

Option ***Queues*** is incorrect - *Azure Queue* service is used to store and retrieve millions of messages. Queues are generally used to store lists of messages to be processed asynchronously. Azure Queue is the simplest way to implement decoupled solutions.
Reference: https://docs.microsoft.com/en-us/azure/storage/queues/storage-queues-introduction

Option ***Tables*** is incorrect - *Azure Table storage* stores large amounts of structured, non-relational data.
Reference: https://azure.microsoft.com/en-us/services/storage/tables/

Question 36: **Correct**

```
1. Exam notes:
2. - For each of the following statements, check the checkbox if the statement is
   correct.
3. - Each correct selection is worth one point in the main exam.
```

Statements	Yes	No
1. Building a data center infrastructure is an example of operational expenditure (OpEx) costs.	○	○
2. Monthly salaries for technical personnel are an example of operational expenditure (OpEx) costs.	○	○
3. Leasing software is an example of operational expenditure (OpEx) costs.	○	○

- ☑ **Monthly salaries for technical personnel are an example of operational expenditure (OpEx) costs. (Correct)**
- ☐ **Building a data center infrastructure is an example of operational expenditure (OpEx) costs.**
- ☑ **Leasing software is an example of operational expenditure (OpEx) costs. (Correct)**

Explanation

Statement ***Monthly salaries for technical personnel are an example of operational expenditure (OpEx) costs*** is correct - Monthly salary is an ongoing expense and is a correct example of *operational expenditure (OpEx).*

Statement ***Leasing software is an example of operational expenditure (OpEx) costs*** is correct - If you purchased software as a one-time purchase, that would be CapEx, but leasing software is ongoing Software licensing and falls under *operational expenditure (OpEx).*

Statement ***Building a data center infrastructure is an example of operational expenditure (OpEx) costs*** is incorrect - Building a data center is a *Capital expenditure (CapEx)* as you have to spend money upfront.

Operational Expenditure (OpEx) is spending money on services or products now and being billed for them now. You can deduct this expense in the same year you spend it. There is no upfront cost, as you pay for a service or product as you use it. The following are different costs considered as OpEx:

o Software licensing.
o Hosting expenses.
o Electric bills.
o Real estate rentals.
o Cooling expenses.
o Permanent or Temporary staff required for operations.
o Equipment rentals.
o Replacement parts.
o Maintenance contracts.
o Repair services.
o Business continuity and disaster recovery (BCDR) services.
o Other expenses that don't require capital expense approvals.
Reference: https://docs.microsoft.com/en-us/azure/architecture/cloud-adoption/business-strategy/financial-models

---

Question 37: **Incorrect**

```
1. Exam notes:
2. - For each of the following statements, check the checkbox if the statement is
   correct.
3. - Each correct selection is worth one point in the main exam.
```

	Statements	Yes	No
1.	Availability zones can be implemented in all Azure regions.	○	○
2.	Only virtual machines that run Windows server can be created in availability zones.	○	○
3.	Availability zones are used to replicate data and applications to multiple regions.	○	○

- ☑ **Availability zones can be implemented in all Azure regions. (Incorrect)**
- ☐ **All statements are incorrect. (Correct)**
- ☑ **Only virtual machines that run Windows servers can be created in availability zones. (Incorrect)**
- ☑ **Availability zones are used to replicate data and applications to multiple regions. (Incorrect)**

Explanation
Statement ***Availability zones can be implemented in all Azure regions*** is incorrect -
Not all Azure Regions support availability zones.

Statement ***Only virtual machines that run Windows servers can be created in availability zones*** is incorrect -
You are allowed to use Windows/Linux/macOs on Virtual machines in Availability zones.

Statement ***Availability zones are used to replicate data and applications to multiple regions*** is incorrect -
Availability Zones are unique physical locations within a single Azure region.

Question 38: **Incorrect**
You are planning the deployment of two Azure Virtual Machines (VMs) for a short project. You need to allow your IT technician assistants, the ability to only start and stop virtual machines related to the project.

Which solution represents the least amount of administrative effort?

- **As each new VM is created, assign a role** **(Incorrect)**
- **Deploy VMs to one Resource Group, assign the role to the Resource Group** **(Correct)**
- **Create multiple Azure Subscriptions, deploy each VM into its own Subscription**
- **Assign the role to the entire Azure Subscription**

Explanation
Keywords: *permission, set of resources, less effort => RBAC on Resource Group*

Correct answer is option ***Deploy VMs to one Resource Group, assign the role to the Resource Group***.

This is the best solution from the provided options because deploying VMs to one resource group and assigning roles to that resource group will only impact VMs, on which additional control is needed, and also only need to maintain role at the Resource Group level. This solution will decrease the administrative efforts.

Other options are not correct.

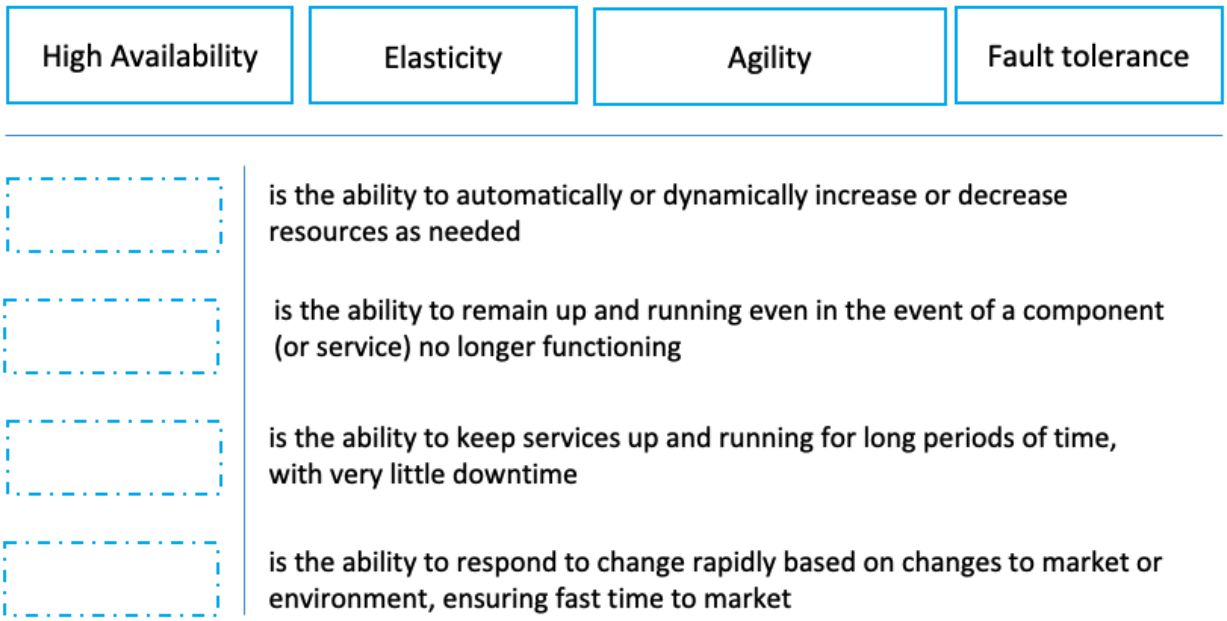
Option ***Assign the role to the entire Azure Subscription*** is incorrect - will enforce this rule on all resources created under subscription, which is not the purpose, as we need additional control on VMs only.

Option ***As each new VM is created, assign a role*** is incorrect - Resource level role assignment is not a good solution as this will require greater administrative effort every time a new VM is created.

Option ***Create multiple Azure Subscriptions, deploy each VM into its own Subscription*** is incorrect - Multiple subscriptions, one for each VM, will require more administrative effort, so this is not a good option.

Question 39: **Incorrect**

```
1. Exam notes:
2. - Drag the appropriate term from the row on the top to its description on the
   bottom.
3. - Udemy does not support drag & drop, but in the actual exam, you will be
   allowed.
4. - Each correct selection is worth one point in the main exam.
```



- ○ ***High Availability*** **- is the ability to keep services up and running for long periods of time, with very little downtime**
  Elasticity **- is the ability to automatically or dynamically increase or decrease resources as needed**
  Agility **- is the ability to respond to change rapidly based on changes to market or environment, ensuring fast time to market**
  Fault tolerance **- is the ability to remain up and running even in the event of a component (or service) no longer functioning** **(Correct)**
- ◉ ***High Availability*** **- is the ability to remain up and running even in the event of a component (or service) no longer functioning**
  Elasticity **- is the ability to automatically or dynamically increase or decrease resources as needed**
  Agility **- is the ability to respond to change rapidly based on changes to market or environment, ensuring fast time to market**
  Fault tolerance **- is the ability to keep services up and running for long periods of time, with very little downtime** **(Incorrect)**
- ○ ***High Availability*** **- is the ability to keep services up and running for long periods of time, with very little downtime**

***Elasticity* - is the ability to respond to change rapidly based on changes to market or environment, ensuring fast time to market**
***Agility* - is the ability to automatically or dynamically increase or decrease resources as needed**
***Fault tolerance* - is the ability to remain up and running even in the event of a component (or service) no longer functioning**

- ***High Availability* - is the ability to remain up and running even in the event of a component (or service) no longer functioning**
***Elasticity* - is the ability to respond to change rapidly based on changes to market or environment, ensuring fast time to market**
***Agility* - is the ability to automatically or dynamically increase or decrease resources as needed**
***Fault tolerance* - is the ability to keep services up and running for long periods of time, with very little downtime**

Explanation
Correct answer is option
High Availability - is the ability to keep services up and running for long periods of time, with very little downtime
Elasticity - is the ability to automatically or dynamically increase or decrease resources as needed
Agility - is the ability to respond to change rapidly based on changes to market or environment, ensuring fast time to market
Fault tolerance - is the ability to remain up and running even in the event of a component (or service) no longer functioning

Detailed explanation:

High Availability is the ability to keep services up and running for long periods of time, with very little downtime. Workloads are typically spread across different virtual machines to gain high throughput, performance, and to create redundancy in case a service is impacted due to an update or other event.
Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/availability

Elasticity is the ability to automatically or dynamically increase or decrease resources as needed. Elastic resources match the current needs and resources are added or removed automatically to meet future needs when it's needed.
Reference: https://azure.microsoft.com/en-us/overview/what-is-elastic-computing/

Agility is the ability to respond to change rapidly based on changes to market or environment, ensuring fast time to market. Cloud services can allocate and deallocate resources quickly.
Reference: https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/strategy/business-outcomes/agility-outcomes

Fault tolerance is the ability to remain up and running even in the event of a component (or service) no longer functioning. Typically, redundancy is built into cloud services architecture, so if one component fails, a backup component takes its place. This type of service is said to be tolerant of faults.

Other options are not correct.

Question 40: **Incorrect**

```
1. Exam note:
2. - Each correct selection is worth one point in the main exam.
```

What types of DDoS protection services does Azure provide?

Select two correct options.

- ☑ **Standard (Correct)**
- ☐ **Developer**
- ☑ **Basic (Correct)**
- ☑ **Premium (Incorrect)**
- ☐ **Advanced**

Explanation
Keywords: *DDoS service => Standard, Basic*

Correct answers are option ***Basic*** & option ***Standard***

DDoS attacks attempt to overwhelm and exhaust an application's resources, making the application slow or unresponsive to legitimate users. Azure DDoS Protection provides Basic and Standard service plans.
Reference: https://docs.microsoft.com/en-us/azure/virtual-network/ddos-protection-

overview

Feature	DDoS Protection Basic	DDoS Protection Standard
Active traffic monitoring & always on detection	●	●
Automatic attack mitigations	●	●
Availability guarantee		●
Application based mitigation policies		●
Metrics & alerts		●
Mitigation reports		●
Mitigation flow logs		●
Mitigation policy customizations		●
DDoS rapid response support		●

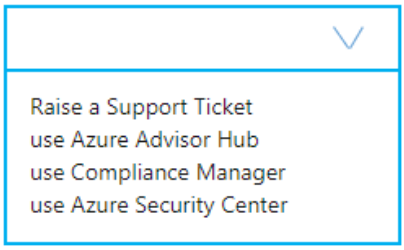
Reference: https://docs.microsoft.com/en-us/azure/virtual-network/ddos-protection-overview

Other options are not correct as DDoS does not provide Developer, Advance & Premium service options.

Question 41: **Incorrect**

```
1. Exam notes:
2. - This question requires you to select the correct option from the dropdown.
3. - Udemy does not support dropdown selection, but in the actual exam, you will
   be allowed to use dropdown.
```

To evaluate whether Azure meets your company's regulatory requirements, you should



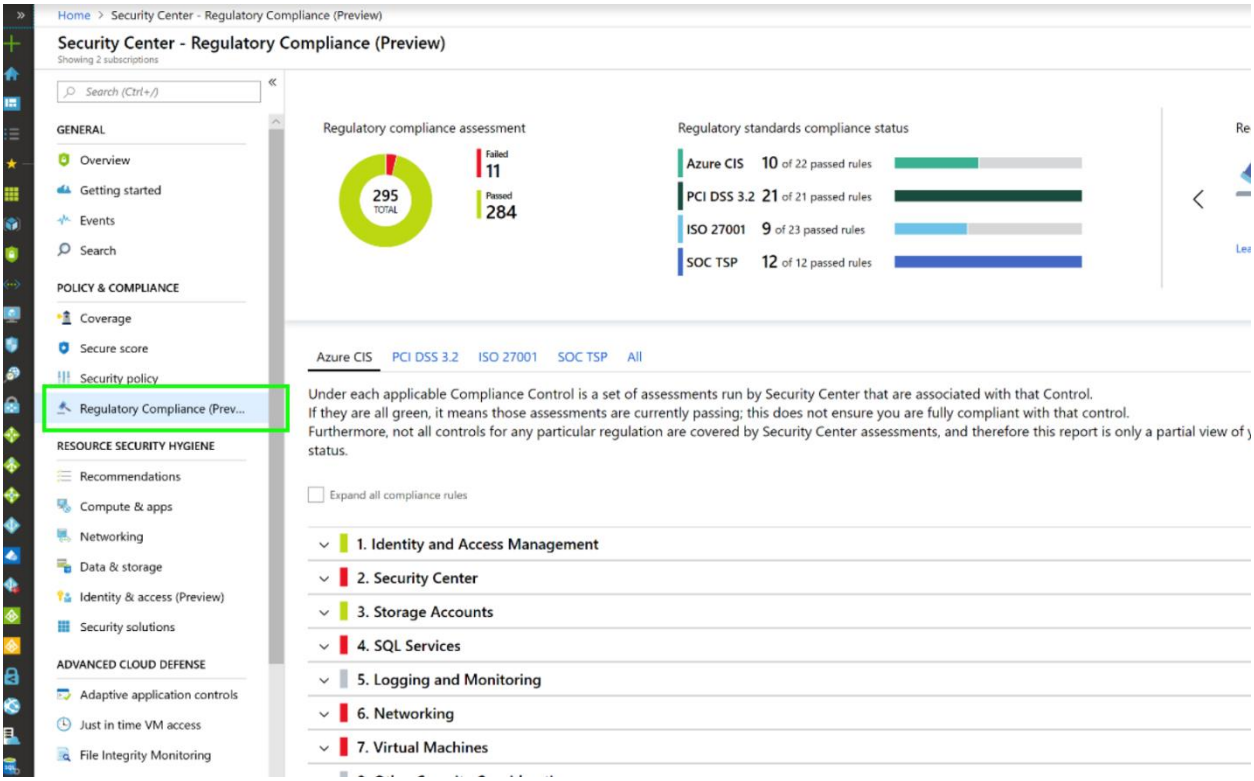
- Raise a Support Ticket
- use Compliance Manager
- use Azure Advisor Hub (Incorrect)
- use Azure Security Center (Correct)

Explanation

Keywords: *regulatory requirements => Regulatory compliance in Security center*

Correct answer is option ***use Azure Security Center***

The regulatory compliance dashboard under Security Center provides insight into your compliance posture for a set of supported standards and regulations, based on continuous assessments of your Azure environment.



Reference: https://azure.microsoft.com/en-au/blog/regulatory-compliance-dashboard-in-azure-security-center-now-available/

Other options are not correct.

Option ***use Azure Advisor Hub*** is incorrect - *Advisor Hub* provides recommendations on ***high availability, security, performance, and cost***. It does not provide recommendations for an organization's regulatory compliance requirements.
Reference: https://docs.microsoft.com/en-us/azure/advisor/advisor-get-started

Option ***Raise a Support Ticket*** is incorrect - *Support ticket* is not required, as *Azure environment regulatory status* can be checked with the *Compliance Manager from the Security Trust Portal.*

Option ***use Compliance Manager*** is incorrect - *Compliance Manager* is a dashboard within the Trust Portal that enables you to track, assign, and verify your organization's compliance activities.

Question 42: **Incorrect**
Your company has 10 offices. You plan to generate several billing reports from the Azure portal. Each report should contain the Azure resource utilization of each office.

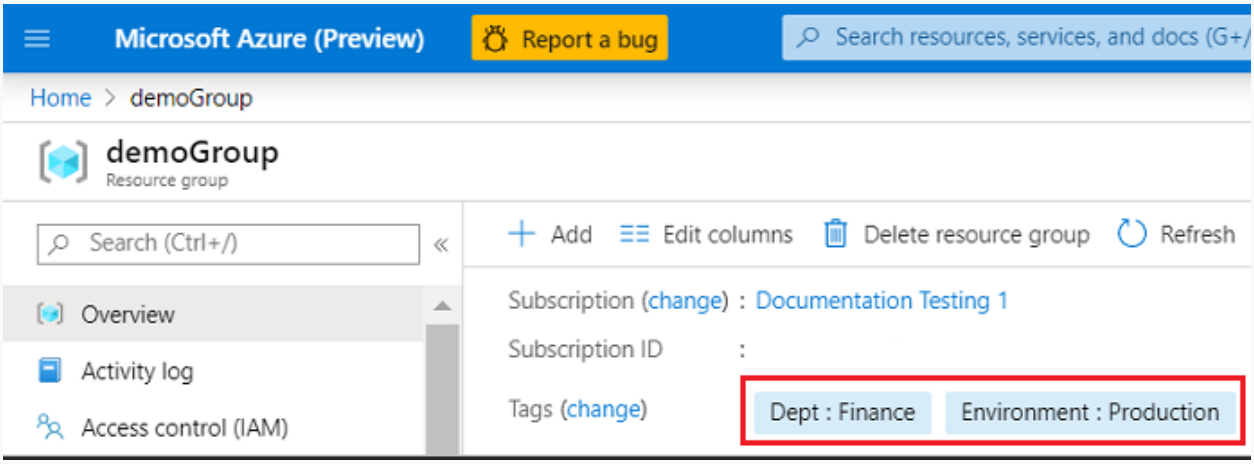
Which Azure Resource Manager feature should you use before you generate the reports?

- **Templates** **(Incorrect)**
- **Policies**
- **Locks**
- **Tags** **(Correct)**

Explanation
Keywords: *resources, each office => Tags*

Correct answer is option ***Tags***.

Tags are used to logically organize Azure resources, resource groups, and subscriptions into a taxonomy. You can apply the office name "City" and the value "Sydney" or "Brisbane" to all the resources in production. This tag can be used to generate billing reports per office basis from the Azure portal.



Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/tag-resources

Other options are not correct.

Option ***Templates*** is incorrect - Azure *Resource Manager (ARM) Templates* are JSON files that define the infrastructure and configuration for your project. Templates do not help in categorizing resources and generating bills based on office location.

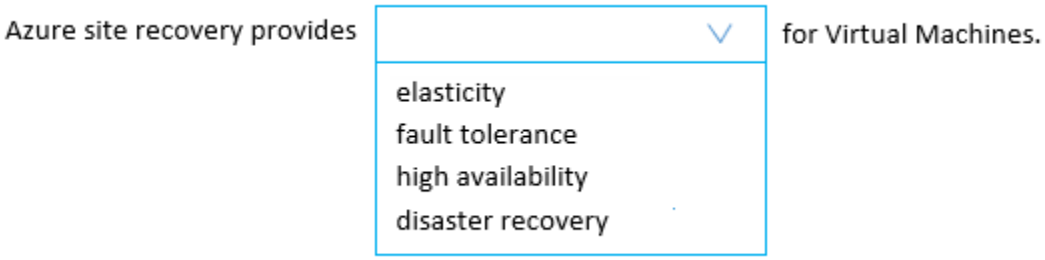
Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/overview

Option ***Locks*** is incorrect - Azure Lock allows us to lock Azure Resources like subscription, resource group, or other resources to prevent other users in your organization from *accidentally deleting or modifying critical resources*. Locks do not help in categorizing resources and generating bills based on office location.
Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources

Option ***Policies*** is incorrect - Azure Policy helps to enforce rules at the resource group, or subscription level. The policy does not help in categorizing resources and generating bills based on office location.
Reference: https://docs.microsoft.com/en-us/azure/governance/policy/overview

Question 43: **Incorrect**

```
1. Exam notes:
2. - This question requires you to select the correct option from the dropdown.
3. - Udemy does not support dropdown selection, but in the actual exam, you will
   be allowed to use dropdown.
```



- **disaster recovery** **(Correct)**
- **elasticity**
- **high availability** **(Incorrect)**
- **fault tolerance**

Explanation
Keywords: *Azure Site Recovery => restore site from backup => disaster recovery*

Correct answer is option ***disaster recovery***.

Site Recovery provides ***disaster recovery*** 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. When an outage occurs at your primary site, you failover to the secondary location, and access apps

from there. After the primary location is running again, you can fail back to it. Site recovery is considered as DRaaS.
Reference: https://docs.microsoft.com/en-us/azure/site-recovery/site-recovery-overview

Other options are not correct.

Option ***elasticity*** is incorrect - ***Elasticity*** is the ability to automatically or dynamically increase or decrease resources as needed. Site recovery does not provide elasticity.
Reference: https://azure.microsoft.com/en-us/overview/what-is-elastic-computing/

Option ***fault tolerance*** is incorrect - Fault tolerance is the ability to remain up and running even in the event of a component (or service) no longer functioning. Site Recovery is a Disaster Recovery as a Service (DRaaS) so fault tolerance is not a correct option.

Option ***High Availability*** is incorrect - ***High availability (HA)*** is the ability of a system to operate continuously without failing for a designated period of time.

Question 44: **Correct**

```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

[*Availability Zones*] are used to ensure availability during maintenance events.

- **No change needed**
- **Azure Load Balancers**
- **Availability Sets** **(Correct)**
- **Scale Sets**

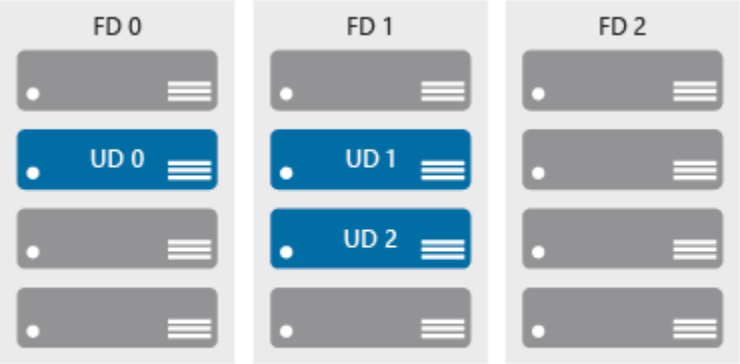
Explanation
Keywords: *availability during maintenance => Availability Set's Update Domain*

Correct answer is option ***Availability Sets***

Availability Set ensures your application remains online if a high-impact maintenance event is required, or if a hardware failure occurs with 99.95% Azure SLA. Availability sets are made up of **Update domains (UD)** and **Fault domains (FD)**.
o ***Update domains*** are a logical section of the data center, and they are implemented with software and logic. When a maintenance event occurs (such as a performance update or critical security patch applied to the host), the update is sequenced through

update domains.

o ***Fault domains*** provide for the physical separation of your workload across different hardware in the datacenter. This includes power, cooling, and network hardware that supports the physical servers located in server racks. In the event the hardware that supports a server rack becomes unavailable, only that rack of servers would be affected by the outage.



Reference: https://docs.microsoft.com/en-us/learn/modules/discuss-core-azure-architectural-components/6-define-availability-sets

Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/windows/tutorial-availability-sets

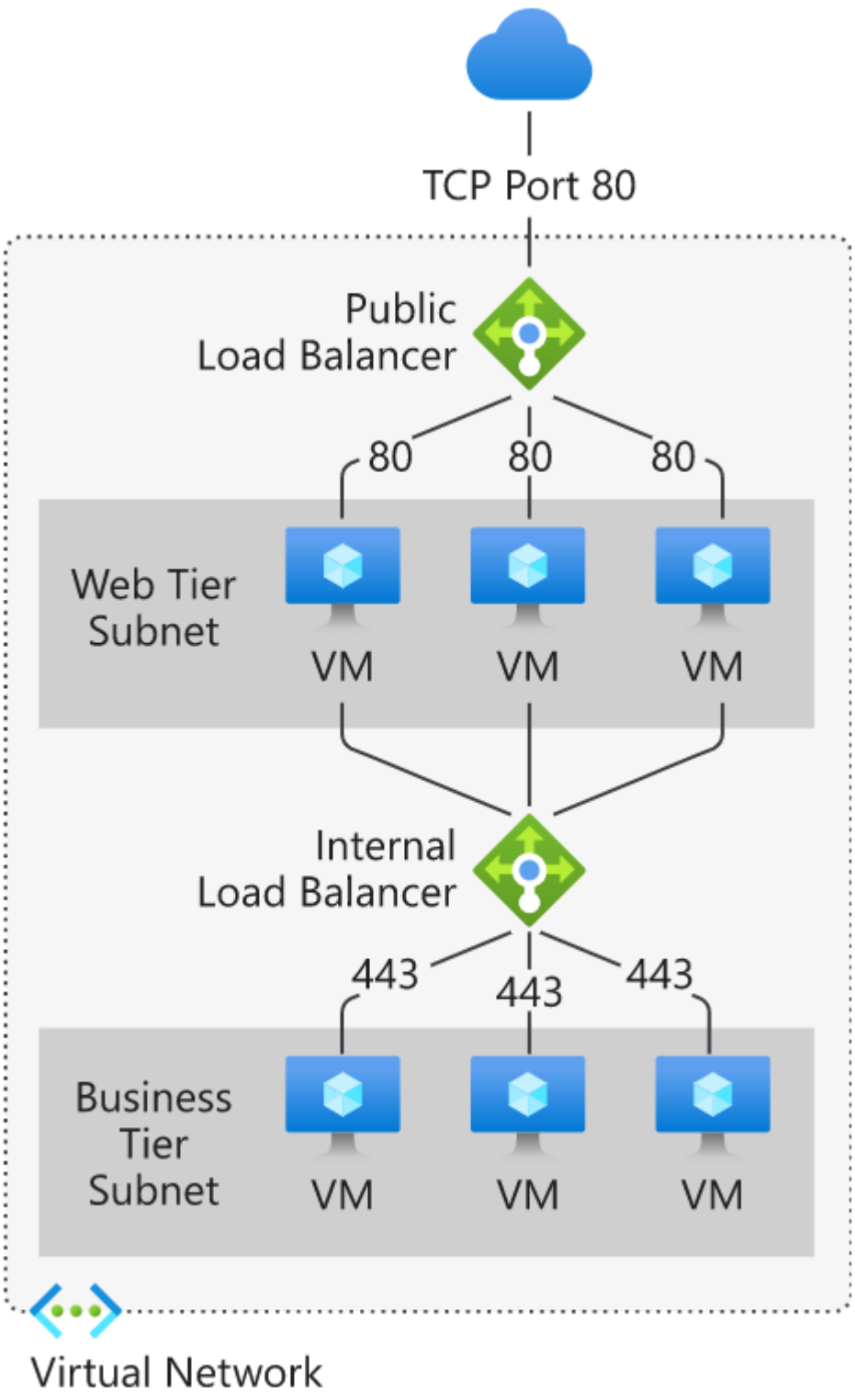
Other Options **Availability Zone, Scale Sets & Load Balancer** also provide high availability but not at the event maintenance.

Option ***No change needed*** i.e., **Availability Zones** is incorrect - *Availability Zones* are physically separate locations within an Azure region that use availability sets to provide additional fault tolerance. AZs are used to avoid outages at datacenter level.
Reference: https://docs.microsoft.com/en-us/azure/availability-zones/az-overview

Option **Scale Sets** is incorrect - *Azure virtual machine scale sets* let you create and manage a group of load-balanced VMs. The number of VM instances can automatically increase or decrease in response to demand.
Reference: https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/overview

Option **Azure Load Balancers** is incorrect - *Load Balancer* provides high availability by distributing incoming traffic among healthy Virtual Machines. You can use a Load Balancer with incoming internet traffic or internal traffic across Azure services.

Reference: https://docs.microsoft.com/en-us/azure/virtual-machines/windows/tutorial-load-balancer



Question 45: **Incorrect**
You need to create a human-computer interface that uses natural language to answer customer questions.

Which product option should you eliminate as a candidate?

- **Azure Machine Learning** **(Correct)**
- **Azure Bot Service**
- **Azure Cognitive Services** **(Incorrect)**

Explanation
Correct answer is option ***Azure Machine Learning***

As all answers are correct here, so you have to make a decision which correct answer should be eliminated, you can make this choice based on KPIs like cost and time, So Azure Machine Learning could be used to create a natural language model, it would likely be cost and time prohibitive. It should be eliminated as a candidate in comparison to Bot & Cognitive Services.

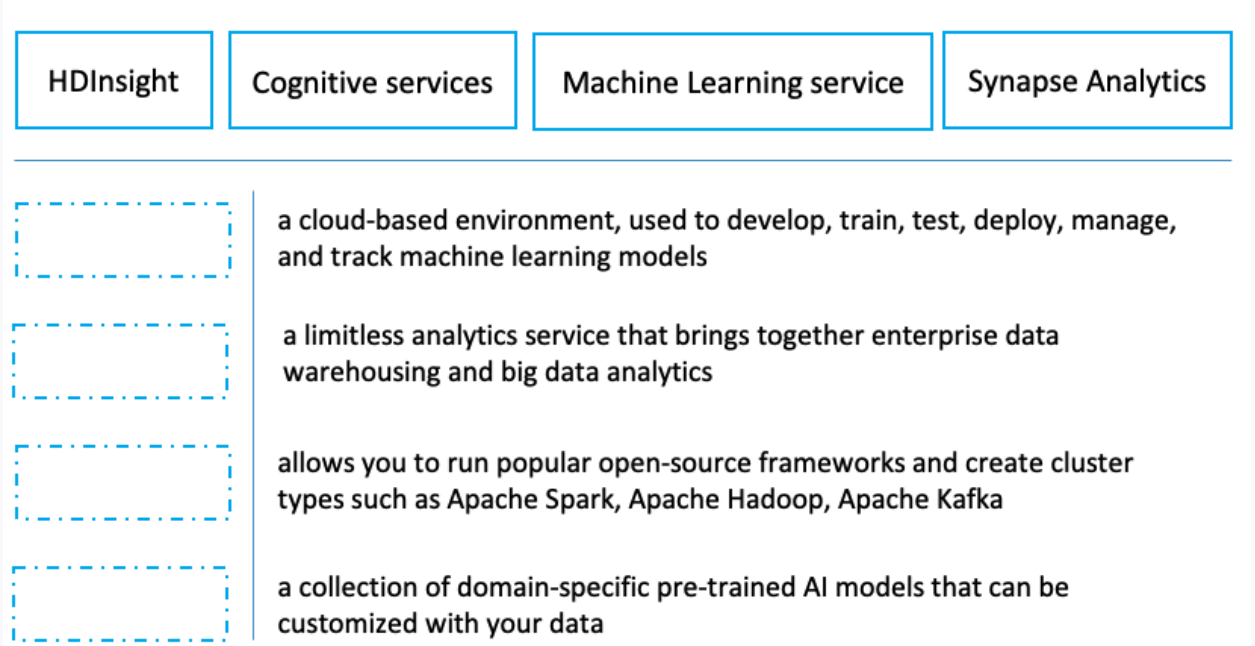
Other options are not correct.

Option ***Azure Bot Service*** is incorrect - Azure Bot Service creates virtual agent solutions that utilize natural language. It should not be eliminated as a candidate.

Option ***Azure Cognitive Services*** is incorrect - Azure Cognitive Services provides natural language services. It should not be eliminated as a candidate.

Question 46: **Correct**

```
1. Exam notes:
2. - Drag the appropriate term from the row on the top to its description on the
   bottom.
3. - Udemy does not support drag & drop, but in the actual exam, you will be
   allowed.
4. - Each correct selection is worth one point in the main exam.
```



- ***HDInsight*** **- allows you to run popular open-source frameworks and create cluster types such as Apache Spark, Apache Hadoop, Apache Kafka**
  Cognitive services **- a collection of domain-specific pre-trained AI models that can be customized with your data**
  Machine Learning service **- a limitless analytics service that brings together enterprise data warehousing and big data analytics**
  Synapse Analytics **- a cloud-based environment, used to develop, train, test, deploy, manage, and track machine learning models**
- ***HDInsight*** **- a collection of domain-specific pre-trained AI models that can be customized with your data**
  Cognitive services **- allows you to run popular open-source frameworks and create cluster types such as Apache Spark, Apache Hadoop, Apache Kafka**
  Machine Learning service **- a limitless analytics service that brings together enterprise data warehousing and big data analytics**
  Synapse Analytics **- a cloud-based environment, used to develop, train, test, deploy, manage, and track machine learning models**
- ***HDInsight*** **- a collection of domain-specific pre-trained AI models that can be customized with your data**
  Cognitive services **- allows you to run popular open-source frameworks and create cluster types such as Apache Spark, Apache Hadoop, Apache Kafka**
  Machine Learning service **- a cloud-based environment, used to develop, train, test, deploy, manage, and track machine learning models**
  Synapse Analytics **- a limitless analytics service that brings together enterprise data warehousing and big data analytics**

-  ***HDInsight*** **- allows you to run popular open-source frameworks and create cluster types such as Apache Spark, Apache Hadoop, Apache Kafka**
  Cognitive services **- a collection of domain-specific pre-trained AI models that can be customized with your data**
  Machine Learning service **- a cloud-based environment, used to develop, train, test, deploy, manage, and track machine learning models**
  Synapse Analytics **- a limitless analytics service that brings together enterprise data warehousing and big data analytics** **(Correct)**

Explanation
Correct answer is option
HDInsight - allows you to run popular open-source frameworks and create cluster types such as Apache Spark, Apache Hadoop, Apache Kafka
Cognitive services - a collection of domain-specific pre-trained AI models that can be customized with your data
Machine Learning service - a cloud-based environment, used to develop, train, test, deploy, manage, and track machine learning models
Synapse Analytics - a limitless analytics service that brings together enterprise data warehousing and big data analytics

Detailed explanation:

Azure HDInsight is a cloud service that makes it easier, faster, and more cost-effective to process massive amounts of data. HDInsight allows you to run popular open-source frameworks and create cluster types such as **Apache Spark**, **Apache Hadoop**, **Apache Kafka.**
Reference: https://docs.microsoft.com/en-us/azure/hdinsight/hadoop/apache-hadoop-introduction

Azure Machine Learning service provides a cloud-based environment that can be used to develop, train, test, deploy, manage, and track machine learning models. It will let you start training on your local machine, and then scale out to the cloud.
Reference: https://azure.microsoft.com/en-in/services/machine-learning/

Azure Synapse Analytics is a limitless analytics service that brings together enterprise data warehousing and big data analytics. It gives you the freedom to query data on your terms, using either serverless on-demand or provisioned resources - at scale.
Reference: https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-overview-what-is

Cognitive services are a collection of domain-specific pre-trained AI models that can be customized with your data. They are categorized broadly into vision, speech, language, and search.

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/what-are-cognitive-services

Other options are not correct.

Question 47: **Correct**

```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

Azure Resource Manager (ARM) templates use [*XML*] format.

- ○ **HTML**
- ◉ **JSON** **(Correct)**
- ○ **No change needed**
- ○ **C#**

Explanation
Correct answer *is* option ***JSON***

Azure Resource Manager (ARM) templates are **JSON** files that define the resources you need to deploy for your solution. You can use ARM template to easily re-create multiple versions of your infrastructure, such as staging and production.

Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/overview

Other Options ***HTML, XML & C#*** are not valid language for ARM Templates.

Question 48: **Correct**

```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

After you create a virtual machine, you need to modify the [*virtual network*] to allow connections to TCP port 8080 on the virtual machine.

- **No change needed**
- **virtual network gateway**
- **route table**
- **network security group (NSG)** **(Correct)**

Explanation
Correct answer is option ***network security group (NSG)***

When you create a new Virtual Machine, the next step is to create a Network Security Group (NSG) attached to the network interface assigned to the VM.

A network security group works as a firewall. You can attach a network security group to a virtual network and/or individual subnets within the virtual network. You can also attach a network security group to a network interface assigned to a virtual machine. You can use multiple network security groups within a virtual network to restrict traffic between resources such as virtual machines and subnets.

In this question, we need to add a rule to the Network Security Group to allow the connection to the virtual machine on port 8080.

Reference: https://docs.microsoft.com/en-us/azure/virtual-network/security-overview#network-security-groups

Other options are not correct.

Option ***No change needed*** i.e., ***virtual network*** is incorrect - *Azure Virtual Network (VNet)* is the fundamental building block for your private network in Azure, which enables many types of Azure resources to securely communicate with each other. You select virtual network at the time of VM creation.

Reference: https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-overview

Option ***virtual network gateway*** is incorrect - *Virtual network gateway* is used to send encrypted traffic between an Azure Virtual Network and an on-premises location over the public internet. It provides a more secure connection from on-premises to Azure over the internet.

Option ***route table*** is incorrect - A route table is used to routes traffic between Azure subnets, virtual networks, and on-premises networks. You cannot use it to whitelist port.

Question 49: **Incorrect**
A company is planning to deploy a number of resources to their Azure subscription and want to be informed if the costs of Azure resources goes beyond a certain threshold.

Which of the following can help achieve this?

- **Create an alert in Azure Advisor**
- **Create a budget in Azure Cost Management** **(Correct)**
- **Create a cost tag for the Resource Group** **(Incorrect)**
- **Create an alert in Azure Monitor**

Explanation
Keywords: *cost, threshold, informed => Budget in Cost Management*

Correct answer is option ***Create a budget in Azure Cost Management***.

Budgets in Cost Management help you to proactively manage costs and to monitor how spending progresses over time. When the budget thresholds you've created are exceeded, notifications are triggered, so that you can take corrective actions.
Reference: https://docs.microsoft.com/en-us/azure/cost-management-billing/costs/tutorial-acm-create-budgets

Other options are not correct.

Option ***Create an alert in Azure Advisor*** is incorrect - *Azure Advisor* provides recommendations on ***high availability, security, performance, operational excellence, and cost***. The advisor does not provide the capability to generate alerts based on usage.

Option ***Create a cost tag for the Resource Group*** is incorrect - *Tags* are used to logically organize Azure resources, resource groups, and subscriptions into a taxonomy. For example, you can apply the Environment with value "Production" or "UAT". Tags do not provide the capability to generate alerts based on usage.

Option ***Create an alert in Azure Monitor*** is incorrect - *Azure Monitor* helps you understand how your applications are performing and proactively identifies issues affecting the application. Monitors do not provide the capability to generate alerts based on cost usage.

Question 50: **Incorrect**

```
1. Exam note:
2. - Each correct selection is worth one point in the main exam.
```

Which of the following are the most common uses of Hybrid Clouds?

Select two correct options.

- ☑ **Virtualization** **(Incorrect)**
- ☑ **Cloud migration** **(Correct)**
- ☑ **High availability** **(Correct)**
- ☐ **Government agencies**

Explanation

Correct answers are

Option ***Cloud migration*** - Cloud migration is a correct use case of the Hybrid cloud, as you will need to manage the private cloud until the migration is completed on the public cloud. So, you will need to manage the public cloud & private data center during the migration phase.

Option ***High availability*** - High availability can be achieved with a hybrid cloud, by hosting applications in private & public clouds, reducing the risk of failure.

Other options are not correct

Option ***Virtualization*** is incorrect - Virtualization does not require a Hybrid cloud modal, it can be achieved in private cloud / public cloud independently.

Option ***Government agencies*** is incorrect - Government agencies usually use a private cloud and not a hybrid cloud modal.

Question 51: **Incorrect**

```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

Your Azure trial account expired last week. You are now unable to [*access your data stored in Azure]*

- **start an existing Azure virtual machine** **(Correct)**
- **No change needed**
- **create additional user accounts in Azure Active Directory (Azure AD)**
- **access the Azure portal** **(Incorrect)**

Explanation
Correct answer is option ***start an existing Azure virtual machine***

Azure free account is valid only for 30 days, after that you have to upgrade your account to pay-as-you-go pricing. Your subscription and paid services are disabled when your credit runs out or expires at the end of 30 days. To continue using Azure services, you must upgrade your account. Until you upgrade, you won't be able to use paid services, like Virtual machines.

A stopped (deallocated) VM is offline and not mounted on an Azure host server. Starting a VM mounts the VM on a host server before the VM starts. As soon as the VM is mounted, it becomes chargeable. For this reason, you are unable to start a VM after a trial has expired.

Reference: https://azure.microsoft.com/en-gb/support/plans/

Other options are not correct.

Option ***No change needed*** i.e., ***access your data stored in Azure*** is incorrect - You can access data that is already stored in Azure.

Option ***create additional user accounts in Azure Active Directory (Azure AD)*** is incorrect - You are not charged for Azure Active Directory user accounts so you can continue to create accounts.

Option ***access the Azure portal*** is incorrect - You can access the Azure Portal. You can also reactivate and upgrade the expired subscription in the portal.

Question 52: **Incorrect**
Your company has a team of remote workers that need to use Windows-based software to develop your company's applications, but your team members are using various operating systems like MacOS, Linux, and Windows.

Which Azure compute service would help resolve this scenario?

- **Windows Virtual Desktop** **(Correct)**
- **Azure Kubernetes**
- **Azure App Service**
- **Azure Container Instances** **(Incorrect)**

Explanation
Keywords: *Windows Software=> use Windows Virtual Desktop*

Correct answer is option ***Windows Virtual Desktop***

Windows Virtual Desktop enables your team members to run Windows in the cloud, with access to the required applications for your company's needs. Windows Virtual Desktop works across devices like Windows, Mac, iOS, Android, and Linux. It works with apps that you can use to access remote desktops and apps. You can also use most modern browsers to access Windows Virtual Desktop-hosted experiences.

Other options are not correct as ***Azure App Service, Azure Container Instances*** and ***Azure Kubernetes*** are code deployment and environment management solutions and do not provide the capability to team members to login to Virtual machines which run on windows.

Question 53: **Incorrect**

```
Exam notes:
- For each of the following statements, check the checkbox if the statement is correct.
- Each correct selection is worth one point in the main exam.
```

	Statements	Yes	No
1.	A Windows Virtual Desktop session host can run Windows 10 only.	○	○
2.	A Windows Virtual Desktop host pool that includes 20 session hosts supports a maximum of 20 simultaneous user connections.	○	○
3.	A Windows Virtual Desktop supports desktop and app virtualization.	○	○

- ☐ **A Windows Virtual Desktop session host can run Windows 10 only.**
- ☑ **A Windows Virtual Desktop host pool that includes 20 session hosts supports a maximum of 20 simultaneous user connections. (Incorrect)**
- ☑ **A Windows Virtual Desktop supports desktop and app virtualization. (Correct)**

Explanation

Statement ***A Windows Virtual Desktop supports desktop and app virtualization*** is correct - You can achieve desktop or app virtualization via RemoteApps.
Reference: https://docs.microsoft.com/en-us/azure/virtual-desktop/manage-app-groups

Statement ***A Windows Virtual Desktop session host can run Windows 10 only*** is incorrect - A Windows Virtual Desktop session host is supported on Windows 10 Enterprise multi-session or Windows 10 Enterprise, Windows 7 Enterprise, Windows Server 2012 R2, 2016, 2019.
Reference: https://docs.microsoft.com/en-us/azure/virtual-desktop/overview#requirements

Statement ***A Windows Virtual Desktop host pool that includes 20 session hosts supports a maximum of 20 simultaneous user connections*** is incorrect - In the Windows Virtual Desktop pool, you are allowed to enter the maximum number of users you want load-balanced to a single session host.
Reference: https://docs.microsoft.com/en-us/azure/virtual-desktop/create-host-pools-azure-marketplace

Question 54: **Incorrect**
You have 100 virtual machines hosted on the Hyper-V hosts in a data center and 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?

- **Consumption-based model** **(Incorrect)**
- **Operational Expenditure (OpEx)** **(Correct)**
- **Capital Expenditures (CapEx)**
- **Elasticity**

Explanation
Keywords: *pay-as-you-go subscription => Operational Expenditure (OpEx)*

Correct answer is option ***Operational Expenditure (OpEx)***

Operational Expenditure (OpEx) is spending money on services or products now and being billed for them now. You can deduct this expense in the same year you spend it. There is no upfront cost, as you pay for a service or product as you use it (*pay-as-you-go)*. The following are different cost considered as OpEx:
o Software licensing.
o Hosting expenses.
o Electric bills.
o Real estate rentals.
o Cooling expenses.
o Temporary staff required for operations.
o Equipment rentals.
o Replacement parts.
o Maintenance contracts.
o Repair services.
o Business continuity and disaster recovery (BCDR) services.
o Other expenses that don't require capital expense approvals.
Reference: https://docs.microsoft.com/en-us/azure/architecture/cloud-adoption/business-strategy/financial-models

Other options are not correct.

Option ***Capital Expenditures (CapEx)*** is incorrect - *Capital Expenditure (CapEx)* is the upfront spending of money on physical infrastructure, and then deducting that upfront expense over time. The upfront cost from CapEx has a value that reduces over time.

Following are different cost considered as CapEx:
- o Server costs
- o Storage costs
- o Network costs
- o Backup and archive costs
- o Organization continuity and disaster recovery costs
- o Datacenter infrastructure costs
- o Technical personnel

Reference: https://docs.microsoft.com/en-us/azure/architecture/cloud-adoption/business-strategy/financial-models

Option ***Consumption-based model*** is incorrect - *Consumption-based model* allows end-users only to pay for the resources that they use. Whatever they use is what they pay for. A consumption-based model has many benefits, including:
- o No upfront costs.
- o No need to purchase and manage the costly infrastructure that they may or may not use to its fullest.
- o The ability to pay for additional resources when they are needed.
- o The ability to stop paying for resources that are no longer needed.

Reference: https://docs.microsoft.com/en-us/learn/modules/discuss-why-cloud-services/7-define-consumption-based-models

Option ***Elasticity*** is incorrect - *Elasticity* is not a payment model, it is the ability to automatically or dynamically increase or decrease resources as needed.
Reference: https://azure.microsoft.com/en-us/overview/what-is-elastic-computing/

Question 55: **Incorrect**

```
1. Exam notes:
2. - This question requires you to evaluate the text inside [ ] to determine if
   it is correct
3. - Select "No change needed" if the above statement is correct, otherwise
   select the correct answer.
```

[*Azure Security Center]* grants or denies access based on the originating IP address.

- ◉ **No change needed** **(Incorrect)**
- ○ **VPN Gateway**
- ○ **Azure Active Directory**
- ○ **Azure Firewall** **(Correct)**

Explanation
Keywords: *IP based access => Azure Firewall*

Correct answer is option ***Azure Firewall***

The Azure Firewall grants server access based on the originating IP address of each request. You create firewall rules that specify ranges of IP addresses. Only clients from these granted IP addresses will be allowed to access the server.
Reference: https://docs.microsoft.com/en-us/azure/firewall/overview

Other options are not correct.

Option ***No change needed*** i.e. ***Azure Security Center*** is incorrect - *Azure Security Center* is a monitoring service that provides threat protection across all of your services both in Azure and on-premises.
Reference: https://docs.microsoft.com/en-us/azure/security-center/security-center-introduction

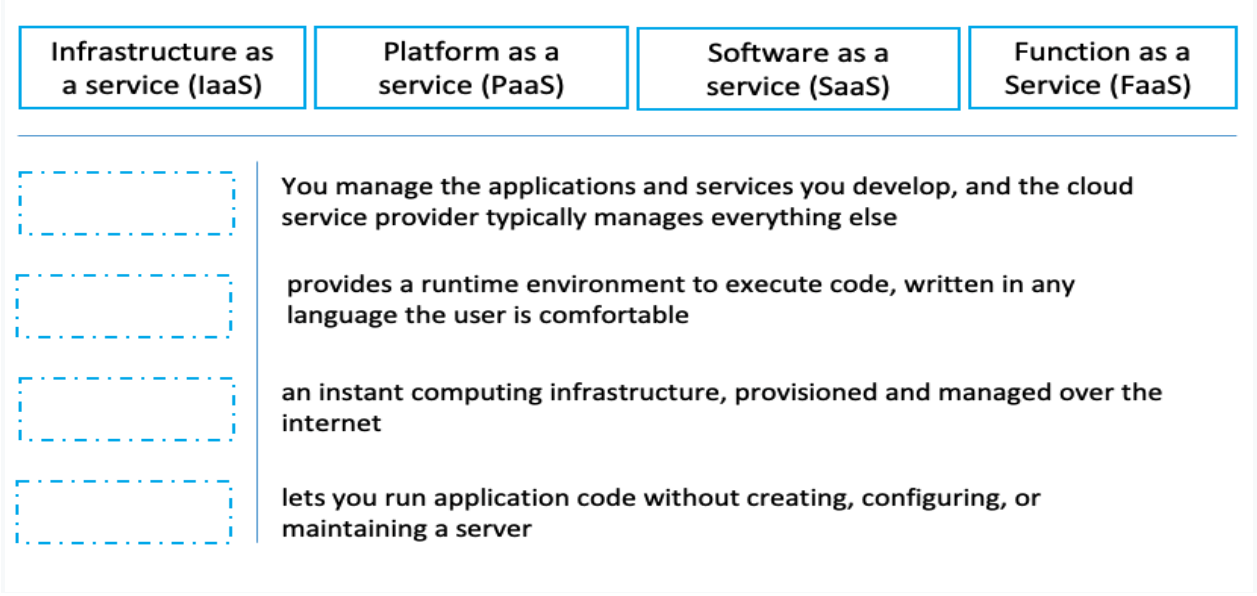
Option ***Azure Active Directory*** is incorrect - *Azure Active Directory* is a cloud-based identity and access management service. Azure AD provides services such as authentication, Single sign-on (SSO), Application management, Device Management.
Reference: https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-whatis

Option ***VPN Gateway*** is incorrect - *Azure Virtual Private Network (VPN) gateway* is used to send encrypted traffic between an Azure Virtual Network and an on-premises location over the public internet. It provides a more secure connection from on-premises to Azure over the internet.
Reference: https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-vpngateways

---

Question 56: **Correct**

```
1. Exam notes:
2. - Drag the appropriate term from the row on the top to its description on the
   bottom.
3. - Udemy does not support drag & drop, but in the actual exam, you will be
   allowed.
4. - Each correct selection is worth one point in the main exam.
```



- ***Infrastructure as a service (IaaS)*** **- You manage the applications and services you develop, and the cloud service provider typically manages everything else**
  Platform as a service (PaaS) **- lets you run application code without creating, configuring, or maintaining a server**
  Software as a service (SaaS) **- an instant computing infrastructure, provisioned and managed over the internet**
  Function as a Service (FaaS) **- provides a runtime environment to execute code, written in any language the user is comfortable**
- ***Infrastructure as a service (IaaS)*** **- You manage the applications and services you develop, and the cloud service provider typically manages everything else**
  Platform as a service (PaaS) **- provides a runtime environment to execute code, written in any language the user is comfortable**
  Software as a service (SaaS) **- an instant computing infrastructure, provisioned and managed over the internet**
  Function as a Service (FaaS) **- lets you run application code without creating, configuring, or maintaining a server**
- ***Infrastructure as a service (IaaS)*** **- an instant computing infrastructure, provisioned and managed over the internet**
  Platform as a service (PaaS) **- lets you run application code without creating, configuring, or maintaining a server**
  Software as a service (SaaS) **- You manage the applications and services you develop, and the cloud service provider typically manages everything else**
  Function as a Service (FaaS) **- provides a runtime environment to execute code, written in any language the user is comfortable**
- ***Infrastructure as a service (IaaS)*** **- an instant computing infrastructure, provisioned and managed over the internet**

***Platform as a service (PaaS)* - You manage the applications and services you develop, and the cloud service provider typically manages everything else**
***Software as a service (SaaS)* - lets you run application code without creating, configuring, or maintaining a server**
***Function as a Service (FaaS)* - provides a runtime environment to execute code, written in any language the user is comfortable (Correct)**

Explanation
Correct answer is option
Infrastructure as a service (IaaS) - an instant computing infrastructure, provisioned and managed over the internet
Platform as a service (PaaS) - You manage the applications and services you develop, and the cloud service provider typically manages everything else
Software as a service (SaaS) - lets you run application code without creating, configuring, or maintaining a server
Function as a Service (FaaS) - provides a runtime environment to execute code, written in any language the user is comfortable

Detailed explanation:

Infrastructure as a service (IaaS) is an instant computing infrastructure, provisioned, and managed over the internet. IaaS quickly scales up and down with demand, letting you pay only for what you use. It helps you avoid the expense and complexity of buying and managing your own physical servers and other data center infrastructure.
Reference: https://azure.microsoft.com/en-us/overview/what-is-iaas/

Platform as a service (PaaS) allows you to avoid the expense and complexity of buying and managing underlying application infrastructure. You manage the applications and services you develop, and the cloud service provider typically manages everything else.
Reference: https://azure.microsoft.com/en-us/overview/what-is-paas/

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).
Reference: https://azure.microsoft.com/en-us/overview/what-is-saas/

Function as a Service (FaaS) or Azure function is a serverless implementation, provides a runtime environment to execute code, written in any language the user is comfortable with. Functions are ideal when you're only concerned with the code running your service and not the underlying platform or infrastructure.
Reference: https://azure.microsoft.com/en-us/services/functions/

Other options are not correct.

Question 57: **Correct**
Which of the following option can be used to define a repeatable set of Azure resources, to orchestrate the deployment of various resource types such as role assignments and policy assignments, that implement organizational requirements?

Select the correct option.

- **Azure Blueprint** **(Correct)**
- **Role-Based Access Control (RBAC)**
- **Azure Policy**
- **Azure Resource Groups**

Explanation
Keywords: *repeatable, orchestrate, resources => Azure Blueprints*

Correct answer is option ***Azure Blueprints***

Azure Blueprints enable cloud architects to define a repeatable set of Azure resources that implement and adhere to an organization's standards, patterns, and requirements. Azure Blueprint is a declarative way to orchestrate the deployment of various resource templates and other artifacts, such as:
o Role assignments
o Policy assignments
o Azure Resource Manager templates
o Resource groups
Reference: https://docs.microsoft.com/en-us/azure/governance/blueprints/overview

Other options are not correct.

Option ***Azure Policy*** is incorrect - *Azure Policy* helps to enforce rules at the resource group, or subscription level. The policy can help to make sure that the organization's standards are followed, but can not define repeatable resources.
Reference: https://docs.microsoft.com/en-us/azure/governance/policy/overview

Option ***Azure Resource Groups*** is incorrect - *Resource Groups* is a unit of management for resources in Azure, allows you to logically group Azure Resources together. Blueprints are used to orchestrate the deployment of various resource groups and other artifacts.
Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/overview#resource-groups

Option ***Role-Based Access Control (RBAC)*** is incorrect - *Role-based access control* provides fine-grained access management for Azure resources, enabling you to grant users only the rights they need to perform their jobs.
Reference: https://docs.microsoft.com/en-us/azure/role-based-access-control/overview

---

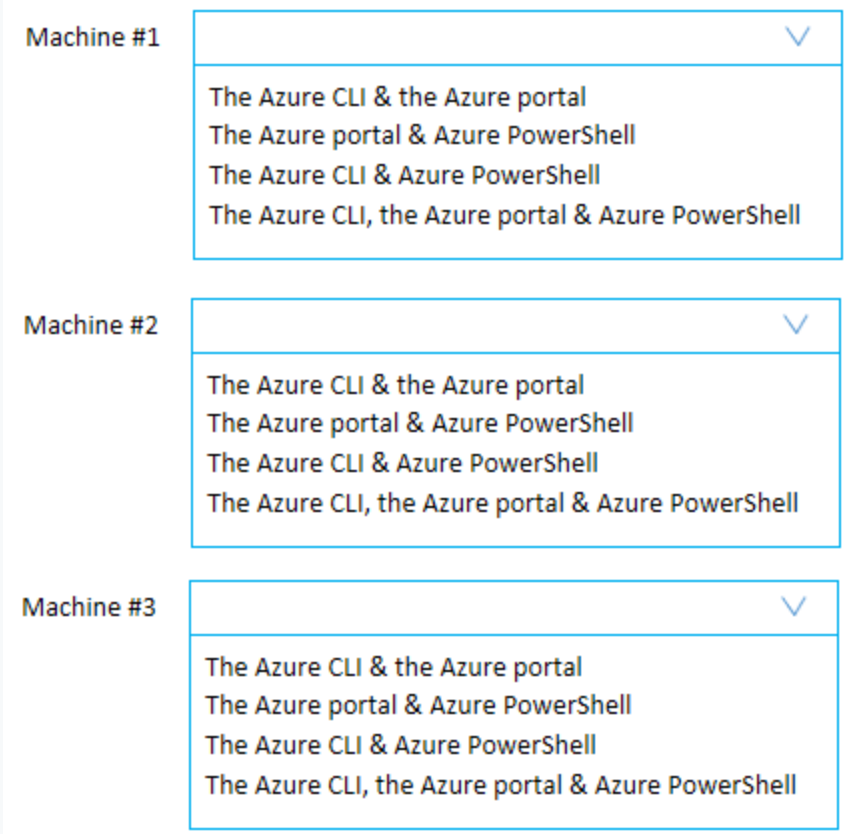
Question 58: **Incorrect**

```
1. Exam notes:
2. - This question requires you to select the correct option from the dropdown.
3. - Udemy does not support dropdown selection, but in the actual exam, you will
   be allowed to use dropdown.
4. - Each correct selection is worth one point in the main exam.
```

Your DevOps engineer plan to manage Azure by using the machines shown in the following table:

Name	Operating System
Machine #1	Windows 10
Machine #2	Ubuntu
Machine #3	MacOS

You need to identify which Azure management tools can be used from each Machine.



- ***Machine #1*** **- The Azure CLI, the Azure portal & Azure PowerShell**
  Machine #2 **- The Azure portal & Azure PowerShell**
  Machine #3 **- The Azure CLI, the Azure portal** **(Incorrect)**
- ***Machine #1*** **- The Azure CLI & Azure PowerShell**
  Machine #2 **- The Azure CLI, the Azure portal**
  Machine #3 **- The Azure CLI, the Azure portal & Azure PowerShell**
- ***Machine #1*** **- The Azure CLI & Azure PowerShell**
  Machine #2 **- The Azure CLI, the Azure portal & Azure PowerShell**
  Machine #3 **- The Azure CLI, the Azure portal**
- ***Machine #1*** **- The Azure CLI, the Azure portal & Azure PowerShell**
  Machine #2 **- The Azure CLI, the Azure portal & Azure PowerShell**
  Machine #3 **- The Azure CLI, the Azure portal & Azure PowerShell** **(Correct)**

Explanation
Correct Answer is

Machine #1 **-** The Azure CLI, the Azure portal & Azure PowerShell
Machine #2 **-** The Azure CLI, the Azure portal & Azure PowerShell
Machine #3 **-** The Azure CLI, the Azure portal & Azure PowerShell

The Azure portal runs in a web browser so can be used in either operating system.

Azure CLI is a cross-platform command-line program that connects to Azure and executes administrative commands on Azure resources. Cross-platform means that it can be run on Windows, Linux, or macOS.

PowerShell can be used for Windows OS, macOS users can use PowerShell Core which is a cross-platform version of PowerShell that runs on Windows, Linux, or macOS.
`Note: This question does not mention Powershell core or just Powershell, so you can assume powershell core`

Other options are not correct.

Question 59: **Incorrect**

```
1. Exam note:
2. - Each correct selection is worth one point in the main exam.
```

You are planning to deploy an Azure solution and as a part of this, you have to configure and manage several resources in Azure. You decided to apply a lock on resources.

Which of the following are valid reasons for locking Azure resources?

- ☐ **Prevent Stopping** **(Correct)**
- ☑ **Prevent Viewing** **(Incorrect)**
- ☐ **Prevent Modification** **(Correct)**
- ☑ **Prevent Starting** **(Correct)**
- ☑ **Prevent Deletion** **(Correct)**

Explanation
Correct answers are option **Prevent Starting,** option **Prevent Stopping,** option **Prevent Modification,** and option **Prevent Deletion**

Azure Lock allows locking Azure Resources like subscription, resource group, or other resources to prevent other users in your organization from *accidentally deleting or modifying critical resources*. You can set the lock level to **CanNotDelete** or **ReadOnly**.
o ***CanNotDelete*** means authorized users can still read and modify a resource, but they can't delete the resource.
o ***ReadOnly*** means authorized users can read a resource, but they can't delete or update the resource. Applying this lock is similar to restricting all authorized users to the permissions granted by the Reader role.

```
A read-only lock on a resource group that contains a virtual machine prevents all
users from starting or restarting the virtual machine.
These operations require a POST request.
```

Reference: https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources

Other options are not correct as Azure Locks does not prevent from Viewing resources.

Question 60: **Incorrect**
You need to process messages from a queue, parse them by using some existing imperative logic written in Java, and then send them to a third-party API.

Which serverless option should you choose?

- **Azure App Service** **(Incorrect)**
- **Azure Kubernetes Service**
- **Azure Functions** **(Correct)**
- **Azure Logic Apps**

Explanation
Correct answer is option ***Azure Functions***

Azure Functions is the correct choice because you can use existing Java code with minimal modification. *Azure function* is a serverless implementation, provides a runtime environment to execute code, written in any language the user is comfortable.
Reference: https://azure.microsoft.com/en-us/services/functions/

Other options are not correct.

Option ***Azure Logic Apps*** is incorrect - Azure Logic Apps could be used to parse a message's contents, but in this case, you already have Java code for this purpose.

Option ***Azure App Service*** is incorrect - With App services, you need to deploy code on VMs which require more resources, effort, and cost to solve this problem.

Option ***Azure Kubernetes Service*** is incorrect - *Kubernetes* is open-source orchestration software for deploying, managing, and scaling containers. You can deploy your code in a container and manage it by Kubernetes, but this is a huge effort to solve this problem, which can be easily solved with Functions.