

Q1)

A company needs a fully managed enterprise integration message broker that can decouple applications and services. It should offer a reliable and secure platform for asynchronous transfer of data and state.

What Azure Service should they use?

- Azure Machine Learning Studio

Explanation:-This option is incorrect because this service just gives you an interactive, visual workspace to easily build, test, and iterate on a predictive analysis model.

- Azure Service Bus

Explanation:-Microsoft Azure Service Bus is a fully managed enterprise integration message broker. Service Bus can decouple applications and services. Service Bus offers a reliable and secure platform for asynchronous transfer of data and state.

Data is transferred between different applications and services using messages. A message is in binary format and can contain JSON, XML, or just text. Some common messaging scenarios are:

- Messaging. Transfer business data, such as sales or purchase orders, journals, or inventory movements.
- Decouple applications. Improve the reliability and scalability of applications and services. Client and service don't have to be online at the same time.
- Topics and subscriptions. Enable 1:n relationships between publishers and subscribers.
- Message sessions. Implement workflows that require Message ordering or Message deferral.

Therefore, the correct answer is: Azure Service Bus.

- Azure Stream Analytics

Explanation:-This option is incorrect because it is simply a real-time analytics & complex event-processing engine that is designed to analyze and process high volumes of fast streaming data from multiple sources simultaneously.

- Azure Logic Apps

Explanation:-This option is incorrect because this service only helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations.

Q2)

A company needs an Azure service that can provide development services to support teams to plan work, collaborate on code development, and build and deploy applications.

What Azure service should they use?

- Azure Dev/Test Labs

Explanation:-This option is incorrect because this service just enables developers on teams to efficiently self-manage virtual machines (VMs) and PaaS resources without waiting for approvals. Dev/Test Labs creates labs consisting of pre-configured bases or Azure Resource Manager templates.

- Azure DevOps

Explanation:-Azure DevOps provides developer services to support teams to plan work, collaborate on code development, and build and deploy applications. Developers can work in the cloud using Azure DevOps Services or on-premises using Azure DevOps Server. Azure DevOps Server was formerly named Visual Studio Team Foundation Server (TFS).

Azure DevOps provides integrated features that you can access through your web browser or IDE client. You can use one or more of the following services based on your business needs:

- Azure Repos provides Git repositories or Team Foundation Version Control (TFVC) for source control of your code
- Azure Pipelines provides build and release services to support continuous integration and delivery of your apps
- Azure Boards delivers a suite of Agile tools to support planning and tracking work, code defects, and issues using Kanban and Scrum methods
- Azure Test Plans provides several tools to test your apps, including manual/exploratory testing and continuous testing
- Azure Artifacts allows teams to share Maven, npm, and NuGet packages from public and private sources and integrate package sharing into your CI/CD Pipelines

Therefore, the correct answer is: Azure DevOps.

- Azure HDInsights

Explanation:-This option is incorrect because this service is simply a managed analytics service in the cloud for enterprises. It is a cloud distribution of Hadoop components. Azure HDInsight makes it easy, fast, and cost-effective to process massive amounts of data.

- Azure Machine Learning Studio

Explanation:-This option is incorrect because this service gives you an interactive, visual workspace to easily build, test, and iterate on a predictive analysis model. You drag-and-drop datasets and analysis modules onto an interactive canvas, connecting them together to form an experiment, which you run in Machine Learning Studio.

Q3)

A company is planning to do load testing in Azure that requires 100 new virtual machines every week for a month. After a week, the existing virtual machines will be replaced by another batch. Azure Resource Manager templates are used to configure the virtual machines.

What Azure service should you use to satisfy this requirement?

- Azure IoT Hub

Explanation:-This option is incorrect because this service acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. You can use Azure IoT Hub to build IoT solutions with reliable and secure communications between millions of IoT devices and a cloud-hosted solution backend. You can connect virtually any device to IoT Hub.

- Azure IoT Edge

Explanation:-This option is incorrect because this service moves cloud analytics and custom business logic to devices so that your organization can focus on business insights instead of data management. Scale-out your IoT solution by packaging your business logic into standard containers, then you can deploy those containers to any of your devices and monitor it all from the cloud.

- Azure DevTest Labs

Explanation:-Azure DevTest Labs enables developers on teams to efficiently self-manage virtual machines (VMs) and PaaS resources without waiting for approvals.

DevTest Labs creates labs consisting of pre-configured bases or Azure Resource Manager templates. These have all the necessary tools and software that you can use to create environments. You can create environments in a few minutes, as opposed to hours or days.

By using DevTest Labs, you can test the latest versions of your applications by doing the following tasks:

- Quickly provision Windows and Linux environments by using reusable templates and artifacts.
- Easily integrate your deployment pipeline with DevTest Labs to provision on-demand environments.
- Scale up your load testing by provisioning multiple Test agents and create pre-provisioned environments for training and demos.

Hence, the correct answer is: Azure DevTest Labs.

- Azure Sphere

Explanation:-This option is incorrect because this service is just a secure, high-level application platform with built-in communication and security features for internet-connected devices. It comprises a secure, connected, crossover microcontroller unit (MCU), a custom high-level Linux-based operating system (OS), and a cloud-based security service that provides continuous, renewable security.

Q4)

A company has several Azure resources across different regions. The support engineers need to manage the Azure cloud environments of the company using the Azure CLI.

Which two tools below can the engineers use to install and run the Azure CLI?

- Azure AD Seamless SSO

Explanation:-This option is incorrect because you can't use this service to run Azure CLI. It just simplifies the user authentication between your on-premises network and your Azure cloud infrastructure.

- Azure Storage Explorer

Explanation:-This option is incorrect because this is simply a cross-platform, standalone application that you can use to manage your Azure cloud storage resources. It's not capable of installing or running the Azure CLI.

- Azure Resource Explorer

Explanation:-This option is incorrect because this is primarily used to view the available Azure Resource Management APIs and make actual API calls directly to your own Azure subscriptions.

- Windows Command Prompt (CMD)

Explanation:-The Azure command-line interface (Azure CLI) is a set of commands used to create and manage Azure resources. The Azure CLI is available across Azure services and is designed to get you working quickly with Azure, with an emphasis on automation.

Azure CLI capabilities make it easy to work with different programming languages and software environments. For example, Azure CLI:

- Is available to install in Windows, macOS, and Linux environments.
- Can also be run in Docker and Azure Cloud Shell.
- Offers command-line flexibility when managing an Azure solution.
- Supports long-running operations.
- Has the ability to use one subscription for all commands, or vary subscriptions per command.
- allows for querying of command-line results with query output returned in your format of choice.
- Has the flexibility to work with multiple clouds.
- provides configurable settings for logging, data collection, and default argument values.
- Is deployed with Resource Manager deployment templates.

For Windows, the Azure CLI is installed via an MSI, which gives you access to the CLI through the Windows Command Prompt (CMD) or PowerShell. The packages are also available for your Linux distribution if you are using Windows Subsystem for Linux (WSL).

Hence, the correct answers are:

- Windows Command Prompt (CMD)

- Windows PowerShell

- Windows PowerShell

Windows PowerShell

Explanation:-The Azure command-line interface (Azure CLI) is a set of commands used to create and manage Azure resources. The Azure CLI is available across Azure services and is designed to get you working quickly with Azure, with an emphasis on automation.

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For Windows, the Azure CLI is installed via an MSI, which gives you access to the CLI through the Windows Command Prompt (CMD) or PowerShell. The packages are also available for your Linux distribution if you are using Windows Subsystem for Linux (WSL).

Hence, the correct answers are:

- Windows command Prompt (CMD)
- Windows PowerShell

Q5) What are the three available access tiers in Azure Blob Storage?

Standard

Hot

Explanation:-Azure storage offers different access tiers, which allow you to store blob object data in the most cost-effective manner. The available access tiers include: Hot, Cool and Archive. SOurce - <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers?tabs=azure-portal>

Cool

Explanation:-Azure storage offers different access tiers, which allow you to store blob object data in the most cost-effective manner. The available access tiers include: Hot, Cool and Archive. SOurce - <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers?tabs=azure-portal>

Premium

Archive

Explanation:-Azure storage offers different access tiers, which allow you to store blob object data in the most cost-effective manner. The available access tiers include: Hot, Cool and Archive. SOurce - <https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers?tabs=azure-portal>

Magnetic

Q6)

You plan to deploy a WordPress website to Azure. You need to recommend an Azure solution that will host the website without managing the infrastructure.

What service should you recommend?

Azure Logic Apps

Explanation:-This option is incorrect because this only helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations.

Azure DevOps

Explanation:-This option is incorrect because this service simply provides developer services to support teams to plan work, collaborate on code development, and build and deploy applications. It is not capable of hosting your website, unlike Azure App Service.

Azure App Service

Explanation:-Azure App Service enables you to build and host web apps, mobile back ends, and RESTful APIs in the programming language of your choice without managing infrastructure. It offers auto-scaling and high availability, supports both Windows and Linux, and enables automated deployments from GitHub, Azure DevOps, or any Git repo. The correct answer is: Azure App Service.

Azure Virtual Machine

Explanation:-This option is incorrect because this service just gives you the flexibility of virtualization without having to buy and maintain the physical hardware that runs it. However, you still need to maintain the VM by performing tasks, such as configuring, patching, and installing the software that runs on it.

Q7)

You are planning on migrating an application to Azure that sends email notifications automatically whenever a specific event happens. You need to recommend a serverless computing solution that can orchestrate the application workflow.

What Azure service should you use?

- Azure Batch

Explanation:-This option is incorrect because this service simply creates and manages a pool of compute nodes (virtual machines), installs the applications you want to run, and schedules jobs to run on the nodes.

- Azure Functions

Explanation:-This option is incorrect because this is just an event-driven, compute-on-demand service that extends the existing Azure application platform with capabilities to implement code triggered by events occurring in Azure or third party service as well as on-premises systems. It is not capable of creating workflows for your application.

- Azure Service Bus

Explanation:-This option is incorrect because this service is primarily a fully managed enterprise integration message broker that allows you to decouple applications and services. Service Bus offers a reliable and secure platform for asynchronous transfer of data and state.

- Azure Logic Apps

Explanation:-Azure Logic Apps is a cloud service that helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations. Logic Apps simplifies how you design and build scalable solutions for app integration, data integration, system integration, enterprise application integration (EAI), and business-to-business (B2B) communication, whether in the cloud, on-premises, or both.

For example, here are just a few workloads you can automate with logic apps:

- Process and route orders across on-premises systems and Cloud services.
- Send email notifications with Office 365 when events happen in various systems, apps, and services.
- Move uploaded files from an SFTP or FTP server to Azure Storage.
- Monitor tweets for a specific subject, analyze the sentiment and create alerts or tasks for items that need review.

Azure Logic Apps provides a way to simplify and implement scalable integrations and workflows in the cloud. This service provides a visual designer to model and automates your process as a series of steps called a workflow.

Hence, the correct answer is: Azure Logic Apps.

Q8) Which of the following is a serverless compute service that lets you run event-triggered code without having to explicitly provision or manage infrastructure?

- Azure Virtual Machines

Explanation:-This option is incorrect because this service just gives you the flexibility of virtualization without having to buy and maintain the physical hardware that runs it. However, you still need to maintain the VM by performing tasks, such as configuring, patching, and installing the software that runs on it.

- Azure Container Instances

Explanation:-This option is incorrect because this simply offers the fastest and simplest way to run a container in Azure, without having to manage any virtual machines and without having to adopt a higher-level service.

- Azure Logic Apps

Explanation:-This option is incorrect because this service helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations. It is not capable of running code that is triggered by events.

- Azure Functions

Explanation:-Azure Functions is an event-driven, compute-on-demand experience that extends the existing Azure application platform with capabilities to implement code triggered by events occurring in Azure or third party service as well as on-premises systems. Azure Functions allow developers to take action by connecting to data sources or messaging solutions thus making it easy to process and react to events. The correct answer is: Azure Functions.

Q9) You were tasked to look for a document sharing solution that you can map or mount in your on-premises Windows servers. What Azure service should you use?

- Azure Cosmos DB

Explanation:-This option is incorrect because this service is Microsoft's globally distributed, multi-model database service for mission-critical applications.

- Azure Managed Disks

Explanation:-This option is incorrect because these are block-level storage volumes that are managed by Azure and used with Azure Virtual Machines. Managed disks are like a physical disk in an on-premises server but virtualized. However, this can't be mounted to your on-premises servers, unlike Azure Files.

- Azure Files

Explanation:-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. You can also read the files using the REST interface or the storage client libraries.

One thing that distinguishes Azure Files from files on a corporate file share is that you can access the files from anywhere in the world using a URL that points to the file and includes a shared access signature (SAS) token. You can generate SAS tokens; they allow specific access to a private asset for a specific amount of time.

File shares can be used for many common scenarios:

1. Many on-premises applications use file shares. This feature makes it easier to migrate those applications that share data to Azure. If you mount the file share to the same drive letter that the on-premises application uses, the part of your application that accesses the file share should work with minimal, if any, changes.
2. Configuration files can be stored on a file share and accessed from multiple VMs. Tools and utilities used by multiple developers in a group can be stored on a file share, ensuring that everybody can find them and that they use the same version.
3. Resource logs, metrics, and crash dumps are just three examples of data that can be written to a file share and processed or analyzed later.

The correct answer is: Azure Files.

- Azure Blob

Explanation:-This option is incorrect because this service is an object storage solution for the cloud. Blob storage is optimized for storing massive amounts of unstructured data, such as text or binary data. Objects in Blob storage can be accessed from anywhere in the world via HTTP or HTTPS. You cannot mount this to your on-premises servers

Q10)

Your company is planning to migrate some of its servers to Azure. You need to recommend a solution wherein users can work remotely by having a secure connection to your Azure virtual machines.

What should you include in the recommendation?

- ExpressRoute

Explanation:-This option is incorrect because Express Route is not a encrypted channel. Also this service simply lets you create private connections between Azure datacenters and infrastructure that's on your premises or in a co-location environment. ExpressRoute connections do not go over the public Internet and offer better reliability, faster speeds, lower latencies, and higher security than typical connections over the Internet. You cannot use this to provide a secure connection to your virtual machines from a user working remotely.

- Point-to-Site VPN Connection

Explanation:-Point-to-Site (P2S) VPN connection allows you to create a secure connection to your virtual network from an individual client computer. A P2S connection is established by starting it from the client computer. This solution is useful for telecommuters who want to connect to Azure VNets from a remote location, such as from home or a conference. P2S VPN is also a useful solution to use instead of S2S VPN when you have only a few clients that need to connect to a VNet.

As part of the Point-to-Site configuration, you install a certificate and a VPN client configuration package, which contains the settings that allow your computer to connect to any virtual machine or role instance within the virtual network.

Hence, the correct answer is: Point-to-Site VPN connection.

- Site-to-Site VPN Connection

Explanation:-This option is incorrect because this is simply used to connect your on-premises network to an Azure virtual network over an IPsec/IKE (IKEv1 or IKEv2) VPN tunnel. This type of connection requires a VPN device located on-premises that has an externally facing public IP address assigned to it.

- Traffic Manager

Explanation:-This option is incorrect because this is primarily a DNS-based traffic load balancer that enables you to distribute traffic optimally to services across global Azure regions while providing high availability and responsiveness.

Q11)

A company has multiple virtual machines in their Azure environment. You need to recommend a solution that will evenly distribute Internet traffic to your virtual machines.

What Azure service should you use to satisfy this requirement?

- Public Load Balancer

Explanation:-Public Load Balancer can provide outbound connections for virtual machines (VMs) inside your virtual network. These connections are accomplished by translating their private IP addresses to public IP addresses. Public Load Balancers are used to load balance Internet traffic to your VMs. Public Load Balancers map the public IP and port of incoming traffic to the private IP and port of the VM. Load balancer maps traffic the other way around for the response traffic from the VM. You can distribute specific types of traffic across multiple VMs or services by applying load-balancing rules. For example, you can spread the load of web request traffic across multiple web servers.

Hence, the correct answer is: Azure Public Load Balancer.

- Private Load Balancer

Explanation:-This option is incorrect because this service primarily used where private IPs are needed at the frontend only. Internal load balancers are used to load balance traffic inside a virtual network. Take note that the scenario mentioned that you have to evenly distribute Internet traffic to your virtual machines.

- Azure Traffic Manager

Explanation:-This option is incorrect because this is simply a DNS-based traffic load balancer that enables you to distribute traffic optimally to services across global Azure regions while providing high availability and responsiveness. However, you cannot use this to distribute traffic evenly to virtual machines.

- Azure Front Door

Explanation:-This option is incorrect because this service just enables you to define, manage, and monitor the global routing for your web traffic by optimizing performance and ensuring quick global failover for high availability that works at Layer 7 or HTTP/HTTPS layer. You cannot use this for network layer load balancing, unlike Azure Public Load Balancer.

Q12) What Azure Service would you use if the project requires you to ship faster, operate with ease, scale confidently, and accelerate containerized application development?

- Public Load Balancer

Explanation:-This option is incorrect because this service only provides outbound connections for virtual machines (VMs) inside your virtual network. These connections are accomplished by translating their private IP addresses to public IP addresses. Public Load Balancers are used to load balance Internet traffic to your VMs but not for hosting containerized applications.

- Azure Container Registry

Explanation:-This option is incorrect because this service just allows you to build, store, and manage container images and artifacts in a private registry for all types of container deployments. The Azure container registries are primarily used with your existing container development and deployment pipeline.

- Azure Kubernetes Service

Explanation:-Azure Kubernetes Service is a highly available, secure, and fully managed Kubernetes service. Deploy and manage containerized applications more easily with a fully-managed Kubernetes service. Azure Kubernetes Service (AKS) offers serverless Kubernetes, an integrated continuous integration and continuous delivery (CI/CD) experience, and enterprise-grade security and governance. Unite your development and operations teams on a single platform to rapidly build, deliver, and scale applications with confidence.

Easily define, deploy, debug, and upgrade even the most complex Kubernetes applications, and automatically containerize your applications. Develop and test microservices-based applications without mocking up dependencies using Dev Spaces.

Hence, the correct answer is: Azure Kubernetes Service.

- Private Load Balancer

Explanation:-This option is incorrect because this service is primarily used where private IPs are needed at the frontend only. Internal load balancers are used to load balance traffic inside a virtual network. A load balancer frontend can be accessed from an on-premises network in a hybrid scenario.

Q13)

An organization's patient management system migrated its application that handles patient records to Azure. Due to compliance requirements, you need to store terabytes worth of records for more than 10 years. The records are rarely accessed and can accommodate a delay in retrieval.

What storage solution would best fit the requirements?

-  Store the records to Azure Blob Storage - Cold Tier

Explanation:-This option is incorrect. Although this access tier is optimized for infrequent access and can store data for at least 30 days, this storage type still costs higher than the archive tier. Take note that the scenario states that a delay in retrieval is not an issue.

- Store the records in a virtual machine

Explanation:-This option is incorrect because data disks have a higher per GB costs compared to Azure Blobs. Also, you have to maintain your own virtual machine, perform backups, and OS patching which will add to the costs.

- Store the records to Azure Blob Storage - Archive Tier

Explanation:-Azure storage offers different access tiers, which allow you to store blob object data in the most cost-effective manner. The available access tiers include:

Hot - Optimized for storing data that is accessed frequently.

Cool - Optimized for storing data that is infrequently accessed and stored for at least 30 days.

Archive - Optimized for storing data that is rarely accessed and stored for at least 180 days with flexible latency requirements (on the order of hours).

The following considerations apply to the different access tiers:

- Only the hot and cool access tiers can be set at the account level. The archive access tier isn't available at the account level.
- hot, cool, and archive tiers Can be Set at the blob level during upload or after upload.
- data in the cool access tier Can tolerate slightly lower availability, but still requires high durability, retrieval latency, and throughput characteristics similar to hot data. for cool data, a slightly lower availability service-level agreement (SLA) and higher access costs compared to hot data are acceptable trade-offs for lower storage costs.
- archive storage stores data offline and Offers the lowest storage costs but also the highest data rehydrate and access costs

Archive tier is optimized for data that can tolerate several hours of retrieval latency and that will remain in the archive tier for at least 180 days. The archive tier is the most cost-effective option for storing data. However, accessing that data is more expensive than accessing data in the hot or cool tiers.

Rehydration is the term for retrieving files from the archive tier.

Hence, the correct answer is: Store the records to Azure Blob Storage - Archive Tier

- Store the records to Azure Blob Storage - Hot Tier

Explanation:-This option is incorrect because this access tier is optimized for frequent access and has higher storage costs compared with cool and archive tiers. Take note that the scenario is asking for a cost-effective solution to store infrequently access objects.

Q14) What are the types of locks in Azure that protect you from accidentally deleting a resource? Select two answers among the choices.

- SMB File Locking

Explanation:-This option is incorrect because this is only a file system locking mechanism in Azure File service that is used to manage access to a shared file. It can't be used to prevent a user to delete an Azure resource.

-  Azure Active Directory - smart lockout

Explanation:-This option is incorrect because this is primarily used to lockout intruders that try to guess your users' passwords or use brute-force methods in Azure Active Directory.

- Azure Active Directory - Conditional Access

Explanation:-This option is incorrect because this is merely a tool used by Azure Active Directory to bring signals together, to make decisions, and enforce organizational policies. It can't be used to protect your resources from being accidentally deleted.

-  Management Locks - Cannot Delete

Explanation:-

As an administrator, you may need to lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. You can set the lock level to CanNotDelete or ReadOnly. In the portal, the locks are called Delete and Read-only respectively.

CanNotDelete means authorized users can still read and modify a resource, but they can't delete the resource.

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.

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

Azure Resource Manager is the deployment and management service for Azure. It provides a management layer that enables you to create, update, and delete resources in your Azure account. You use management features, like access control, locks, and tags, to secure and organize your resources after deployment.

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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.

All the resources in your group should share the same lifecycle. You deploy, update, and delete them together. If one resource, such as a server, needs to exist on a different deployment cycle it should be in another resource group.

Hence, the correct answer are:

- Management Locks - CanNotDelete
- Management Locks - Read-Only

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Hence, the correct answer are:

- Management Locks - CanNotDelete
- Management Locks - Read-Only

Q15)

You have several hundreds of servers in a single Azure region.

You need to recommend an Azure service that will automatically deploy the same set of servers to another region.

What Azure service should you use?

- Azure availability set

Explanation:-This option is incorrect because this feature simply is a logical grouping capability that ensures the VMs you place within an Availability Set run across multiple physical servers, compute racks, storage units, and network switches. If a hardware or software failure happens, only a subset of your VMs are impacted and your overall solution stays operational.

- Azure scale set

Explanation:-This option is incorrect because this only lets you create and manage a group of load-balanced VMs. The number of VM instances can automatically increase or decrease in response to demand or a defined schedule and provides high availability to your applications. It is not capable of running (JSON) file that defines the infrastructure and configuration for your project.

-  Azure Resource Manager Templates

Explanation:-Azure Resource Manager is a management layer in which resource groups and all the resources within it are created, configured, managed, and deleted. It provides a consistent management layer that allows you to automate the deployment and configuration of resources using different automation and scripting tools, such as Microsoft Azure PowerShell, Azure Command-Line Interface (Azure CLI), Azure portal, REST API, and client SDKs. Instead of creating resources manually, you can automate deployments and use the practice of infrastructure as code. In code, you define the infrastructure that needs to be deployed. The infrastructure code becomes part of your project. Just like application code, you store the infrastructure code in a source repository and version it. Anyone on your team can run the code and deploy similar environments.

To implement infrastructure as code for your Azure solutions, use Azure Resource Manager (ARM) templates. The template is a JavaScript Object Notation (JSON) file that defines the infrastructure and configuration for your project. The template uses declarative syntax, which lets you state what you intend to deploy without having to write the sequence of programming commands to create it. In the template, you specify the resources to deploy and the properties for those resources.

Azure Resource Manager allows you to repeatedly deploy your infrastructure throughout the development lifecycle and have confidence your resources are deployed in a consistent manner. Templates are idempotent, which means you can deploy the same template many times and get the same resource types in the same state. You can develop one template that represents the desired state, rather than developing lots of separate templates to represent updates.

Hence, the correct answer is: Azure Resource Manager Templates.

- Azure Policy

Explanation:-This option is incorrect because this service just helps enforce organizational standards and assess compliance at-scale. You cannot use this to deploy resources repeatedly.

Q16)

You plan on deploying servers to Azure for your development environment.

You need to create several virtual machines using a macOS device.

Solution: Use Azure Cloud Shell (Powershell).

Does this meet the goal?



Correct

Explanation:-

Azure Cloud Shell is an interactive, authenticated, browser-accessible shell for managing Azure resources. It provides the flexibility of choosing the shell experience that best suits the way you work, either Bash or PowerShell.

PowerShell is a cross-platform task-based automation and configuration management framework, consisting of a command-line shell and scripting language that lets you manage computers from the command line. Unlike most shells, which accept and return text, PowerShell is built on top of the .NET Common Language Runtime (CLR) and accepts and returns .NET objects.

This fundamental change brings entirely new tools and methods for automation to enable system administrators and power-users rapidly automate tasks that manage operating systems (Linux, macOS, and Windows) and processes.

PowerShell providers let you access data stores, such as the registry and certificate store, as easily as you access the file system. PowerShell includes a rich expression parser and a fully developed scripting language.



Incorrect

Q17)

You plan to deploy your big data application to Azure.

You need an Azure service that will cater to your data warehousing and big data analytics requirements.

What Azure solution should you use?

Solution: Use Azure Synapse.

Does this meet the goal?



Explanation:-Azure Synapse 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. Azure Synapse brings these two worlds together with a unified experience to ingest, prepare, manage, and serve data for immediate BI and machine learning needs.

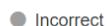
Synapse SQL leverages a scale-out architecture to distribute computational processing of data across multiple nodes. The unit of scale is an abstraction of compute power that is known as a data warehouse unit. Compute is separate from storage, which enables you to scale compute independently of the data in your system.

Synapse SQL uses a node-based architecture. Applications connect and issue T-SQL commands to a Control node, which is the single point of entry for Synapse SQL. The Control node runs the MPP engine, which optimizes queries for parallel processing, and then passes operations to Compute nodes to do their work in parallel.

The Compute nodes store all user data in Azure Storage and run the parallel queries. The Data Movement Service (DMS) is a system-level internal service that moves data across the nodes as necessary to run queries in parallel and return accurate results.

With decoupled storage and compute, when using Synapse SQL pool one can:

- Independently size compute power irrespective of your storage needs.
- Grow or shrink compute power, within a SQL pool (data warehouse), without moving data.
- Pause compute capacity while leaving data intact, so you only pay for storage.
- Resume compute capacity during operational hours.



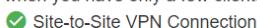
Q18)

A company wants to migrate to the cloud. The requirement is to have a VPN connection to connect your on-premises network to an Azure virtual network over an IPsec/IKE (IKEv1 or IKEv2) VPN tunnel.

What is the most suitable type of VPN connection that you should use?



Explanation:-Point-to-Site (P2S) VPN gateway connection is incorrect because this only allows you to create a secure connection to your virtual network from an individual client computer. A P2S connection is established by starting it from the client computer. This solution is useful for telecommuters who want to connect to Azure VNets from a remote location, such as from home or a conference. P2S VPN is also a useful solution to use instead of S2S VPN when you have only a few clients that need to connect to a VNet.



Explanation:-

A VPN gateway is a specific type of virtual network gateway that is used to send encrypted traffic between an Azure virtual network and an on-premises location over the public Internet. You can also use a VPN gateway to send encrypted traffic between Azure virtual networks over the Microsoft network. Each virtual network can have only one VPN gateway. However, you can create multiple connections to the same VPN gateway. When you create multiple connections to the same VPN gateway, all VPN tunnels share the available gateway bandwidth.

A virtual network gateway is composed of two or more VMs that are deployed to a specific subnet you create called the gateway subnet. Virtual network gateway VMs contain routing tables and run specific gateway services. These VMs are created when you create a virtual network gateway.

There are various configurations available for your VPN gateway connections. You have to determine which configuration meets your requirements. You can set up a Site-to-Site, Multi-Site, Point-to-Site, VNet-to-VNet, and other VPN gateway connections.

Site-to-Site VPN gateway connection is used to connect your on-premises network to an Azure virtual network over an IPsec/IKE (IKEv1 or IKEv2) VPN tunnel. This type of connection requires a VPN device located on-premises that has an externally facing public IP address assigned to it. Hence, the correct answer is: Site-to-Site VPN Connection.



Explanation:-VNet peering connection is incorrect because this connection type simply provides a low-latency, high-bandwidth connection between resources in different Azure virtual networks. This is not suitable for connecting your on-premises network to an Azure virtual network.



Explanation:-ExpressRoute connection is incorrect because it is not a VPN connection in the first place. It also doesn't connect your on-premises network to an Azure virtual network over an IPsec/IKE (IKEv1 or IKEv2) VPN tunnel. Using ExpressRoute, the connectivity can be from an any-to-any (IP VPN) network, a point-to-point Ethernet network, or a virtual cross-connection through a connectivity provider at a co-location facility. ExpressRoute connections do not go over the public Internet unlike an IPsec/IKE (IKEv1 or IKEv2) VPN tunnel.

Q19)

You are the Database Administrator of a media company. Your company requires to have a globally distributed, multi-model NoSQL database service that enables you to elastically and independently scale throughput and storage across any number of Azure regions worldwide.

What database service will you use?

- Azure Database MySQL Server

Explanation:-This option is incorrect because it's a SQL Database. Azure Database for MySQL is a relational database service powered by the MySQL community edition. It's a fully-managed database as a service offering that can handle mission-critical workloads with predictable performance and dynamic scalability.

-  Azure Cosmos DB

Explanation:-Azure Cosmos DB is Microsoft's globally distributed, multi-model database service. With a click of a button, Cosmos DB enables you to elastically and independently scale throughput and storage across any number of Azure regions worldwide. Cosmos DB provides comprehensive service level agreements (SLAs) for throughput, latency, availability, and consistency guarantees, something no other database service offers.

Cosmos DB enables you to build highly responsive and highly available applications worldwide. Cosmos DB transparently replicates your data wherever your users are, so your users can interact with a replica of the data that is closest to them.

Cosmos DB allows you to add or remove any of the Azure regions to your Cosmos account at any time, with a click of a button. Cosmos DB will seamlessly replicate your data to all the regions associated with your Cosmos account while your application continues to be highly available, thanks to the multi-homing capabilities of the service.

Hence, the correct answer is: Azure Cosmos DB.

- Azure SQL Database

Explanation:-This option is incorrect because this is Microsoft's relational DBMS service. Just like Azure Database for MySQL Server, it is not a NoSQL database. Azure SQL Database is a fully managed platform as a service (PaaS) database engine that handles most of the database management functions such as upgrading, patching, backups, and monitoring without user involvement. Take note that the scenario is asking for a NoSQL database.

- Azure Database for PostgreSQL Server

Explanation:-This option is incorrect because it is a relational database service based on the open-source PostgreSQL database engine. It's a fully managed database-as-a-service offering that can handle mission-critical workloads with predictable performance, security, high availability, and dynamic scalability.

Q20)

A company is migrating all its applications and data to Microsoft Azure. There is a strict requirement that the Azure environment must only be comprised of platform-as-a-service (PaaS) solutions to minimize the amount of administrative effort in managing the underlying resources.

Solution: Deploy the applications using Azure App Service.

Does this solution comply with the requirement?

- Incorrect

-  Correct

Explanation:-The Azure App Service is a Platform as a Service (PaaS) solution that allow the customers to deploy and run their custom applications quickly while minimizing the administrative effort in managing the underlying server resources. App Service is a managed hosting service for web apps and mobile back-ends. Quickly build, deploy, and scale your web apps either as code or containers. Source - <https://azure.github.io/AppService/>

Q21)

A company is migrating all its applications and data to Microsoft Azure. There is a strict requirement that the Azure environment must only be comprised of platform-as-a-service (PaaS) solutions to minimize the amount of administrative effort in managing the underlying resources.

Solution: Deploy the applications using Azure Virtual Machines and Azure App Service.

Does this solution comply with the requirement?

Correct

Incorrect

Explanation:-Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. You purchase the resources you need from a cloud service provider on a pay-as-you-go basis and access them over a secure Internet connection.

Like IaaS, PaaS includes infrastructure – servers, storage, and networking – but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application life cycle: building, testing, deploying, managing, and updating.

PaaS allows you to avoid the expense and complexity of buying and managing software licenses, the underlying application infrastructure, and middleware, container orchestrators such as Kubernetes or the development tools, and other resources. You manage the applications and services that you develop, and the cloud service provider typically manages everything else.

In this scenario, the Azure App Service is a Platform as a Service (PaaS) solution while the Azure Virtual Machine is an Infrastructure as a Service(IaaS) solution. Take note that the scenario says that the Azure environment must only be comprised of platform-as-a-service (PaaS) solutions to minimize the amount of administrative effort in managing the underlying resources. Therefore, the proposed solution is invalid.

Hence, the correct answer is: No as it does not comply with the aforementioned requirement.

Q22)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

The customer is responsible for [ensuring high availability of its applications] when using a software as a service (SaaS) solution.

No change is needed.

Explanation:-This option is incorrect because the original statement implies that you have access to the underlying resources of the SaaS solution to be able to ensure high availability. Remember that it is the cloud provider's responsibility to ensure high availability and scalability of the SaaS solution, not the customer.

Configuring and using the provided cloud-based application

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

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

If you've used a web-based email service such as Outlook, Hotmail, or Yahoo! Mail, then you've already used a form of SaaS. With these services, you log into your account over the Internet, often from a web browser. The email software is located on the service provider's network, and your messages are stored there as well. You can access your email and stored messages from a web browser on any computer or Internet-connected device.

The previous examples are free services for personal use. For organizational use, you can rent productivity apps, such as email, collaboration, and calendaring, and sophisticated business applications such as customer relationship management (CRM), enterprise resource planning (ERP), and document management. You pay for the use of these apps by subscription or according to the level of use.

In this scenario, the customer is responsible for doing the initial configuration and using the cloud-based application provided by the software as a service (SaaS) solution.

Hence, the correct answer is: Configuring and using the provided cloud-based application.

Installing its custom applications

Explanation:-This option is incorrect because in SaaS, the cloud provider already offers a complete software that is ready to be used by the customer. You can only install your custom applications if you are using either an IaaS or PaaS solution.

Ensuring the scalability of its cloud-based applications

Explanation:-This option is incorrect because the customer doesn't have access to the underlying resources of the cloud-based applications.

Q23) A company is planning to deploy its suite of enterprise applications to Microsoft Azure, where each application has several dependencies and subcomponents. The company must also control and manage the patching activities of the underlying operating system of the servers.

What type of cloud deployment solution should you recommend?

-  Infrastructure as a Service (IaaS)

Explanation:-Infrastructure as a service (IaaS) is an instant computing infrastructure, provisioned, and managed over the internet. It's one of the types of cloud services, along with software as a service (SaaS), platform as a service (PaaS), and serverless.

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 datacenter infrastructure. Each resource is offered as a separate service component, and you only need to rent a particular one for as long as you need it.

A cloud computing service provider, such as Azure, manages the infrastructure, while you purchase, install, configure, and manage your own software — operating systems, middleware, and applications.

You can also use the Azure Virtual Machines, which is an Infrastructure as a Service (IaaS), to host the suite of enterprise applications and manage the patching activities of the underlying operating system of the servers.

Therefore, the correct answer is: Infrastructure as a Service (IaaS).

- Platform as a Service (PaaS)

Explanation:-This option is incorrect because this is a type of cloud service that allows you to focus on developing your applications and services by letting the cloud service provider handle the administrative tasks of the underlying application infrastructure. It doesn't allow the customers to control and manage the patching activities of the underlying operating system of the servers.

- Software as a Service (SaaS)

Explanation:-This option is incorrect because this cloud service type just allows customers to connect to and use its cloud-based apps over the Internet, and not deploy their custom applications. Just like PaaS, it doesn't allow the customers to control and manage the patching activities of the underlying operating system of the servers that you use.

- Functions as a service (FaaS)

Explanation:-This option is incorrect because this is simply an event-driven serverless compute platform. The underlying servers are abstracted and not accessible to the end-user.

Q24)

A company is migrating all its applications and data to Microsoft Azure. There is a strict requirement that the Azure environment must only be comprised of platform-as-a-service (PaaS) solutions to minimize the amount of administrative effort in managing the underlying resources.

Solution: Deploy the applications using the Azure App Service and migrate the data to Azure SQL databases.

Does this solution comply with the requirement?

-  Correct

Explanation:-

Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. You purchase the resources you need from a cloud service provider on a pay-as-you-go basis and access them over a secure Internet connection.

Like IaaS, PaaS includes infrastructure – servers, storage, and networking – but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application life cycle: building, testing, deploying, managing, and updating.

PaaS allows you to avoid the expense and complexity of buying and managing software licenses, the underlying application infrastructure, and middleware, container orchestrators such as Kubernetes or the development tools, and other resources. You manage the applications and services that you develop, and the cloud service provider typically manages everything else.

In this scenario, the Azure App Service and Azure SQL Databases are both Platform as a Service (PaaS) solutions that allow the customers to deploy and run their custom applications quickly while minimizing the administrative effort in managing the underlying server resources. You can indeed deploy the applications using the Azure App Service and migrate the data to Azure SQL databases.

Hence, the correct answer is: Yes as the proposed solution is valid and complies with the requirement.

- Incorrect

Q25) A company plans to migrate its publicly-accessible .NET and PHP applications to Azure. An environment is needed for deploying and testing the company's custom applications quickly while minimizing the administrative effort in managing the underlying server resources. The customer must be able to focus on managing its apps and services while the cloud service provider should be responsible for everything else.

What type of cloud service should you recommend?

- Infrastructure as a Service (IaaS)

Explanation:-This option is incorrect because with this type of cloud service, Azure manages the underlying infrastructure while you purchase, install, configure, and manage your own software, including the operating systems, middleware, and applications. Although IaaS can quickly provide an environment for deploying and testing the company's custom applications, the administrative effort of managing the underlying server resources still falls under the responsibility of the company. The customer is still burdened by managing the underlying resources that power the application, unlike PaaS.

- Platform as a Service (PaaS)

Explanation:-Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. You purchase the resources you need from a cloud service provider on a pay-as-you-go basis and access them over a secure Internet connection. Like IaaS, PaaS includes infrastructure – servers, storage, and networking – but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application life cycle: building, testing, deploying, managing, and updating.

PaaS allows you to avoid the expense and complexity of buying and managing software licenses, the underlying application infrastructure, and middleware, container orchestrators such as Kubernetes or the development tools, and other resources. You manage the applications and services that you develop, and the cloud service provider typically manages everything else.

In this scenario, you can also use the Azure App Service, which is a Platform as a Service (PaaS), to deploy and run the company's custom applications quickly while minimizing the administrative effort in managing the underlying server resources.

Hence, the correct answer is: Platform as a Service (PaaS).

- Software as a Service (SaaS)

Explanation:-This option is incorrect because this cloud service type simply allows customers to connect to and use its cloud-based apps over the Internet, and not deploy their custom PHP or .NET applications. Take note that the scenario mentioned that the company already has a custom application. In SaaS, the application is already there ready to be used and doesn't require any installation by the customer. SaaS doesn't allow the customers to control and manage any underlying servers or resources used by its application.

- Functions as a service (FaaS)

Explanation:-This option is incorrect because this is just an event-driven serverless compute platform. The underlying servers are abstracted and not accessible to the end-user.

Q26)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

[Scalability] is the ability of a system to remain up and running even if one of its components is no longer functioning, such as an outage on a single Azure data center.

- No change is needed

Explanation:-This option is incorrect because Scalability is just an ability of a system to dynamically increase or decrease its resources to meet its workload.

- Agility

Explanation:-This option is incorrect because this simply refers to the ability to react quickly. Cloud services can allocate and deallocate resources quickly. They are provided on-demand via self-service, so vast amounts of computing resources can be provisioned in minutes. There is no manual intervention in provisioning or de-provisioning services.

- Elasticity

Explanation:-This option is incorrect because this is just 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 (and from the most advantageous geographic location). A distinction between scalability and elasticity is that elasticity is done automatically.

- Fault tolerance

Explanation:-Fault tolerance refers to 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.

There are several mechanisms built into Microsoft Azure to ensure services and applications remain available in the event of a failure. Such failures can include hardware failures, such as hard-disk crashes, or temporary availability issues of dependent services, such as storage or networking services. Azure and its software-controlled infrastructure are written in a way to anticipate and manage such failures.

In the event of a failure, the Azure infrastructure (the Fabric Controller) reacts immediately to restore services and infrastructure. For example, if a virtual machine (VM) fails due to a hardware failure on the physical host, the Fabric Controller moves that VM to another physical node based on the same hard disk stored in Azure storage. Azure is similarly capable of coordinating upgrades and updates in such a way as to avoid service downtime.

Hence, this correct answer is: Fault tolerance.

Q27)

You have hundreds of servers hosted in your on-premises environment.

You plan to migrate some of the servers to an Azure pay-as-you-go-subscription.

Which expenditure model should you use?

- Azure Reservations

Explanation:-This option is incorrect because this feature only helps you save money by committing to one-year or three-year plans for multiple products. Committing allows you to get a discount on the resources you use. Reservations can significantly reduce your resource costs up to 72% on pay-as-you-go prices.

- Public cloud

Explanation:-This option is incorrect because this cloud model primarily is owned by the cloud services provider (also known as a hosting provider) such as Microsoft Azure. It provides resources and services to multiple organizations and users, who connect to the cloud service via a secure network connection, typically over the Internet.

- Capital expenditure

Explanation:-This option is incorrect because this expenditure model is an upfront spending of money on physical infrastructure.

- Operating expenditure

Explanation:-In previous years, startup companies needed to acquire physical premises and infrastructure to start their business and begin trading. Large amounts of money were needed to get a new business up and running or to grow an existing company. A company would have to buy new datacenters or new servers in order to allow them to build out new services, which they could then deliver to their customers. With cloud services, that is no longer the case.

Today, organizations can sign up for a service from a cloud provider to get up and running. This enables the company to begin selling or providing services to their customers quickly, without the need for a significant investment into upfront costs.

Capital Expenditures or CapEx is defined as funds used allocated by organizations to obtain, upgrade, and maintain physical assets that are paid upfront such as data centers. These expenditures are generally nonrecurring and result in the acquisition of permanent assets.

The Azure Reservations service is an example of a CapEx model.

Operating Expenditures or OpEx is defined as funds that are used by organizations for their day-to-day operations. Think of OpEx as your electricity and water bill. The more you use, the higher the charges.

Azure on-demand or pay-as-you-go pricing is an example of an OpEx model.

Hence, this correct answer is: Operating expenditure.

Q28)

An organization is planning to migrate its application servers hosted on-premises to Azure.

What is the primary benefit of using the public cloud for its servers?

- Public cloud is a shared entity operated by a third-party cloud service provider that various corporations can use.

Explanation:-Public clouds are owned and operated by third-party cloud service providers, which deliver their computing resources, like servers and storage, over the Internet. Microsoft Azure is an example of a public cloud. With a public cloud, all hardware, software, and other supporting infrastructure is owned and managed by the cloud provider. You access these services and manage your account using a web browser.

A private cloud refers to cloud computing resources used exclusively by a single business or organization. A private cloud can be physically located on the company's on-site datacenter. Some companies also pay third-party service providers to host their private cloud. A private cloud is one in which the services and infrastructure are maintained on a private network.

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

Hybrid clouds combine public and private clouds, bound together by technology that allows data and applications to be shared between them. By allowing data and applications to move between private and public clouds, a hybrid cloud gives your business greater flexibility, more deployment options, and helps optimize your existing infrastructure, security, and compliance.

Hence, the correct answer is: Public cloud is a shared entity operated by a third-party cloud service provider that various corporations can use.

- Public cloud is owned by the public and not a private organization or corporation.

Explanation:-The option is incorrect because this is just one of the characteristics of a private cloud and not a benefit of a public cloud.

- Public cloud is used exclusively by a single business or organization.

Explanation:-The option is incorrect. Although a public cloud is a shared entity, customers still need to pay for the usage of their cloud resources.

Moreover, a public cloud is not crowdfunded by the public but is operated by a third-party cloud service provider.

- Public cloud is a free shared entity that is crowdfunded by the public and is accessible by everyone.

Explanation:-The option is incorrect because the public cloud is owned by a cloud services provider such as Microsoft.

Q29)

Your company plans on migrating its application named TDojoApp1 to Azure.

TDojoApp1 has a high usage during the first and third weeks of the month and low usage during the 2nd and 4th weeks.

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

- Load balancing

Explanation:-This option is incorrect because this refers to evenly distributing load (incoming network traffic) across a group of backend resources or servers.

-  Elasticity

Explanation:-Elasticity refers to 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 (and from the most advantageous geographic location). A distinction between scalability and elasticity is that elasticity is done automatically.

With cloud elasticity, a company avoids paying for unused capacity or idle resources and doesn't have to worry about investing in the purchase or maintenance of additional resources and equipment.

Hence, the correct answer is: Elasticity.

- High availability

Explanation:-This option is incorrect because this refers to the ability to keep services up and running for long periods of time, with very little downtime, depending on the service in question.

- Fault tolerance

Explanation:-This option is incorrect because this refers to 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.

Q30)

An organization is planning to migrate all of its servers and data to Azure.

You need to recommend a solution to only use Software-as-a-Service Azure products that will support the planned migration.

Solution: Deploy Azure virtual machines and Azure SQL Database.

Does this meet the goal?

- Correct

-  Incorrect

Explanation:-

Infrastructure as a service (IaaS) is an instant computing infrastructure, provisioned, and managed over the Internet. It's one of the types of cloud services, along with software as a service (SaaS), platform as a service (PaaS), and serverless.

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 datacenter infrastructure. Each resource is offered as a separate service component, and you only need to rent a particular one for as long as you need it.

Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. You purchase the resources you need from a cloud service provider on a pay-as-you-go basis and access them over a secure Internet connection.

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

Azure SQL Database is a fully managed platform as a service (PaaS) database engine that handles most of the database management functions such as upgrading, patching, backups, and monitoring without user involvement.

Azure Virtual Machines (VM) is an infrastructure as a service (IaaS) service that gives you the flexibility of virtualization without having to buy and maintain the physical hardware that runs it. However, you still need to maintain the VM by performing tasks, such as configuring, patching, and installing the software that runs on it.

Q31) You are planning to deploy an Artificial Intelligence Solution in Azure. What Azure service should you use to easily build, test, and iterate on a predictive analysis model with an interactive and visual workspace?

- Azure Data Studio

Explanation:-This option is incorrect because this is just a cross-platform database tool for data professionals using the Microsoft family of on-premises and cloud data platforms on Windows, macOS, and Linux. Azure Data Studio offers a modern editor experience with IntelliSense, code snippets, source control integration, and an integrated terminal.

- Azure Functions

Explanation:-This option is incorrect because this service simply allows you to run small pieces of code (called "functions") without worrying about application infrastructure. With Azure Functions, the cloud infrastructure provides all the up-to-date servers you need to keep your application running at scale. Azure Functions allow developers to take action by connecting to data sources or messaging solutions thus making it easy to process and react to events.

- Azure Machine Learning Studio

Explanation:-Azure Machine Learning Studio gives you an interactive, visual workspace to easily build, test, and iterate on a predictive analysis model. You drag-and-drop datasets and analysis modules onto an interactive canvas, connecting them together to form an experiment, which you run in Machine Learning Studio (classic). There is no programming required, visually connect datasets and modules to construct your predictive analysis model. Azure Machine Learning can be used for any kind of machine learning, from classical ML to deep learning, supervised, and unsupervised learning. Whether you prefer to write Python or R code with the SDK or work with no-code/low-code options in the studio, you can build, train, and track machine learning and deep-learning models in an Azure Machine Learning Workspace.

Hence, the correct answer is: Azure Machine Learning Studio.

- Azure Cognitive Services

Explanation:-This option is incorrect because this service only helps developers build intelligent applications without having direct AI or data science skills or knowledge. Azure Cognitive Services enable developers to easily add cognitive features into their applications.

Q32) What Azure service should you use if you want your application to have a higher level of availability and to evenly distribute internal traffic across virtual machines within a VNET?

- Private Load Balancer

Explanation:-Private (or Internal) Load balancer provides a higher level of availability and scale by spreading incoming requests across virtual machines (VMs). Private load balancer distributes traffic to resources that are inside a virtual network. Azure restricts access to the frontend IP addresses of a virtual network that are load balanced. Front-end IP addresses and virtual networks are never directly exposed to an Internet endpoint. Internal line-of-business applications run in Azure and are accessed from within Azure or from on-premises resources.

Internal load balancers balance traffic within a VNET while external load balancers balance traffic to and from an internet-connected endpoint. Hence, the correct answer is: Private Load balancer.

- Public Load Balancer

Explanation:-This option is incorrect because this service is primarily used for providing outbound connections for virtual machines (VMs) inside your virtual network. These connections are accomplished by translating their private IP addresses to public IP addresses. Public Load Balancers are used to load balance Internet traffic to your VMs. Take note that the scenario mentioned that you have to evenly distribute internal traffic across virtual machines within a VNET only.

- Application Gateway

Explanation:-This option is incorrect because this service is a web traffic load balancer that enables you to manage traffic to your web applications. Traditional load balancers operate at the transport layer (OSI layer 4 - TCP and UDP) and route traffic based on source IP address and port, to a destination IP address and port.

- Network Security Group

Explanation:-This option is incorrect because this is used to filter network traffic to and from Azure resources in an Azure virtual network. It contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol.

Q33) You are planning to migrate your MySQL database to Azure. What Azure service should you use to support different migration scenarios for both offline (one-time) and online (continuous sync) migrations and helps you simplify, guide, and automate your database migration to Azure?

- Azure Site Recovery

Explanation:-This option is incorrect because this service simply helps ensure business continuity by keeping business apps and workloads running during outages. Site Recovery replicates workloads running on physical and virtual machines (VMs) from a primary site to a secondary location. When an outage occurs at your primary site, you failover to a secondary location, and access apps from there. After the primary location is running again, you can fail back to it.

-   Azure Database Migration Service

Explanation:-Azure Database Migration Service is designed to support different migration scenarios (source/target pairs) for both offline (one-time) and online (continuous sync) migrations. Azure Database Migration Service enables seamless migrations from multiple database sources to Azure Data platforms with minimal downtime. The service uses the Data Migration Assistant to generate assessment reports that provide recommendations to guide you through the changes required before performing a migration. When you're ready to begin the migration process, Azure Database Migration Service performs all the required steps.

Hence, the correct answer is: Database Migration Service.

- Azure Batch

Explanation:-This option is incorrect because this service just creates and manages a pool of compute nodes (virtual machines), installs the applications you want to run, and schedules jobs to run on the nodes. There's no cluster or job scheduler software to install, manage, or scale. Instead, you use Batch APIs and tools, command-line scripts, or the Azure portal to configure, manage, and monitor your jobs.

- Azure Application Gateway

Explanation:-This option is incorrect because this is only a web traffic load balancer that enables you to manage traffic to your web applications. Traditional load balancers operate at the transport layer (OSI layer 4 - TCP and UDP) and route traffic based on source IP address and port, to a destination IP address and port.

Q34) A news agency company plans to migrate its WordPress application to Azure. As a Support Engineer of the company, you have to suggest a service that can monitor your application, automatically detect performance anomalies, diagnose issues, and understand user behavior.

Which Azure service can do this?

- Azure Application Gateway

Explanation:-This option is incorrect because this service is simply a web traffic load balancer that enables you to manage traffic to your web applications, which can be used as an internal application load balancer, or as an internet-facing application load balancer. However, this can't be used to monitor user behavior in your application.

- Azure App Service

Explanation:-This option is incorrect because this service just enables you to build and host web apps, mobile back ends, and RESTful APIs in the programming language of your choice without managing infrastructure. It is not capable of collecting application performance anomalies.

-   Azure Application Insights

Explanation:-

Application Insights is an extensible Application Performance Management (APM) service for developers and DevOps professionals. Use it to monitor your live applications. It will automatically detect performance anomalies and includes powerful analytics tools to help you diagnose issues and understand what users actually do with your app.

It's designed to help you continuously improve performance and usability. It works for apps on a wide variety of platforms including .NET, Node.js, Java, and Python hosted on-premises, hybrid, or any public cloud. It integrates with your DevOps process and has connection points to a variety of development tools. It can monitor and analyze telemetry from mobile apps by integrating with Visual Studio App Center.

Application Insights is used by installing a small instrumentation package (SDK) in your application or enabling Application Insights using the Application Insights Agent. The instrumentation monitors your app and directs the telemetry data to an Azure Application Insights Resource using a unique GUID that we refer to as an Instrumentation Key.

You can instrument not only the web service application, but also any background components, and the JavaScript in the web pages themselves. The application and its components can run anywhere - it doesn't have to be hosted in Azure.

Hence, the correct answer is: Application Insights.

- Azure AD Connect

Explanation:-This option is incorrect because this is a Microsoft tool designed to meet and accomplish your hybrid identity goals for Active Directory. You cannot use this to diagnose issues with your application.

Q35)

You are planning to build an application with an event-based architecture that can ingest events from Blob storage and create custom topics.

What Azure service should you use?

- Azure Logic Apps

Explanation:-This option is incorrect because it only helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations. However, this can't be used to build event-based architectures.

- Azure Functions

Explanation:-This option is incorrect. Although you can use this service for event-based architectures, it is not capable of making custom topics, unlike Azure Event Grid. Azure Functions just allows you to run small pieces of code (called "functions") without worrying about application infrastructure.

- Azure Machine Learning Studio

Explanation:-This option is incorrect because this service simply gives you an interactive, visual workspace to easily build, test, and iterate on a predictive analysis model. You drag-and-drop datasets and analysis modules onto an interactive canvas, connecting them together to form an experiment, which you run in Machine Learning Studio. You cannot use this to ingest events from blob storage.

-   Azure Event Grid

Explanation:-Azure Event Grid allows you to easily build applications with event-based architectures. First, select the Azure resource you would like to subscribe to, and then give the event handler or WebHook endpoint to send the event to. Event Grid has built-in support for events coming from Azure services, like storage blobs and resource groups. Event Grid also has support for your own events, using custom topics.

You can use filters to route specific events to different endpoints, multicast to multiple endpoints, and make sure your events are reliably delivered.

Azure Event Grid is deployed to maximize availability by natively spreading across multiple fault domains in every region, and across availability zones (in regions that support them).

Hence, the correct answer is: Azure Event Grid.

Q36) Which Azure Service enables various types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the Internet, and on-premises networks?

- Azure Sentinel

Explanation:-This option is incorrect because this service just provides you with a birds-eye view across the enterprise. Sentinel provides a proactive and responsive cloud-native SIEM that will help customers simplify their security operations and scale as they grow.

-   Azure Virtual Network

Explanation:-Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the Internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own datacenter but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation.

A Virtual Network (VNet) is a logical representation of your network in the cloud. It allows you to define your own private IP address space and segment the network into subnets. VNets serve as a trust boundary to host your compute resources such as Azure Virtual Machines and Cloud Services (web/worker roles). A VNet allows direct private IP communication between the resources hosted in it. You can link a virtual network to an on-premises network through a VPN Gateway, or ExpressRoute.

Hence, the correct answer is: Azure Virtual Network.

- Public IP

Explanation:-This option is incorrect because this feature simply allows Internet traffic to communicate inbound to Azure resources. Public IP addresses enable Azure resources to communicate to the Internet and public-facing Azure services.

- Azure Content Delivery Network (CDN)

Explanation:-This option is incorrect because this is primarily used to accelerate the delivery of high-bandwidth content to customers worldwide—from applications and stored content to streaming video.

Q37)

An organization has successfully migrated its **SQL Database** to Azure and they want to prevent other users in the organization from accidentally deleting or modifying critical resources.

What Azure feature should they use?

- Azure Policy

Explanation:-This option is incorrect because this simply helps you enforce organizational standards and assess compliance at-scale. Through its compliance dashboard, it provides an aggregated view to evaluate the overall state of the environment, with the ability to drill-down to the per-resource, per-policy granularity. However, you cannot use this to restrict user permissions.

- Azure Active Directory

Explanation:-This option is incorrect because this service is Microsoft's cloud-based identity and access management service, which just helps employees sign in and access resources from external resources, such as Microsoft Office 365, the Azure portal, and on your corporate network.

-  Azure role-based access control

Explanation:-This option is incorrect because this feature only helps you manage who has access to Azure resources, what they can do with those resources, and what areas they have access to. It is not capable of preventing users even with appropriate permissions to accidentally delete critical resources.

-  Azure Resource Manager Locks

Explanation:-As an administrator, you may need to lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. With Azure Resource Manager Locks, you can set the lock level to CanNotDelete or ReadOnly. In the portal, the locks are called Delete and Read-only respectively. When you apply a lock at a parent scope, all resources within that scope inherit the same lock. Even the resources you add later inherit the lock from the parent. The most restrictive lock in the inheritance takes precedence. Hence, the correct answer is: Azure Resource Manager Locks.

Q38)

A company wants to ensure that users in their company are authenticated when they access resources defined in their Microsoft Azure account.

Which of the following is the correct definition of authentication?

-  This specifies the type of service you can use in Azure
- This specifies the type of data you can use in Azure
-  This is the act of providing legitimate credentials

Explanation:-This is the act of providing legitimate credentials because authentication is the process of proving you are who you say you are (i.e. inputting your creds). Authentication is sometimes shortened to AuthN.

For more information, please visit:

<https://docs.microsoft.com/en-us/azure/active-directory/develop/authentication-scenarios>

- This specifies what you can do in Azure

Q39)

A company is planning on creating several Virtual Machines within Microsoft Azure.

They would be using the Azure Virtual Machine service.

Which of the following is the right category to which the Azure Virtual Machine service belongs to?

-  Infrastructure as a service (IaaS)

Explanation:-Infrastructure as a service (IaaS) because IaaS gives you a server in the cloud (virtual machine) that you have complete control over. With an Azure VM, you are responsible for managing everything from the Operating System on up to the application you are running.

For more information, please visit:

<https://azure.microsoft.com/en-us/blog/infrastructure-as-a-service-series-virtual-machines-and-windows/>

- Platform as a service (PaaS)
- Software as a service (SaaS)
- Function as a service (FaaS)

Q40)

You need to manage Microsoft Azure by using Azure Cloud Shell.

Which Azure portal icon should you select?

 Select 1

Explanation:-

Choose Icon 1 because Azure Cloud Shell is an interactive, authenticated, browser-accessible shell for managing Azure resources. It provides the flexibility of choosing the shell experience that best suits the way you work, either Bash or PowerShell.

Source - <https://docs.microsoft.com/en-us/azure/cloud-shell/overview>

- Select 2
- Select 3
- Select 4

Q41) A company wants to make use of Microsoft Azure for deployment of various solutions.

They want to ensure that whenever users authenticate to Azure, they have to make use of Multi-Factor Authentication (MFA).

Which of the following can help them achieve this?

Azure AD Identity Protection

Explanation:-

Azure AD Identity Protection helps you manage the roll-out of Azure AD Multi-Factor Authentication (MFA) registration by configuring a Conditional Access policy to require MFA registration no matter what modern authentication app you are signing in to.

Link - <https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/howto-identity-protection-configure-mfa-policy>

 Azure Security Center

Azure DDoS protection

Azure privileged identity management

Q42)

A company is planning on hosting solutions within Microsoft Azure Cloud.

They need to implement MFA for identities hosted in Microsoft Azure.

There are only two valid ways of authentications for MFA as listed below:

- Picture Identification

- Passport Number

Is the above true or false?

 TRUE

 FALSE

Explanation:-

Azure AD Multi-Factor Authentication works by requiring two or more of the following authentication methods:

Something you know, typically a password.

Something you have, such as a trusted device that is not easily duplicated, like a phone or hardware key.

Something you are - biometrics like a fingerprint or face scan.

Available verification methods When a user signs in to an application or service and receive an MFA prompt, they can choose from one of their registered forms of additional verification.

An administrator could require registration of these Azure AD Multi-Factor Authentication verification methods, or the user can access their own My Profile to edit or add verification methods. The following additional forms of verification can be used with Azure AD Multi-Factor Authentication:

Microsoft Authenticator app

OATH Hardware token

SMS Voice call

Q43) You are working on understanding all the key terms when it comes to International Standards, data privacy and data protection policies.

Which of the following choices pertains to the following?

"An organization that defines international standards across all industries"

- Azure Government
- GDPR
- ISO

Explanation:-

ISO is the correct answer because ISO, International Organization for Standardization, is an organization defines international standards across all industries.

For more information, please visit:

<https://docs.microsoft.com/en-us/microsoft-365/compliance/offering-iso-27001>

NIST is incorrect because NIST, National Institute of Standards and Technology (is a physical sciences laboratory, and a non-regulatory agency of the United States Department of Commerce. Its mission is to promote innovation and industrial competitiveness. NIST's activities are organized into laboratory programs that include nanoscale science and technology, engineering, information technology, neutron research, material measurement, and physical measurement.

For more information, please <https://docs.microsoft.com/en-us/microsoft-365/compliance/offering-nist-csf>

GDPR is incorrect because GDPR is a new set of rules designed to give EU citizens more control over their personal data. It aims to simplify the regulatory environment for business so both citizens and businesses in the European Union can fully benefit from the digital economy.

For more information, please visit:

<https://azure.microsoft.com/en-us/blog/protecting-privacy-in-microsoft-azure-gdpr-azure-policy-updates/>

- NIST

Q44) You are working on understanding all the key terms when it comes to International standards, data privacy and data protection policies.

Which of the following pertains to the following?

"An organization that defines standards used by the United States government"

- Azure Government
- GDPR
- ISO
- NIST

Explanation:-

NIST is correct because NIST, National Institute of Standards and Technology (is a physical sciences laboratory, and a non-regulatory agency of the United States Department of Commerce. Its mission is to promote innovation and industrial competitiveness. NIST's activities are organized into laboratory programs that include nanoscale science and technology, engineering, information technology, neutron research, material measurement, and physical measurement.

For more information, please <https://docs.microsoft.com/en-us/microsoft-365/compliance/offering-nist-csf>

Azure Government is incorrect because Azure Government delivers a dedicated cloud enabling only US government agencies and their partners to transform mission-critical workloads to the cloud. ... In order to provide you with the highest level of security and compliance, Azure Government uses physically isolated data-centers and networks.

For more information, please visit:

<https://docs.microsoft.com/en-us/azure/azure-government/documentation-government-welcome>

ISO is the incorrect answer because ISO, International Organization for Standardization, is an organization defines international standards across all industries.

For more information, please visit:

<https://docs.microsoft.com/en-us/microsoft-365/compliance/offering-iso-27001>

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For more information, please visit:

<https://azure.microsoft.com/en-us/blog/protecting-privacy-in-microsoft-azure-gdpr-azure-policy-updates/>

Q45)

You are working on understanding all the key terms when it comes to International standards, data privacy and data protection policies. Which of the following pertains to the following?

"A European policy that regulates data privacy and data protection"

Azure Government

 GDPR

Explanation:-

GDPR is correct because GDPR is a new set of rules designed to give EU citizens more control over their personal data. It aims to simplify the regulatory environment for business so both citizens and businesses in the European Union can fully benefit from the digital economy.

For more information, please visit:

<https://azure.microsoft.com/en-us/blog/protecting-privacy-in-microsoft-azure-gdpr-azure-policy-updates/>

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For more information, please <https://docs.microsoft.com/en-us/microsoft-365/compliance/offering-nist-csf>

ISO

NIST

Q46)

A company is planning on hosting 2 Virtual Machines in Azure as shown below:

When the virtual machine demovm is stopped, will you still incur costs for the storage attached to the Virtual Machine?

 Yes

Explanation:-Azure continues to charge for the VM core hours while it is Stopped (Deallocated), based on the size of the VM and the image you selected to create it. You continue to accrue charges for the VM's cloud service and the storage needed for the VM's OS disk and any attached data disks. Temporary (scratch) disk storage on the VM is free.

More for information, please visit:

https://blogs.technet.microsoft.com/uspartner_ts2team/2014/10/10/azure-virtual-machines-stopping-versus-stopping-deallocating/

No

Q47) Which Azure service provides you with real-time analytics and complex event-processing engine?

- Azure Logic Apps

Explanation:-This option is incorrect because this only helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations.

-  Azure Stream Analytics

Explanation:-Azure Stream Analytics is a real-time analytics and complex event-processing engine that is designed to analyze and process high volumes of fast streaming data from multiple sources simultaneously.

Patterns and relationships can be identified in information extracted from a number of input sources including devices, sensors, clickstreams, social media feeds, and applications. These patterns can be used to trigger actions and initiate workflows such as creating alerts, feeding information to a reporting tool, or storing transformed data for later use.

The following scenarios are examples of when you can use Azure Stream Analytics:

- Analyze real-time telemetry streams from IoT devices
- Weblogs clickstream analytics
- Geospatial analytics for fleet management and driverless vehicles
- Remote monitoring and predictive maintenance of high-value assets
- real-time analytics on Point of Sale data for inventory control and anomaly detection

The correct answer is: Azure Stream Analytics.

- Azure Data Lake

Explanation:-This option is incorrect because this is simply an Apache Spark-based analytics platform optimized for the Microsoft Azure cloud services platform.

- Azure Event Hub

Explanation:-This option is incorrect because this is just a big data streaming platform and event ingestion service. It can receive and process millions of events per second. Data sent to an event hub can be transformed and stored by using any real-time analytics provider or batching/storage adapters.

Q48) Which Azure service provides recommendations on how you can optimize and improve the efficiency of your workloads by identifying idle and underutilized resources?

- Azure Blueprints

Explanation:-This option is incorrect because this only enables cloud architects and central information technology groups to define a repeatable set of Azure resources that implements and adheres to an organization's standards, patterns, and requirements. It is not capable of analyzing your Azure spending, unlike Azure Cost Management + Billing.

- Azure Portal

Explanation:-This option is incorrect because this is simply a web-based, unified console that provides an alternative to command-line tools that you can use to access Azure Cost Management + Billing service.

-  Azure Monitor

Explanation:-This option is incorrect because this service primarily helps you understand how your applications are performing and proactively identifies issues affecting them and the resources they depend on. You cannot use this to show recommendations on how to optimize your Azure spending.

- Azure Cost Management + Billing

Explanation:-Azure Cost Management + Billing is a suite of tools provided by Microsoft that help you analyze, manage, and optimize the costs of your workloads. Using the suite helps ensure that your organization is taking advantage of the benefits provided by the cloud.

With Azure products and services, you only pay for what you use. As you create and use Azure resources, you're charged for the resources. Because of the deployment ease for new resources, the costs of your workloads can jump significantly without proper analysis and monitoring. You use Azure Cost Management + Billing features to:

- Conduct billing administrative tasks such as paying your bill
- Manage billing access to costs
- Download cost and usage data that was used to generate your monthly invoice
- Proactively apply data analysis to your costs
- Set spending thresholds

- identify opportunities for workload changes that can optimize your spending

The ways that Cost Management helps you plan for and control your costs include:

- you use cost analysis to explore and analyze your organizational costs.
- Budgets help you plan for and meet financial accountability in your organization.
- recommendations show how you can optimize and improve efficiency by identifying idle and underutilized resources.

Hence, the correct answer is: Azure Cost Management + Billing.

Q49)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

The [Azure Developer] support plan offers the lowest cost option to receive 24/7 technical support by email and phone.

- No change is needed

Explanation:-This option is incorrect because the Azure Developer plan does not offer 24/7 technical support by email and phone.

- Azure Basic plan

Explanation:-This option is incorrect because the Azure Basic plan does not offer any technical support. This plan is included for all Azure customers.

- Azure Standard plan

Explanation:-Azure Support offers you four options to meet your needs, whether you are getting started or already deploying business-critical workloads on Azure by helping you to lower costs while maintaining optimized performance and break-fix support. The four support options are:

Developer plan: It is intended for trial and non-production environments. The availability of support engineers is during business hours by email only with a response time of 8 hours.

Standard plan: It is intended for production workload environments. The lowest cost option for 24/7 technical support by email and phone.

Professional Direct Plan: It is intended for mid-sized to large companies with substantial business-critical utilization of Microsoft Azure. 24/7 technical support by email and phone with a response time of less than an hour for severity A.

Premier Plan: It is well suited for large or global enterprises with strategic and business-critical dependence on Microsoft products including Azure. 24/7 technical support with a 15-minute response time.

Organizations with enterprise agreements with Microsoft can purchase any plan except for the Developer plan.

Microsoft Azure classifies its responses by severity:

Severity A: Critical business impact. Customer's business has significant loss or degradation of services and requires immediate attention.

Severity B: Moderate business impact. Customer's business has moderate loss or degradation of services, but work can reasonably continue in an impaired manner.

Severity C: Minimum business impact. Customer's business is functioning with minor impediments of services.

Hence, the correct answer is: Azure Standard plan.

- Azure Professional Direct

Explanation:-This option is incorrect because it does not offer the lowest cost option for 24/7 technical support by email and phone.

Q50)

You have an application on Azure that utilizes Azure web app and Azure SQL Database in a single region.

The Service Level Agreement (SLA) for your Azure web app is 99.95% and 99.99% for Azure SQL Database.

What is the composite SLA for the application?

- Exactly 99.95% which is the lowest SLA associated with the application.

Explanation:-This option is incorrect because you need to multiply the Service Level Agreement (SLA) of the first service to the Service Level Agreement (SLA) of the second service. The product of those two SLAs is the composite SLA.

- 99.99% which is the highest SLA associated with the application.

Explanation:-This option is incorrect because you need to multiply the Service Level Agreement (SLA) of the first service to the Service Level Agreement (SLA) of the second service. The product of those two SLAs is the composite SLA.

- 99.97% which is the average of the two SLAs divided by two.

Explanation:-This option is incorrect because in order to get the composite SLA, you need to multiply the SLAs of each Azure service with each other.

- Approximately 99.95% which is the product of the two SLAs.

Explanation:-

When combining SLAs across different service offerings, the result SLA is called a Composite SLA. The resulting composite SLA can provide higher or lower uptime values, depending on your application architecture.

Consider an App Service web app that writes to Azure SQL Database. At the time of this writing, these Azure services have the following SLAs:

- App Service Web Apps is 99.95 percent.

- SQL Database is 99.99 percent.

Maximum downtime you would expect for this example application

In the example above, if either service fails, the whole application will fail. In general, the individual probability values for each service are independent.

However, the composite SLA value for this application is:

SLA of the first service X SLA of the second service = composite SLA

99.95 percent x 99.99 percent = Approximately 99.95 percent

This means the combined value is lower than the individual SLA values, meaning a higher probability of failure. This isn't surprising, because an application that relies on multiple services has more potential failure points.

Hence, the correct answer is: Approximately 99.95% which is the product of the two SLAs.

Q51)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

Modern Lifecycle Policy states that it will provide [a minimum of 12 months' notice before ending support for a service].

- No change is needed

Explanation:-The Modern Lifecycle Policy covers products and services that are serviced and supported continuously. Under this policy, the product or service remains in support if the following criteria are met:

Customers must stay current as per the servicing and system requirements published for the product or service.

Customers must be licensed to use the product or service.

Microsoft must currently offer support for the product or service.

For products and services governed by the Modern Lifecycle Policy, unless otherwise noted, Microsoft's policy is to provide a minimum 30 days notification when customers are required to take action in order to avoid significant degradation to the normal use of the product or service.

For products governed by the Modern Lifecycle Policy, Microsoft will provide a minimum of 12 months' notification prior to ending support if no successor product or service is offered—excluding free services or preview releases.

The Fixed Lifecycle Policy is designed to take the guesswork out of determining the length of time Microsoft provides support and servicing for a product.

In most situations, Microsoft provides:

10 years of support (a minimum of five years Mainstream Support followed by five years Extended Support) at the supported service pack level for business, developer, and desktop operating system products. To be eligible for support, customers may be required to deploy the latest update.

Five years of Mainstream Support at the supported service pack level for consumer and multimedia products.

Mainstream Support is the first phase of the product lifecycle. At the supported service pack level, Mainstream Support for products and services include:

Incident support (no-charge incident support, paid incident support, support charged on an hourly basis, support for warranty claims)

Security update support

The ability to request non-security updates

Extended Support phase follows Mainstream Support. At the supported service pack level, Extended Support includes:

Paid support

Security updates at no additional cost

Ability to request non-security fixes for select products.

Hence, the correct answer is: No change is needed.

- provide a minimum of five years of Mainstream Support for newly released products.

Explanation:-This option is incorrect because this is the support feature of Fixed Lifecycle Policy.

- provide five years of Extended Support after Mainstream Support.

Explanation:-This option is incorrect because this is the support feature of Fixed Lifecycle Policy.

- provide three years of End of Support by purchasing paid programs for applicable products.

Explanation:-This option is incorrect because the End of Support pertains to security updates that are no longer provided and customers can purchase Extended Security Update (ESU) as a last resort option to run certain legacy Microsoft products past the End of Support period.

Q52)

A company hosts its non-critical servers in Azure.

You need to recommend a support plan that gives you billing and subscription management support, Azure Advisor access, and Azure health status and notifications at the lowest possible cost.

What support plan should you include in the recommendation?

- Developer

Explanation:-This option is incorrect because they do not meet the requirement of the scenario that requires the lowest possible cost.

- Standard

Explanation:-This option is incorrect because they do not meet the requirement of the scenario that requires the lowest possible cost.

- Basic

Explanation:-Azure Support offers you five options to meet your needs, whether you are getting started or already deploying business-critical workloads on Azure by helping you to lower costs while maintaining optimized performance and break-fix support.

The five support options are:

Basic plan: A free support plan that is included for all Azure customers. It has access to 24/7 self-help resources, personalized guide to Azure best practices, and Azure health status and notifications. It does not include technical support.

Developer plan: It is intended for trial and non-production environments. The availability of support engineers is during business hours by email only with a response time of 8 hours.

Standard plan: It is intended for production workload environments. The lowest cost option for 24/7 technical support by email and phone.

Professional Direct Plan: It is intended for mid-sized to large companies with substantial business-critical utilization of Microsoft Azure. 24/7 technical support by email and phone with a response time of less than an hour for severity A.

Premier Plan: It is well suited for large or global enterprises with strategic and business-critical dependence on Microsoft products including Azure. 24/7 technical support with a 15-minute response time.

Organizations with enterprise agreements with Microsoft can purchase any plan except for the Developer plan.

Microsoft Azure classifies its responses by severity:

Severity A: Critical business impact. Customer's business has significant loss or degradation of services and requires immediate attention.

Severity B: Moderate business impact. Customer's business has moderate loss or degradation of services, but work can reasonably continue in an impaired manner.

Severity C: Minimum business impact. The customer's business is functioning with minor impediments of services.

Hence, the correct answer is: Basic.

- Premier

Explanation:-This option is incorrect because it has the highest cost among the support plans.

Q53)

A company is migrating its website to Azure. The website is accessed by users worldwide for video streaming services. You need to recommend a solution that will provide reduced load times and high transfer speeds.

What Azure service should you recommend?

- Blob Storage

Explanation:-This option is incorrect because this is simply an object storage solution of Azure. Blob storage is optimized for storing massive amounts of unstructured data, such as text or binary data. Objects in Blob storage can be accessed from anywhere in the world via HTTP or HTTPS. This service does not cache your data but it can work as an origin for Azure CDN.

- Network Security Groups

Explanation:-This option is incorrect because it is just used to filter network traffic to and from Azure resources in an Azure virtual network. It contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol.

- Load Balancers

Explanation:-This option is incorrect because this service refers to evenly distributing load (incoming network traffic) across a group of backend resources or servers. Load Balancer distributes inbound flows that arrive at the load balancer's front end to backend pool instances. The backend pool instances can be Azure Virtual Machines or instances in a virtual machine scale set. This can't be used to cache data, unlike the Azure Content Delivery Network.

- Azure Content Delivery Network

Explanation:-Content Delivery Network is a distributed network of servers that can efficiently deliver web content to users. CDNs store cached content on edge servers in point-of-presence (POP) locations that are close to end-users, to minimize latency.

It offers developers a global solution for rapidly delivering high-bandwidth content to users by caching their content at strategically placed physical nodes across the world. Azure CDN can also accelerate dynamic content, which cannot be cached, by leveraging various network optimizations using CDN POPs.

Therefore, the correct answer is: Azure Content Delivery Network (CDN).

Q54)

A company plans to migrate an application to Azure. The application will host the banking records of its users and you need to recommend a security information event management (SIEM) and security orchestration automated response (SOAR) solution.

What Azure service will fit your recommendation?

- Azure CycleCloud

Explanation:-This option is incorrect because this is primarily designed to enable enterprise IT organizations to provide secure and flexible cloud HPC and Big Compute environments to their end-users. With the dynamic scaling of clusters, the business can get the resources it needs at the right time and the right price.

-  Azure Sphere

Explanation:-This option is incorrect because this is just a secure, high-level application platform with built-in communication and security features for Internet-connected devices.

- Azure Sentinel

Explanation:-Azure Sentinel is a scalable, cloud-native, security information event management (SIEM) and security orchestration automated response (SOAR) solution. Azure Sentinel delivers intelligent security analytics and threat intelligence across the enterprise, providing a single solution for alert detection, threat visibility, proactive hunting, and threat response.

Azure Sentinel is your birds-eye view across the enterprise alleviating the stress of increasingly sophisticated attacks, increasing volumes of alerts, and long resolution timeframes.

- Collect data at cloud scale across all users, devices, applications, and infrastructure, both on-premises and in multiple clouds.
- Detect previously undetected threats, and minimize false positives using Microsoft's analytics and unparalleled threat intelligence.
- Investigate threats with artificial intelligence, and hunt for suspicious activities at scale, tapping into years of cybersecurity work at Microsoft.
- Respond to incidents rapidly with built-in orchestration and automation of common tasks.

Hence, the correct answer is: Azure Sentinel.

- Azure Security Center

Explanation:-This option is incorrect because this service is just 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. It is not designed for security orchestration and automated response (SOAR) or to be a SIEM tool.

Q55)

A company has a Windows Server running in an Azure Virtual Machine hosted in the South Central US Azure region. You have to view the planned maintenance, incidents, and other service outages in Azure that may affect your virtual machine and other related services.

What service should you use to accomplish the above requirement?

- Azure Service Health

Explanation:

Azure Service Health notifies you about Azure service incidents and planned maintenance so you can take action to mitigate downtime. Configure customizable cloud alerts and use your personalized dashboard to analyze health issues, monitor the impact to your cloud resources, get guidance and support and share details and updates.

Link - <https://azure.microsoft.com/en-in/features/service-health/>

Service Health helps you assess the health of Azure, while Azure Monitor helps you determine if there are any issues on your end. Both services use the same alerting platform to keep you notified and informed of the availability and performance of your Azure workloads. Link - <https://azure.microsoft.com/en-in/blog/what-s-the-difference-between-azure-monitor-and-azure-service-health/>

- Azure Advisor

Explanation:-This option is incorrect because this service only analyzes your configurations and usage telemetry to offer personalized and actionable recommendations to help you optimize your Azure resources for reliability, security, operational excellence, performance, and cost. It doesn't provide information about the planned maintenance, incidents, and other service outages in Azure that may affect your virtual machine and other related services.

-  Azure Service Fabric

Explanation:-This option is incorrect because this is just a distributed systems platform in Azure that makes it easy for you to package, deploy, and manage scalable and reliable microservices and containers.

- Azure Monitor

Explanation:-This option is incorrect because this is simply a fully managed platform as a service (PaaS) that provides enterprise-grade data models in the cloud and not a monitoring service.

Q56) What service enables you to evaluate the regulatory compliance as well as improve the compliance posture of your Azure environment?

- Azure Advisor

Explanation:-This option is incorrect because this service just analyzes your configurations and usage telemetry and offers personalised, actionable recommendations to help you optimize your Azure resources for reliability, security, operational excellence, performance, and cost.

-  Azure Blueprints

Explanation:-This option is incorrect because this simply defines a repeatable set of Azure resources that implement and adhere to your organization's standards, patterns, and requirements and rapidly build new environments with a set of built-in components to speed up development and delivery.

-  Azure Security Center

Explanation:-

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 not - as well as on-premises.

Keeping your resources safe is a joint effort between your cloud provider, Azure, and you, the customer. You have to make sure your workloads are secure as you move to the cloud, and at the same time, when you move to IaaS (infrastructure as a service) there is more customer responsibility than there was in PaaS (platform as a service), and SaaS (software as a service). Azure Security Center provides you the tools needed to harden your network, secure your services and make sure you're on top of your security posture.

With Azure Security Center, you can do the following:

Evaluate your regulatory compliance using the Regulatory compliance dashboard

Improve your compliance posture by taking action on recommendations

Azure Security Center helps streamline the process for meeting regulatory compliance requirements, using the regulatory compliance dashboard. In the dashboard, Security Center provides insights into your compliance posture based on continuous assessments of your Azure environment. Security Center analyzes risk factors in your hybrid cloud environment according to security best practices. These assessments are mapped to compliance controls from a supported set of standards. In the Regulatory compliance dashboard, you can see the status of all the assessments within your environment in the context of a particular standard or regulation. As you act on the recommendations and reduce risk factors in your environment, your compliance posture improves. Hence, the correct answer is: Azure Security Center.

- Azure Policy

Explanation:-This option is incorrect because this service is primarily used to manage and prevent IT issues with policy definitions that enforce rules and effects for your resources.

Q. 57 Which service can you use to create and store TLS/SSL certificates?

- Azure Security Center

- Azure Storage

- Azure Artifacts

- Azure Key Vault

[Report Error](#)

Q57) Which service can you use to create and store TLS/SSL certificates?

- Azure Key Vault

Explanation:-

Azure Key Vault is a tool for securely storing and accessing secrets. A secret is anything that you want to tightly control access to, such as API keys, passwords, or certificates. A vault is a logical group of secrets.

Key Vault certificates support provides for management of your x509 certificates and the following behaviors:

Allows a certificate owner to create a certificate through a Key Vault creation process or through the import of an existing certificate. Includes both self-signed and Certificate Authority generated certificates.

Allows a Key Vault certificate owner to implement secure storage and management of X509 certificates without interaction with private key material.

Allows a certificate owner to create a policy that directs Key Vault to manage the lifecycle of a certificate.

Allows certificate owners to provide contact information for notification about life-cycle events of expiration and renewal of certificate.

Supports automatic renewal with selected issuers - Key Vault partner X509 certificate providers / certificate authorities.

When a Key Vault certificate is created, an addressable key and secret are also created with the same name. The Key Vault key allows key operations and the Key Vault secret allows retrieval of the certificate values as a secret. A Key Vault certificate also contains public x509 certificate metadata.

A certificate policy contains information on how to create and manage lifecycle of a Key Vault certificate. When a certificate with private key is imported into the key vault, a default policy is created by reading the x509 certificate.

When a Key Vault certificate is created from scratch, a policy needs to be supplied. The policy specifies how to create this Key Vault certificate version, or the next Key Vault certificate version. Once a policy has been established, it isn't required with successive create operations for future versions. There's only one instance of a policy for all the versions of a Key Vault certificate.

Therefore, the correct answer is: Azure Key Vault.

- Azure Storage

Explanation:-This option is incorrect because this is just a cloud storage solution that offers a massively scalable object store for data objects, disk storage for Azure virtual machines (VMs), a file system service for the cloud, a messaging store for reliable messaging, and a NoSQL store. It is not capable of generating TLS/SSL certificates nor suitable for storing them.

- Azure Security Center

Explanation:-This option is incorrect because this is only 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.

- Azure Artifacts

Explanation:-This option is incorrect because this is primarily used to create and share Maven, npm, and NuGet package feeds from public and private sources. It is not suitable to be used for creating or even storing TLS/SSL certificates.

Q58)

A company has hundreds of virtual machines that are dispersedly hosted across multiple virtual networks and subscriptions. You are tasked to limit the amount of outbound HTTPS traffic to a specified list of fully qualified domain names (FQDN) as well as limit the inbound traffic to the virtual networks.

What must be done to satisfy the above requirement?

- Integrate Azure virtual network TAP (Terminal Access Point) to your network architecture.

Explanation:-This option is incorrect because this just allows you to continuously stream your virtual machine network traffic to a network packet collector or analytics tool.

- Launch a single Azure ExpressRoute connection.

Explanation:-This option is incorrect because this service is primarily used to create private connections between Azure and your on-premises network or in a colocation environment.

- Launch a single network security group.

Explanation:-This option is incorrect because a network security group simply provides a distributed network layer traffic filtering to limit traffic to resources within virtual networks in each subscription. Remember that it's mentioned in the scenario that the virtual machines are dispersedly hosted across multiple virtual networks and subscriptions.

- Integrate Azure Firewall to your network architecture.

Explanation:-

Azure Firewall is a managed, cloud-based network security service that protects your Azure Virtual Network resources. It's a fully stateful firewall as a service with built-in high availability and unrestricted cloud scalability.

You can centrally create, enforce, and log application and network connectivity policies across subscriptions and virtual networks. Azure Firewall uses a static public IP address for your virtual network resources allowing outside firewalls to identify traffic originating from your virtual network. The service is fully integrated with Azure Monitor for logging and analytics.

The Azure Firewall service complements network security group functionality. Together, they provide better "defense-in-depth" network security. Network security groups provide distributed network layer traffic filtering to limit traffic to resources within virtual networks in each subscription. Azure Firewall is a fully stateful, centralized network firewall as-a-service, which provides network- and application-level protection across different subscriptions and virtual networks.

Hence, the correct answer is: Integrate Azure Firewall to your network architecture.

Q59) Which of the following allows you to group virtual machines that are hosted in the same virtual network and define network security policies based on those groups without manual maintenance of explicit IP addresses?

- Application Security Groups

Explanation:-Application security groups enable you to configure network security as a natural extension of an application's structure, allowing you to group virtual machines and define network security policies based on those groups. You can reuse your security policy at scale without manual maintenance of explicit IP addresses. The platform handles the complexity of explicit IP addresses and multiple rule sets, allowing you to focus on your business logic.

The rules that specify an application security group as the source or destination are only applied to the network interfaces that are members of the application security group. If the network interface is not a member of an application security group, the rule is not applied to the network interface, even though the network security group is associated to the subnet.

Hence, the correct answer is: Application Security Groups.

- Network Security Groups

Explanation:-This option is incorrect because this filters the network traffic to and from the Azure resources in your entire Azure virtual network, and not just on certain VMs or groups that you defined.

-  Azure virtual network TAP (Terminal Access Point)

Explanation:-This option is incorrect because this just allows you to continuously stream your virtual machine network traffic to a network packet collector or analytics tool.

- Azure Firewall

Explanation:-This option is incorrect because this is a managed, cloud-based network security service that protects your Azure resources hosted across multiple virtual networks and subscriptions. Remember that it's mentioned in the scenario that you have to group virtual machines hosted in the same virtual network.

Q60)

You are migrating all of the data from your on-premises data center to Azure. You have to ensure that your Azure environment adheres to the regional compliance requirements of the company.

What service should you use?

- Trust Center

Explanation:-The Microsoft Trust Center is a central location for the latest information, news, and best practices in security, privacy, and compliance. With companies around the world shifting from on-premises IT infrastructure to cloud computing, legal and compliance professionals face new questions from their organizations about which industries are moving to the cloud, the compliance requirements and security standards that apply, and what to expect from a cloud services contract.

Microsoft has developed a wealth of resources to help answer your questions that can be found in the Trust Center. Whether it's privacy law requirements that apply across all industries, or sector-specific outsourcing guidelines in financial services, the interactive guides, documents, and resources found in the Trust Center provides key information organized by industry, region, and country.

The goal of this service is to help demystify cloud technology and provide a framework for understanding the legal and regulatory landscape and how it may be evolving.

Hence, the correct answer is: Trust Center.

- Azure Active Directory

Explanation:-This option is incorrect because this is just a cloud-based identity and access management service, which helps your employees sign in and access resources in both internal and external resources.

-  Azure Advisor

Explanation:-This option is incorrect because this is simply a personalized cloud consultant that helps you follow best practices to optimize your Azure deployments.

- Azure Marketplace

Explanation:-this option is incorrect because this is only a channel to market and sell your cloud solutions that are certified to run on Azure.

Q61)

You are tasked to monitor your on-premises identity infrastructure and ensure a reliable connection to Office 365 and Microsoft Online Services.

What service should you use?

- Azure Application Gateway

Explanation:-This option is incorrect because this service is simply a web traffic load balancer that enables you to manage traffic to your web applications.

- Azure App Service

Explanation:-This option is incorrect because this only enables you to build and host web apps, mobile backends, and RESTful APIs in the programming language of your choice without managing infrastructure. It offers auto-scaling and high availability, supports both Windows and Linux, and enables automated deployments from GitHub, Azure DevOps, or any Git repo.

- Azure Application Insights

Explanation:-This option is incorrect because this is just an extensible Application Performance Management (APM) service for developers and DevOps professionals. You can use it to monitor your live applications. It will automatically detect performance anomalies and includes powerful analytics tools to help you diagnose issues and understand what users actually do with your app.

-  Azure AD Connect Health

Explanation:-Azure Active Directory (Azure AD) Connect Health provides robust monitoring of your on-premises identity infrastructure. It enables you to maintain a reliable connection to Office 365 and Microsoft Online Services. This reliability is achieved by providing monitoring capabilities for your key identity components. Also, it makes the key data points about these components easily accessible.

The information is presented in the Azure AD Connect Health portal. Use the Azure AD Connect Health portal to view alerts, performance monitoring, usage analytics, and other information. Azure AD Connect Health enables the single lens of health for your key identity components in one place. Hence, the correct answer is: Azure Active Directory (Azure AD) Connect Health.

Q62)

Your on-premises Active Directory forest currently has 3000 users.

You plan to decommission the on-premises server that hosts the Active directory. You need to recommend a solution to migrate the users the quickest way to Azure Active Directory with minimal impact on users.

What should you recommend?

- Manually create the users in Azure Active Directory.

Explanation:-This option is incorrect because this will be a time-consuming process. Take note that the scenario is looking for a solution that will allow the company to migrate its Active Directory to Azure the quickest way.

- Implement Azure Multi-Factor Authentication.

Explanation:-This option is incorrect because this is just a process where a user is prompted during the sign-in process for an additional form of identification, such as to enter a code on their cellphone or to provide a fingerprint scan. It is not capable of syncing on-premises Active Directory to Azure AD.

- Migrate the on-premises Active Directory server to Azure virtual machines.

Explanation:-This option is incorrect because the scenario states that the users must be migrated to Azure Active Directory and not to Azure virtual machines. Migrating the on-premises active directory to Azure virtual machine will not meet the scenario's requirements.

-  Sync the on-premises Active Directory to Azure Active Directory using AD connect.

Explanation:-Azure Active Directory (Azure AD) is Microsoft's cloud-based identity and access management service, which helps your employees sign in and access resources in:

- External resources, such as Microsoft Office 365, the Azure portal, and thousands of other SaaS applications.

- Internal resources, such as apps on your corporate network and intranet, along with any Cloud apps developed by your own organization.

Microsoft Online business services, such as Office 365 or Microsoft Azure, require Azure AD for sign-in and to help with identity protection. If you subscribe to any Microsoft Online business service, you automatically get Azure AD with access to all the free features.

Azure AD Connect installs an on-premises service that orchestrates synchronization between your on-premises Active Directory and Azure Active Directory. The Microsoft Azure AD Sync synchronization service (ADSync) runs on a server in your on-premises environment. The credentials for the service are set by default in the Express installations but may be customized to meet your organizational security requirements. These credentials are not used to connect to your on-premises forests or Azure Active Directory.

Hence, the correct answer is: Sync the on-premises Active Directory to Azure Active Directory using AD connect.

Q63) Which of the following can be protected by the Azure Information Protection service?

- Emails and documents

Explanation:-Azure Information Protection (AIP) is a cloud-based solution that enables organizations to classify and protect documents and emails by applying labels. Labels can be applied:

- Automatically by administrators using rules and conditions
- Manually by users
- by a combination where administrators define the recommendations shown to users

For example, your administrator might configure a label with rules that detect sensitive data, such as credit card information. In this case, any user who saves credit card information in a Word file might see a tooltip at the top of the document with a recommendation to apply the relevant label for this scenario.

Labeling content includes:

- Classification that can be detected regardless of where the data is stored or with whom it's shared.
- Visual markings, such as headers, footers, or watermarks.
- Metadata, added to files and email headers in cleartext. The clear text Metadata ensures that other services can identify the Classification and take appropriate action.

You can use Azure Information Protection to apply classification labels to both documents and emails.

Hence, the correct answer is Emails and documents.

-  Data stored in an Azure Storage account

Explanation:-This option is incorrect because the Azure Information Protection service is primarily used to protect your documents or email messages. This service is not suitable to protect the data stored in your Azure Storage account.

- Azure SQL Databases

Explanation:-This option is incorrect because you usually secure your Azure SQL databases by using server-side encryption via the Transparent Data Encryption (TDE) feature or client-side encryption via the Always Encrypted feature. Azure Information Protection is not applicable for this.

- Remote Desktop Protocol (RDP) connections

Explanation:-This option is incorrect because Azure Information Protection is not capable of protecting your RDP connections. You can use Transport Layer Security (TLS) to encrypt your connections.

Q64) Which of the following lets you extend your on-premises networks into the Microsoft cloud over a private connection facilitated by a connectivity provider?

- Azure Content Delivery Network (CDN)

Explanation:-This option is incorrect because this is simply a global CDN solution for delivering high-bandwidth content. This service does not let you extend your on-premises networks into the Microsoft cloud over a private connection facilitated by a connectivity provider.

-  Azure Virtual WAN

Explanation:-This option is incorrect because this is only a DNS-based traffic load balancer that enables you to distribute traffic optimally to services across global Azure regions while providing high availability and responsiveness.

- Azure ExpressRoute

Explanation:-ExpressRoute lets you extend your on-premises networks into the Microsoft cloud over a private connection facilitated by a connectivity provider. With ExpressRoute, you can establish connections to Microsoft cloud services, such as Microsoft Azure and Office 365.

Connectivity can be from an any-to-any (IP VPN) network, a point-to-point Ethernet network, or a virtual cross-connection through a connectivity provider at a co-location facility. ExpressRoute connections do not go over the public Internet. This allows ExpressRoute connections to offer more reliability, faster speeds, consistent latencies, and higher security than typical connections over the Internet.

Each ExpressRoute circuit consists of two connections to two Microsoft Enterprise edge routers (MSEEs) at an ExpressRoute Location from the connectivity provider/your network edge. Microsoft requires dual BGP connection from the connectivity provider/your network edge – one to each MSEE. You may choose not to deploy redundant devices/Ethernet circuits at your end. However, connectivity providers use redundant devices to ensure that your connections are handed off to Microsoft in a redundant manner. A redundant Layer 3 connectivity configuration is a requirement for our SLA to be valid. Hence, the correct answer is: Azure ExpressRoute.

- Azure Private Link

Explanation:-This option is incorrect because this just enables you to access Azure PaaS Services (e.g. Azure Storage and SQL Database) and Azure-hosted customer-owned/partner services over a private endpoint in your virtual network.

Q65) What service enables you to correlate trace events from multiple Azure VMs and other resources into a centralized repository?

- Azure Event Hubs

Explanation:-This option is incorrect because this is just a big data streaming platform and event ingestion service. It's not suitable to be used to correlate trace events from multiple Azure VMs.

- Azure Repos

Explanation:-This option is incorrect because this is simply a set of version control tools that you can use to manage your code.

- Azure Monitor

Explanation:-Azure Monitor maximizes the availability and performance of your applications and services by delivering a comprehensive solution for collecting, analyzing, and acting on telemetry from your cloud and on-premises environments. It helps you understand how your applications are performing and proactively identifies issues affecting them and the resources they depend on.

Application Insights, a feature of Azure Monitor, is an extensible Application Performance Management (APM) service for developers and DevOps professionals. Use it to monitor your live applications. It will automatically detect performance anomalies, and includes powerful analytics tools to help you diagnose issues and to understand what users actually do with your app. It's designed to help you continuously improve performance and usability. It works for apps on a wide variety of platforms including .NET, Node.js, Java, and Python hosted on-premises, hybrid, or any public cloud. It integrates with your DevOps process, and has connection points to a variety of development tools. It can monitor and analyze telemetry from mobile apps by integrating with Visual Studio App Center.

Application Insights is aimed at the development team, to help you understand how your app is performing and how it's being used. It monitors:
Request rates, response times, and failure rates - Find out which pages are most popular, at what times of day, and where your users are. See which pages perform best. If your response times and failure rates go high when there are more requests, then perhaps you have a resourcing problem.

Dependency rates, response times, and failure rates - Find out whether external services are slowing you down.

Exceptions - Analyze the aggregated statistics, or pick specific instances and drill into the stack trace and related requests. Both server and browser exceptions are reported.

Page views and load performance - reported by your users' browsers.

AJAX calls from web pages - rates, response times, and failure rates.

User and session counts.

Performance counters from your Windows or Linux server machines, such as CPU, memory, and network usage.

Host diagnostics from Docker or Azure.

Diagnostic trace logs from your app - so that you can correlate trace events with requests.

Custom events and metrics that you write yourself in the client or server code, to track business events such as items sold or games won.

You install a small instrumentation package (SDK) in your application or enable Application Insights using the Application Insights Agent when supported.

The instrumentation monitors your app and directs the telemetry data to an Azure Application Insights Resource using a unique GUID that we refer to as an Instrumentation Key.

Hence, the correct answer is: Azure Monitor.

-  Azure Resource Manager

Explanation:-This option is incorrect because this is only a deployment and management service that enables you to create, update, and delete resources in your Azure account. This service is not suitable for monitoring and correlating trace events from various VMs and resources.

Q66) Which service analyzes your resource configuration and usage telemetry and then recommends solutions that can help you improve the cost-effectiveness, performance, reliability, and security of your Azure resources?

- Compliance Manager

Explanation:-This option is incorrect because this is just a free workflow-based risk assessment tool in the Microsoft Service Trust Portal for managing regulatory compliance activities related to Microsoft cloud services.

- Azure Information Protection

Explanation:-This option is incorrect because this is simply a service that helps organizations in labelling their documents and emails.

- Azure Resource Manager

Explanation:-This option is incorrect because this is only a deployment and management service for Azure. It provides a management layer that enables you to create, update, and delete resources in your Azure account.

-   Azure Advisor

Explanation:Azure Advisor is a personalized cloud consultant that helps you follow best practices to optimize your Azure deployments. It analyzes your resource configuration and usage telemetry and then recommends solutions that can help you improve the cost-effectiveness, performance, Reliability (formerly called High availability), and security of your Azure resources.

With Advisor, you can:

Get proactive, actionable, and personalized best practices recommendations.

Improve the performance, security, and reliability of your resources, as you identify opportunities to reduce your overall Azure spend.

Get recommendations with proposed actions inline.

You can access Advisor through the Azure portal. Sign in to the portal, locate Advisor in the navigation menu, or search for it in the All services menu.

The Advisor dashboard displays personalized recommendations for all your subscriptions. You can apply filters to display recommendations for specific subscriptions and resource types. The recommendations are divided into five categories:

Reliability (formerly called High Availability): To ensure and improve the continuity of your business-critical applications.

Security: To detect threats and vulnerabilities that might lead to security breaches.

Performance: To improve the speed of your applications.

Cost: To optimize and reduce your overall Azure spending.

Operational Excellence: To help you achieve process and workflow efficiency, resource manageability, and deployment best practices.

Hence, the correct answer is: Azure Advisor.

Q67) Which service enables cloud architects and central information technology groups to define a repeatable set of Azure resources that implements and adheres to an organization's standards, patterns, and requirements?

-   Azure Blueprints

Explanation:-Azure Blueprints makes it possible for development teams to rapidly build and launch new environments with the reliability that they're building within organizational compliance with a set of built-in components, such as networking, to speed up development and delivery. Just as a blueprint allows an engineer or an architect to sketch a project's design parameters, Azure Blueprints enables cloud architects and central information technology groups to define a repeatable set of Azure resources that implements and adheres to an organization's standards, patterns, and requirements.

Blueprints are a declarative way to orchestrate the deployment of various resource templates and other artifacts such as:

Role Assignments

Policy Assignments

Azure Resource Manager templates (ARM templates)

Resource Groups

The Azure Blueprints service is backed by the globally distributed Azure Cosmos DB. Blueprint objects are replicated to multiple Azure regions. This replication provides low latency, high availability, and consistent access to your blueprint objects, regardless of which region Azure Blueprints deploys your resources to.

Hence, the correct answer is: Azure Blueprints.

- Compliance Manager

Explanation:-This option is incorrect because this service doesn't define a repeatable set of Azure resources. It is simply a free workflow-based risk assessment tool in the Microsoft Service Trust Portal for managing regulatory compliance activities related to Microsoft cloud services.

-  Azure Monitor

Explanation:-This option is incorrect because this service is primarily used to maximize the availability and performance of your applications and services by delivering a comprehensive solution for collecting, analyzing, and acting on telemetry from your cloud and on-premises environments.

-   Azure Advisor

Explanation:-This option is incorrect because this is a service that analyzes your configurations and usage telemetry and offers personalized, actionable recommendations to help you optimize your Azure resources for reliability, security, operational excellence, performance, and cost.

Q68)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

The [Azure Advisor] helps you track and manage your company's compliance to standards and regulations that are applicable for your organization, such as ISO 27001, NIST 800-53, and GDPR.

- No change is needed

Explanation:-This option is incorrect because Azure Advisor only analyzes your configuration and usage telemetry to offer personalized, actionable recommendations to help you optimize your Azure resources. It doesn't help you manage regulatory compliance.

- Compliance Manager

Explanation:-

The Microsoft Compliance Manager is a free workflow-based risk assessment tool in the Microsoft Service Trust Portal for managing regulatory compliance activities related to Microsoft cloud services. Part of your Microsoft 365, Office 365, or Azure Active Directory subscription, Compliance Manager helps you manage regulatory compliance within the shared responsibility model for Microsoft cloud services.

With Compliance Manager, your organization can:

Combine detailed compliance information Microsoft provided to auditors and regulators about its cloud services with your compliance self-assessment for standards and regulations applicable for your organization. These include standards and regulations outlined by the International Organization for Standardization (ISO), the National Institute of Standards and Technology (NIST), the Health Insurance Portability and Accountability Act (HIPAA), the General Data Protection Regulation (GDPR), and many others.

Enable you to assign, track, and record compliance and assessment-related activities, which can help your organization cross team barriers to achieve your compliance goals.

Provide a Compliance Score to help you track your progress and prioritize auditing controls that help reduce your organization's exposure to risk.

Provide a secure repository for you to upload and manage evidence and other artifacts related to your compliance activities.

Produce richly detailed Microsoft Excel reports that document compliance activities performed by Microsoft and your organization for auditors, regulators, and other compliance reviewers.

Therefore, the correct answer is: Compliance Manager.

- Azure Information Protection (AIP)

Explanation:-This option is incorrect because this service is primarily used to classify and label data in your organization at the time of creation, as well as apply protection, based on encryption and usage rights for sensitive data.

- Azure Resource Manager

Explanation:-This option is incorrect because this is just a deployment and management service for Azure. It doesn't enable you to track and manage your company's compliance to standards and regulations that are applicable for your organization, such as ISO 27001, NIST 800-53, and GDPR.

Q69) What service provides security tokens that you can use for the authentication flow of your cloud-based applications?

- Azure Storage account

Explanation:-This option is incorrect because this is just a durable, highly available, massively scalable cloud storage solution in Azure.

- Azure Security Center

Explanation:-This option is incorrect because this is simply 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.

- Azure Key Vault

Explanation:-This option is incorrect because this is a service that enables Azure subscribers to safeguard and control cryptographic keys and other secrets used by cloud apps and services.

- Azure Active Directory

Explanation:-Azure Active Directory (Azure AD) is Microsoft's cloud-based identity and access management service, which helps your employees sign in and access resources in:

External resources, such as Microsoft Office 365, the Azure portal, and thousands of other SaaS applications.

Internal resources, such as apps on your corporate network and intranet, along with any cloud apps developed by your own organization.

Microsoft Online business services, such as Office 365 or Microsoft Azure, require Azure AD for sign-in and to help with identity protection. If you subscribe to any Microsoft Online business service, you automatically get Azure AD with access to all the free features.

A centralized identity provider is especially useful for apps that have users located around the globe that don't necessarily sign in from the enterprise's network. Microsoft identity platform authenticates users and provides security tokens, such as access token, refresh token, and ID token, that allow a client application to access protected resources on a resource server.

An access token is a security token that is issued by an authorization server as part of an OAuth 2.0 flow. It contains information about the user and the app for which the token is intended; which can be used to access web APIs and other protected resources.

Access tokens are only valid for a short period of time, so authorization servers will sometimes issue a refresh token at the same time the access token is issued. The client application can then exchange this refresh token for a new access token when needed.

Hence, the correct answer is: Azure Active Directory.

Q70) Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

You have to modify the [network security] group of your virtual machine to allow connections to and from the public Internet over TCP port 8080.

- No change is needed

Explanation:-You can use an Azure network security group to filter network traffic to and from Azure resources in an Azure virtual network. A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol.

Network security group security rules are evaluated by priority using the 5-tuple information (source, source port, destination, destination port, and protocol) to allow or deny the traffic. A flow record is created for existing connections. Communication is allowed or denied based on the connection state of the flow record. The flow record allows a network security group to be stateful. If you specify an outbound security rule to any address over port 80, for example, it's not necessary to specify an inbound security rule for the response to the outbound traffic. You only need to specify an inbound security rule if communication is initiated externally. The opposite is also true. If inbound traffic is allowed over a port, it's not necessary to specify an outbound security rule to respond to traffic over the port.

For inbound traffic, Azure processes the rules in a network security group associated to a subnet first, if there is one, and then the rules in a network security group associated to the network interface, if there is one.

For outbound traffic, Azure processes the rules in a network security group associated to a network interface first, if there is one, and then the rules in a network security group associated to the subnet, if there is one.

Hence, the correct answer is: No change is needed because the provided statement is already true i.e. you have to modify the network security group of your virtual machine to allow connections to and from the public Internet over TCP port 8080.

- Azure ExpressRoute

Explanation:-This option is incorrect because this service is primarily used to create private connections between Azure datacenters and infrastructure that are on your premises or in a co-location environment. This is not an appropriate service to use in controlling the connections of your virtual machine.

- Azure virtual network TAP (Terminal Access Point)

Explanation:-This option is incorrect because this only allows you to continuously stream your virtual machine network traffic to a network packet collector or analytics tool.

- Azure Firewall

Explanation:-This option is incorrect because this is just a managed, cloud-based network security service that protects your Azure resources hosted across multiple virtual networks and subscriptions. Remember that the scenario indicates that you have to group virtual machines hosted in the same virtual network.

Q71) Your colleague is working on a project and informed you that he needs RDP access to the server hosted on Azure. He gave you his workstation's IP address.

Where should you whitelist his IP address?

- Load Balancer

Explanation:-This option is incorrect because load balancing simply refers to evenly distributing load (incoming network traffic) across a group of backend resources or servers and not for whitelisting the IP address to have access to a server. Load Balancer distributes inbound flows that arrive at the load balancer's front end to backend pool instances.

- Application Security Group

Explanation:-This option is incorrect because this is primarily used to configure network security as a natural extension of an application's structure, without manual maintenance of explicit IP addresses. And even if you whitelist the IP address here, it is still not enough since you have to modify your Network Security Group to allow the traffic to the specific IP address.

- Activity Log

Explanation:-Activity log is incorrect because it just contains all write operations (PUT, POST, DELETE) for your resources. You can use the activity logs to find an error when troubleshooting or to monitor how a user in your organization modified a resource.

- Network Security Group

Explanation:-Azure network security group is used to filter network traffic to and from Azure resources in an Azure virtual network. A network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from, several types of Azure resources. For each rule, you can specify source and destination, port, and protocol. Hence, the correct answer is: Azure network security group.

Q72)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

[Authorization] is the process of verifying the credentials of the user.

No change is needed

Explanation:-This option is incorrect because Authorization is actually the process of granting an authenticated party permission to do something rather than the act of verifying the credentials of a specific user.

Synchronization

Explanation:-This option is incorrect because this concept is more of the integration of two different systems to make them compatible with each other. For example, it allows you to successfully authenticate your on-premises user credentials with your cloud user directories in Azure.

Federation

Explanation:-This option is incorrect because this is primarily the process of granting users single sign-on (SSO) access to an external system. If a user connection is terminated or if the user leaves, the account can immediately be disabled and its access revoked.

Authentication

Explanation:-There is a difference between Authentication (AuthN) and Authorization (AuthZ) in terms of purpose and process. Both of these concepts are also implemented differently in Azure.

Authentication is the process of proving you are who you say you are. Authentication is sometimes shortened to AuthN. Microsoft identity platform implements the OpenID Connect protocol for handling authentication.

This is also referred to as the act of challenging a party for legitimate credentials, providing the basis for the creation of a security principal to be used for identity and access control. During an OAuth2 authorization grant, for example, the party authenticating is filling the role of either resource owner or client application, depending on the grant used.

Authorization, on the other hand, is the act of granting an authenticated party permission to do something. It specifies what data you're allowed to access and what you can do with that data. Authorization is sometimes shortened to AuthZ. Microsoft identity platform implements the OAuth 2.0 protocol for handling authorization.

This is the act of granting an authenticated security principal permission to do something. There are two primary use cases in the Azure AD programming model:

- During an OAuth2 authorization grant flow: when the resource owner grants authorization to the client application, allowing the client to access the resource owner's resources.
- During resource access by the client: as implemented by the resource server, using the claim values present in the access token to make access control decisions based upon them.

Microsoft identity platform simplifies authorization and authentication for application developers by providing identity as a service, with support for industry-standard protocols such as OAuth 2.0 and OpenID Connect, as well as open-source libraries for different platforms to help you start coding quickly. It allows developers to build applications that sign in all Microsoft identities, get tokens to call Microsoft Graph, other Microsoft APIs, or APIs that developers have built.

Hence, the correct answer is: Authentication.

Q73)

A company needs to secure its web applications from security vulnerabilities such as volumetric, protocol, and resource layer attacks. The solution must also have the capability of automatically generating post-attack mitigation reports for compliance purposes.

What service should you use to satisfy this requirement?

- Azure Firewall

Explanation:-This option is incorrect. Although this is a cloud-based network security service, it is not capable of protecting your web applications from volumetric, protocol, and resource layer attacks.

- Azure Security Center

Explanation:-This option is incorrect because this is simply 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.

-  Azure Advanced Threat Protection

Explanation:-This option is incorrect because this service is primarily used to identify, detect, and investigate advanced threats, compromised identities, and malicious insider actions directed at your organization by leveraging on your on-premises Active Directory signals. It is not capable of protecting your web application from DDoS attacks.

-  Azure DDoS Protection Standard

Explanation:-Distributed denial of service (DDoS) attacks are some of the largest availability and security concerns facing customers that are moving their applications to the cloud. A DDoS attack attempts to exhaust an application's resources, making the application unavailable to legitimate users. DDoS attacks can be targeted at any endpoint that is publicly reachable through the internet.

Azure DDoS protection, combined with application design best practices, provide defense against DDoS attacks. Azure DDoS protection provides the following service tiers: Basic and Standard.

DDoS Protection Standard can mitigate the following types of attacks:

Volumetric attacks: These attacks flood the network layer with a substantial amount of seemingly legitimate traffic. They include UDP floods, amplification floods, and other spoofed-packet floods. DDoS Protection Standard mitigates these potential multi-gigabyte attacks by absorbing and scrubbing them, with Azure's global network scale, automatically.

Protocol attacks: These attacks render a target inaccessible, by exploiting a weakness in the layer 3 and layer 4 protocol stack. They include SYN flood attacks, reflection attacks, and other protocol attacks. DDoS Protection Standard mitigates these attacks, differentiating between malicious and legitimate traffic, by interacting with the client, and blocking malicious traffic.

Resource (application) layer attacks: These attacks target web application packets, to disrupt the transmission of data between hosts. They include HTTP protocol violations, SQL injection, cross-site scripting, and other Layer 7 attacks. Use a Web Application Firewall, such as the Azure Application Gateway web application firewall, as well as DDoS Protection Standard to provide defense against these attacks. There are also third-party web application firewall offerings available in the Azure Marketplace.

You can also get detailed reports in five-minute increments during a security attack, and a complete summary after the attack ends. The mitigation flow logs can be streamed to an offline security information and event management (SIEM) system for near real-time monitoring during an attack.

Attack mitigation reports use the Netflow protocol data which is aggregated to provide detailed information about the attack on your resource. Anytime a public IP resource is under attack, the report generation will start as soon as the mitigation starts. There will be an incremental report generated every 5 mins and a post-mitigation report for the whole mitigation period. This is to ensure that in an event the DDoS attack continues for a longer duration of time, you will be able to view the most current snapshot of mitigation report every 5 minutes and a complete summary once the attack mitigation is over. Hence, the correct answer is: Azure DDoS Protection Standard.

Q74)

A company needs to configure its Azure Active Directory to automatically prompt a user to change the password if the user signs in from an anonymous IP address.

Which Azure service should you use?

- Azure AD Privileged Identity Management

Explanation:-This option is incorrect because this just provides a time-based and approval-based role activation to mitigate the risks of excessive, unnecessary, or misused access permissions on resources that you care about. This service doesn't automate the detection and remediation of identity-based risks.

- Azure Service Health

Explanation:-This option is incorrect because this is simply a suite of experiences that provide personalized guidance and support when issues in Azure services affect you. It is not capable of detecting sign-ins that are made via anonymous IP addresses, unlike Azure Active Directory Identity Protection.

- Azure Advanced Threat Protection (ATP)

Explanation:-This option is incorrect because this is only a cloud-based security solution that leverages your on-premises Active Directory signals to identify, detect, and investigate advanced threats, compromised identities, and malicious insider actions directed at your organization. This service doesn't apply any metadata or visual markings to your documents or emails.

-   Azure Active Directory Identity Protection

Explanation:-Identity Protection is a tool that allows organizations to accomplish three key tasks:

Automate the detection and remediation of identity-based risks.

Investigate risks using data in the portal.

Export risk detection data to third-party utilities for further analysis.

Identity Protection uses the learnings Microsoft has acquired from its position in organizations with Azure AD, the consumer space with Microsoft Accounts, and in gaming with Xbox to protect your users. Microsoft analyses 6.5 trillion signals per day to identify and protect customers from threats.

The signals generated by and fed to Identity Protection can be further fed into tools like Conditional Access to make access decisions, or fed back to a security information and event management (SIEM) tool for further investigation based on your organization's enforced policies.

You can detect sign-ins that are made via anonymous IP addresses using the Azure Identity Protection. Signs in from an anonymous IP address could originate from a Tor browser or an anonymizer VPNs.

It can be exported to other tools for archive and further investigation and correlation. The Microsoft Graph-based APIs allow organizations to collect this data for further processing in a tool such as their SIEM.

Hence, the correct answer is: Azure Active Directory Identity Protection.

Q75)

Instructions: Check the phrase enclosed in brackets. If it is correct then choose "No change is needed" and if it is wrong, select the option that makes the statement correct.

The [Microsoft Privacy Statement] explains the personal data that Microsoft processes, how Microsoft processes it, and for what purposes.

-   No change is needed

Explanation:-The Microsoft Privacy Statement explains the personal data that Microsoft processes, how Microsoft processes it, and for what purposes. Microsoft offers a wide range of products, including server products used to help operate enterprises worldwide, devices you use in your home, software that students use at school, and services developers use to create and host what's next. References to the products in this statement include Microsoft services, websites, apps, software, servers, and devices.

You can read the product-specific details in this privacy statement, which provide additional relevant information. The Microsoft Privacy Statement applies to the interactions Microsoft has with you and the Microsoft products listed.

Hence, the correct answer is: No change is needed.

- Microsoft Online Services Level Agreement

Explanation:-This option is incorrect because this is only a Service Level Agreement (SLA) that states your eligibility for a credit towards a portion of your monthly service fees if Microsoft does not achieve and maintain the service levels of its online services.

- Microsoft Online Subscription Agreement

Explanation:-This option is incorrect because this is simply an agreement between Microsoft Corporation and you, or the entity that you represent, in connection with a Subscription purchase or renewal.

- Microsoft Cloud Agreement (MCA)

Explanation:-This option is incorrect because this is just a transactional licensing agreement for commercial and government organizations seeking to fully outsource the management of their cloud services through a Cloud Solution Provider (CSP).

Q76)

A company is currently planning on setting up resources as part of their Azure subscription. They are looking at different security options that can be used to secure their Azure environment.

Which of the following could be used for the following requirement?

"Provide an extra level of security when users log into the Azure Portal"

- Azure Key Vault
- Azure Network Security Groups
-  Azure Multi-Factor Authentication

Explanation:-

The extra level of security can be accomplished by providing a facility of Multi-Factor Authentication

The Microsoft documentation mentions the following:

- Azure DDoS Protection

Q77)

A company is currently planning on setting up resources as part of their Azure subscription. They are looking at different security options that can be used to secure their Azure environment.

Which of the following could be used for the following requirement?

"Provide a store that can be used to store secrets."

-  Azure Key Vault

Explanation:-

You can store secrets in the Azure Key Vault service.

Azure Key Vault helps solve the following problems: 1. Secrets Management - Azure Key Vault can be used to Securely store and tightly control access to tokens, passwords, certificates, API keys, and other secrets 2. Key Management - Azure Key Vault can also be used as a Key Management solution.

Azure Key Vault makes it easy to create and control the encryption keys used to encrypt your data. 3. Certificate Management - Azure Key Vault is also a service that lets you easily provision, manage, and deploy public and private Transport Layer Security/Secure Sockets Layer (TLS/SSL) certificates for use with Azure and your internal connected resources. 4. Store secrets backed by Hardware Security Modules - The secrets and keys can be protected either by software or FIPS 140-2 Level 2 validated HSMs.

Reference: <https://docs.microsoft.com/en-us/azure/key-vault/general/about-keys-secrets-certificates>

- Azure Network Security Groups
- Azure Multi-Factor Authentication
- Azure DDoS Protection

Q78)

A company is currently planning on setting up resources as part of their Azure subscription. They are looking at different security options that can be used to secure their Azure environment.

Which of the following could be used for the following requirement?

"Provide Protection against distributed denial of service attacks"

- Azure Key Vault
- Azure Network Security Groups
- Azure Multi-Factor Authentication
-  Azure DDoS Protection

Explanation:-

You can protect your environment from such attacks by using Azure DDoS Protection. Distributed denial of service (DDoS) attacks are some of the largest availability and security concerns facing customers that are moving their applications to the cloud. A DDoS attack attempts to exhaust an application's resources, making the application unavailable to legitimate users. DDoS attacks can be targeted at any endpoint that is publicly reachable through the internet.

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

Q79) You are trying to understand the different cloud models. Which of the following are advantages of using the public cloud? Choose 2 answers from the options give below

-  Lower costs

Explanation:-The advantages for using the public cloud is given in the Microsoft documentation

Since this is clearly given in the Microsoft documentation, all other options are incorrect

- Higher maintenance

-  High reliability

Explanation:-The advantages for using the public cloud is given in the Microsoft documentation

Since this is clearly given in the Microsoft documentation, all other options are incorrect

- Higher costs

Q80) A company plans to build a customized solution that will upload weather data to Azure using several million sensors. What should the company use to connect, monitor, and control the sensors without managing the infrastructure?

- Azure Files

Explanation:-This option is incorrect because this is just a fully managed file share in the cloud that is accessible via the industry standard Server Message Block (SMB) protocol. Azure file shares can be mounted concurrently by cloud or on-premises deployments of Windows, Linux, and macOS. However, this can't be used to host IoT solutions, unlike IoT Hub.

- Azure Virtual Machine

Explanation:-This option is incorrect because this service just gives you the flexibility of virtualization without having to buy and maintain the physical hardware that runs it. However, you still need to maintain the VM by performing tasks, such as configuring, patching, and installing the software that runs on it.

-  Azure IoT Hub

Explanation:-IoT Hub is a managed service hosted in the cloud that acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. You can use Azure IoT Hub to build IoT solutions with reliable and secure communications between millions of IoT devices and a cloud-hosted solution backend. You can connect virtually any device to IoT Hub.

IoT Hub's capabilities help you build scalable, full-featured IoT solutions such as managing industrial equipment used in manufacturing, tracking valuable assets in healthcare, and monitoring office building usage.

IoT Hub supports communications both from the device to the cloud and from the cloud to the device. IoT Hub supports multiple messaging patterns such as device-to-cloud telemetry, file upload from devices, and request-reply methods to control your devices from the cloud. IoT Hub monitoring helps you maintain the health of your solution by tracking events such as device creation, device failures, and device connections.

Hence, the correct answer is: IoT Hub.

- Azure App Service

Explanation:-This option is incorrect because it only enables you to build and host web apps, mobile back ends, and RESTful APIs in the programming language of your choice without managing infrastructure. It is not intended to connect, monitor, and control IoT devices.

Q81)

A company plans to migrate to Azure.

The company has multiple departments and each department has its own support team lead by a department administrator.

What are two possible solutions to ensure segmentation between departments?

- Deploy multiple virtual machines

Explanation:-This option is incorrect. Even if you have deployed network segmentation between the different departments under one subscription, they will still be able to see the other departments' resources. Having one subscription per department is the solution.

- Deploy multiple subscriptions

Explanation:-A Subscription is a logical container for your resources. Each Azure resource is associated with only one subscription. Creating a subscription is the first step in adopting Azure.

Azure role-based access control (Azure RBAC) helps you manage who has access to Azure resources, what they can do with those resources, and what areas they have access to. You can segregate duties within your team or department and grant only the necessary access to users to perform their jobs. Instead of giving everybody unrestricted permissions in your Azure subscription or resources, you can allow only specific actions at a particular scope.

- Deploy multiple resource groups

Explanation:-A resource group is a logical container that you use to group related resources in a subscription. Each resource can exist in only one resource group. Resource groups allow for more granular grouping within a subscription. They are commonly used to represent a collection of assets required to support a workload, application, or specific function within a subscription.

Remember these two important concepts about resource groups:

- When you delete a resource group, all resources in the resource group are also deleted.
- Azure resource groups are regional in scope but it can contain Azure resources that span to multiple regions.

Generally, you can assign role-based access controls for your users/teams/departments to your subscription. The permissions assigned will trickle down to the resource groups and resources under that subscription.

- Deploy multiple Azure Active Directories

Explanation:-This option is incorrect because Azure Active Directory roles only control permissions to manage Azure Active Directory resources while Azure roles control permissions to manage Azure resources.

Q82) What Azure service allows you to have a DNS-based traffic load balancer?

- Azure Public Load Balancer

Explanation:-This option is incorrect because this only provides outbound connections for virtual machines (VMs) inside your virtual network. These connections are accomplished by translating their private IP addresses to public IP addresses. Public Load Balancers are used to load balance internet traffic to your VMs.

- Azure Traffic Manager

Explanation:-Azure Traffic Manager is a DNS-based traffic load balancer that enables you to distribute traffic optimally to services across global Azure regions while providing high availability and responsiveness. Traffic Manager uses DNS to direct client requests to the most appropriate service endpoint based on a traffic-routing method and the health of the endpoints.

An endpoint is any Internet-facing service hosted inside or outside of Azure. Traffic Manager provides a range of traffic-routing methods and endpoint monitoring options to suit different application needs and automatic failover models. Traffic Manager is resilient to failure, including the failure of an entire Azure region.

Hence, the correct answer is: Azure Traffic Manager.

- Azure Network Interface

Explanation:-This option is incorrect because this just enables an Azure Virtual Machine to communicate with the Internet, Azure, and on-premises resources.

- Azure Private Load Balancer

Explanation:-This option is incorrect because this service is primarily used where private IPs are needed at the frontend only. Internal load balancers are used to load balance traffic inside a virtual network. A load balancer frontend can be accessed from an on-premises network in a hybrid scenario.

Q83) You have an application running in the cloud. What service should you use to make routing decisions based on additional attributes of an HTTP request such as its URI path or host headers?

-  Azure Application Gateway

Explanation:-Azure Application Gateway is a web traffic load balancer that enables you to manage traffic to your web applications. Traditional load balancers operate at the transport layer (OSI layer 4 - TCP and UDP) and route traffic based on source IP address and port, to a destination IP address and port.

Application Gateway can make routing decisions based on additional attributes of an HTTP request, for example, URI path or host headers. For example, you can route traffic based on the incoming URL. So if /images are in the incoming URL, you can route traffic to a specific set of servers (known as a pool) configured for images. If /video is in the URL, that traffic is routed to another pool that's optimized for videos.

Azure Application Gateway can be used as an internal application load balancer or as an internet-facing application load balancer. An internet-facing application gateway uses public IP addresses. The DNS name of an internet-facing application gateway is publicly resolvable to its public IP address. As a result, internet-facing application gateways can route client requests to the internet.

Internal application gateways use only private IP addresses. If you are using a Custom or Private DNS zone, the domain name should be internally resolvable to the private IP address of the Application Gateway. Therefore, internal load-balancers can only route requests from clients with access to a virtual network for the application gateway.

Hence, the correct answer is: Azure Application Gateway.

- Azure App Service

Explanation:-This option is incorrect because this service just enables you to build and host web apps, mobile back ends, and RESTful APIs in the programming language of your choice without managing infrastructure. It is not capable of routing the traffic based on additional attributes of an incoming HTTP request.

- Azure Application Insights

Explanation:-This option is incorrect because it is only an extensible Application Performance Management (APM) service for developers and DevOps professionals. You can use this to monitor your live applications to automatically detect performance anomalies. However, this can't be used to route traffic, unlike Azure Application Gateway.

- Azure AD Connect

Explanation:-This option is incorrect because this service is primarily used to provide robust monitoring of your on-premises identity infrastructure. You cannot use this to make routing decisions based on additional attributes of an HTTP request such as its URI path or host headers.

Q84)

A company needs to store 40 TB of data in Azure that they can query using either serverless on-demand or provisioned resources at a scale. For analytics, the stored data must be integrated and visualized using Microsoft Power BI.

What Azure service should the company use?

- Azure CycleCloud

Explanation:-This option is incorrect because this service is primarily designed to enable enterprise IT organizations to provide secure and flexible cloud HPC and Big Compute environments to their end-users.

-  Azure Synapse Analytics

Explanation:-Azure Synapse Analytics is an 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. Azure Synapse brings these two worlds together with a unified experience to ingest, prepare, manage, and serve data for immediate BI and machine learning needs.

Azure Synapse has four components:

Synapse SQL: Complete T-SQL based analytics – Generally Available

- SQL pool (pay per DWU provisioned)

- SQL on-demand (pay per TB processed) (preview)

Spark: Deeply integrated Apache Spark (preview)

Synapse Pipelines: Hybrid data integration (preview)

Studio: Unified user experience. (preview)

The SQL pool capability within Azure Synapse Analytics enables users to integrate with many of the other services in Azure. Using Synapse SQL, you can create a data warehouse via its SQL pool resource, which can then utilize several additional services, some of which include:

- Power BI

- Azure data Factory

- Azure Machine Learning

- Azure Stream analytics

Take note that the Azure Synapse Analytics is formerly called Azure SQL Data Warehouse.

Hence, the correct answer is: Azure Synapse Analytics.

- Azure Database Migration Service

Explanation:-This option is incorrect because this service just enables seamless migrations from multiple database sources to Azure Data platforms with minimal downtime.

- Azure Sphere

Explanation:-This option is incorrect because this is just a secure, high-level application platform with built-in communication and security features for internet-connected devices. It comprises a secured, connected, crossover microcontroller unit (MCU), a custom high-level Linux-based operating system (OS), and a cloud-based security service that provides continuous, renewable security.

Q85)

Your company plans to deploy several virtual machines that will host its business-critical application to Azure.

You need to recommend a solution to ensure that if a single data center fails, the application will not be affected.

Solution: Deploy virtual machines to multiple resource groups with the same availability zone.

Does this meet the goal?

  Correct

 Incorrect

Explanation:-A resource group is a container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization.

Availability zones expand the level of control you have to maintain the availability of the applications and data on your VMs. Availability Zones are unique physical locations within an Azure region. Each zone is made up of one or more data centers equipped with independent power, cooling, and networking. Deploying your virtual machines into multiple resource groups won't increase its availability of your VMs in the event of Azure data center outage. A resource group is only a logical container that contains the metadata of the resource contained within it.

With Availability Zones, Azure offers industry best 99.99% VM uptime SLA. By architecting your solutions to use replicated VMs in zones, you can protect your applications and data from the loss of a datacenter. If one zone is compromised then replicated apps and data are instantly available in another zone. In this scenario, deploying virtual machines to multiple resource groups with the same availability zone will not prevent an outage in the event that a single data center fails. You must deploy your servers to multiple Availability Zones or Regions to ensure the availability of your application.

Q86)

A company is migrating its docker containers to Azure.

You need to recommend a solution that provides a set of version control tools to help developers manage the application code.

What should you include in your recommendation?

- Azure Monitor

Explanation:-This option is incorrect because it just helps you understand how your applications are performing and proactively identifies issues affecting them and the resources they depend on. You cannot use this to manage your code.

- Azure Repos

Explanation:-Azure DevOps provides developer services to support teams to plan work, collaborate on code development, and build and deploy applications. Developers can work in the cloud using Azure DevOps Services or on-premises using Azure DevOps Server. It also includes various developer services such as Azure Pipelines, Azure Boards, and Azure Repos.

Azure Repos is a set of version control tools that you can use to manage your code. Whether your software project is large or small, using version control as soon as possible is a good idea.

Version control systems are software that helps you track the changes you make in your code over time. As you edit your code, you tell the version control system to take a snapshot of your files. The version control system saves that snapshot permanently so you can recall it later if you need it. Use version control to save your work and coordinate code changes across your team.

-  Azure Pipelines

Explanation:-This option is incorrect because this simply helps you automatically build and test your code project and make it available to other users. However, you cannot use this as a version control system, unlike Azure Repos.

- Azure Activity log

Explanation:-This option is incorrect because it only provides insight into subscription-level events. This includes such information as to when a resource is modified or when a virtual machine is started. It is not capable of tracking changes in your code.