**Exam Time : 45 minutes**

**(45-60 Questions)**

**Q 1.** Which azure feature allows you to prevent resources from being accidentally deleted ?

* Azure Locks

**Q 2**. If you want to quickly provision a group of identical and load load-balanced virtual machines but you don’t want to configure them individually which service would you use ?

* Azure VMSS

**Q 3.** If we obtain services from the cloud there is a model in which there are **both** Capital expenditures as well as operational expenditures. **=> True, in the Hybrid Cloud Model.**

**Q4.** Your company operates in a very dynamic market with a quickly changing landscape. Quick time to market is an essential factor for them. Which benefit of the cloud relates to that **> -> Agility**

**Q5.** Which feature is not available in free service plan of App Service ?=> **Make use of Auto-scaling.**

**Q6.**

**Benefits of Cloud**

1. **High Availability**
2. **Scalability ->**

**Vertical scalability ->** scale up -> More CPU

**Horizontal scalability ->** scale out -> More Virtual machines

1. **Capital expenditure -> High** upfront cost

**Operational expenditure ->** cost of electricity, licence, (when used rented), etc.

1. **Reliability ->** ability of a system to recover from a failure and continue to function.

**Fault tolerance-> Ability to respond to a failure of a component.**

1. **Predictability ->** cost & performance
2. **Security ->** Architected to handle security.
3. **Governance ->** support for governance and compliance
4. **Manageability ->** Ability to manage cloud resources.

**Elasticity ->** Ability to quickly react to changing demands.

**Cloud Model ->** Public , Private, Hybrid

**Cloud Service types ->** Iaas, Paas, SaaS

**IAAS ->** VM, Storage, Networking (Highest responsibility, Maximum control, Pay-as-you-go)

**Paas ->** Hardware fully managed by azure,

**e.g. Azure SQL db, Cosmos DB, Azure app service, container service**

**SaaS->** Microsoft Office 365, Outlook, Microsoft Planner. (NO installation needed, application is not developed but only configured).

**Region ->** consists of one or multiple data centers within a specific radius.

**Availability zones ->** Most of the regions support availability zones but not all of them. Designed to achieve redundancy and fault tolerance.

**Region pairs and geographies** -> If whole availabi;ity zone goes down, then geo-redundant zone.

**Sovereign regions -> China, US.**

**Management group -> Management of sunscriptions and policies.** This will be above subscription. It can have one or more subscriptions. This is specifically used for policy. We can use this to create policies. Used for governance across subscriptions.

Mangement group can be **nested**.

**Compute Service =>** Provision of computing power on demand.

e.g. VM, Scale set, Availability Sets, Azure Virtual Desktop, Azure app service,

Azure container instances, Azure Functions + Azure Logic Apps(or serverless computing)

**Availability Set** -> Protection against failure within Data Center(rack wide failure). Availability Sets group VMs inside a single Data Center. **(Fault and Update Domain)**

**Availability Zone ->** protect from entire **data center** failure.

**Load Balancer ->** Distribute traffic among VMs, depending on health of VM. This will increase the availability and performance.

**VMSS ->** Set of auto-scaling, load balanced, identical VMs.

**DevTest Labs ->** DevTest Lab users can easily & quickly create VMs. Pre-configured VMs with pre-installed development tools.

**Azure Virtual Desktop ->** Is a virtualization of an entire desktop or may be some specific applications. This is accessible through browser. We can access it from any location, device, any operating system as we are using browser to access it. Multiple concurrent user sessions.

Benefits -> Independent from hardware, Centralized security.

**App Service ->** This is used to host web application. **PAAS used to deploy and host web applications.**

**Container Services ->** Application development moving towards microservices. Very complex application break down into loosely connected and somewhat independent microservices. Container is a virtualization, One VM can create many container,

**Docker->** one of the most popular container engines.

**Azure container Instances ->(PAAS -it means no need to manage underlying OS) Fast and simple way to upload and run containers.**

**Serverless => Server is invisible to the users, completely focus on code, no worry about scaling, focus on events and triggers, MIcrobilling(if not use no bill).**