AZ – 900 Microsoft Azure Fundamentals Syllabus

Section 1:Describe cloud computing

- ➢ What is cloud computing?
- ➢ Describe the shared responsibility model
- ➢ Define cloud models, including public, private, and hybrid
- ➢ Identify appropriate use cases for each cloud model
- ➢ Describe the consumption-based model
- ➢ Compare cloud pricing models

Section 2: Describe the benefits of using cloud services

- ➢ Benefits of high availability and scalability in the cloud
- ➢ Benefits of reliability and predictability in the cloud
- ➢ Benefits of security and governance in the cloud
- ➢ Benefits of manageability in the cloud

Section 3:Describe cloud service types

- ➢ Description of infrastructure as a service (IaaS)
- ➢ Description of platform as a service (PaaS)
- ➢ Description software as a service (SaaS)
- ➢ Identify appropriate use cases for each cloud service (IaaS, PaaS, SaaS)

Section 4:Describe the core architectural components of Azure

- ➢ Develop batch processing solutions by using
- ➢ Describe Azure regions, region pairs, and sovereign regions
- ➢ Describe availability zones
- ➢ Describe Azure datacenters
- ➢ Describe Azure resources and resource groups
- ➢ Describe subscriptions
- ➢ Describe management groups
- ➢ Describe the hierarchy of resource groups, subscriptions, and management groups

Section 5: Describe Azure compute and networking services

➢ Comparison of compute types, including container instances, virtual machines (VMs), and functions
➢ Describe VM options, including Azure Virtual Machines, Azure Virtual Machine Scale Sets, availability sets, and Azure Virtual Desktop
➢ Describe resources required for virtual machines
➢ Describe application hosting options, including the Web Apps feature of Azure App
➢ Service, containers, and virtual machines
➢ Describe virtual networking, including the purpose of Azure Virtual Networks, Azure virtual subnets, peering, Azure DNS, Azure VPN Gateway, and Azure ExpressRoute
➢ Define public and private endpoints

Section 6:Describe Azure storage services

➢ Comparison of Azure storage services
➢ Describe storage tiers
➢ Describe redundancy options
➢ Description of storage account options and storage types
➢ Identify options for moving files, including AzCopy, Azure Storage Explorer, and Azure File Sync
➢ Describe migration options, including Azure Migrate and Azure Data Box

Section 7:Describe Azure identity, access, and security

➢ Describe directory services in Azure, including Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra and Azure Active Directory Domain Services (Azure AD DS)
➢ Describe authentication methods in Azure, including single sign-on (SSO), multifactor authentication, and passwordless
➢ Describe external identities and guest access in Azure
➢ Describe Conditional Access in Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra
➢ Describe Azure role-based access control (RBAC)
➢ Describe the concept of Zero Trust

➢ Describe the purpose of the defense in depth model
➢ Describe the purpose of Microsoft Defender for Cloud

Section 8:Describe cost management in Azure

➢ Describe factors that can affect costs in Azure
➢ Comparison of the Pricing calculator and the Total Cost of Ownership (TCO) calculator
➢ Describe the Azure Cost Management and Billing tool
➢ Describe the purpose of tags

Section 9:Describe features and tools in Azure for governance and compliance

➢ Describe the purpose of Azure Blueprints
➢ Describe the purpose of Azure Policy
➢ Describe the purpose of resource locks
➢ Describe the purpose of the Service Trust Portal

Section 10: Describe features and tools for managing and deploying Azure resources

➢ Describe the Azure portal
➢ Describe Azure Cloud Shell, including Azure CLI and Azure PowerShell
➢ Describe the purpose of Azure Arc
➢ Describe Azure Resource Manager and Azure Resource Manager templates (ARM templates)

Section 11:Describe monitoring tools in Azure

➢ Describe the purpose of Azure Advisor
➢ Describe Azure Service Health
➢ Describe Azure Monitor, including Log Analytics, Azure Monitor alerts, and Application Insights

Section 12: Security

➢ Manage Keys
➢ Manage Secrets
➢ Manage Certificates
➢ Data Encryption
➢ Azure Key Vault