1. Develop Azure Infrastructure as a Service Compute Solutions (10-15%)
2. Implement solutions that use virtual machines (VM)

Provision VMs

Create ARM templates

Configure Azure Disk Encryption for VMs

1. Implement batch jobs by using Azure Batch Services

Manage batch jobs by using Batch Service API

Run a batch job by using Azure CLI, Azure portal, and other tools

Write code to run an Azure Batch Services batch job

1. Create containerized solutions

Create an Azure Managed Kubernetes Service (AKS) cluster

Create container images for solutions

Publish an image to the Azure Container Registry

Run containers by using Azure Container Instance or AKS

1. Develop Azure Platform as a Service Compute Solutions (20-25%)
2. Create Azure App Service Web Apps

Create an Azure App Service Web App

Create an Azure App Service background task by using WebJobs

Enable diagnostics logging

1. Create Azure App Service mobile apps

Add push notifications for mobile apps

Enable offline sync for mobile app

Implement a remote instrumentation strategy for mobile devices

1. Create Azure App Service API apps

Create an Azure App Service API app

Create documentation for the API by using open source and other tools

1. Implement Azure functions

Implement input and output bindings for a function

Implement function triggers by using data operations, timers, and webhooks

Implement Azure Durable Functions

Create Azure Function apps by using Visual Studio

1. Develop for Azure storage (15-20%)
2. Develop solutions that use storage tables

Design and implement policies for tables

Query table storage by using code

Implement partitioning schemes

1. Develop solutions that use Cosmos DB storage

Create, read, update, and delete data by using appropriate APIs

Implement partitioning schemes

Set the appropriate consistency level for operations

1. Develop solutions that use a relational database

Provision and configure relational databases

Configure elastic pools for Azure SQL Database

Create, read, update, and delete data tables by using code

1. Develop solutions that use blob storage

Move items in blob storage between storage accounts or containers

Set and retrieve properties and metadata

Implement blob leasing

Implement data archiving and retention

1. Implement Azure security (10-15%)
2. Implement authentication

Implement authentication by using certificates, forms-based authentication, or tokens

Implement multi-factor or Windows authentication by using Azure AD

Implement OAuth2 authentication

Implement Managed Service Identity (MSI)/Service Principal authentication

1. Implement access control

Implement CBAC (Claims-Based Access Control) authorization

Implement RBAC (Role-Based Access Control) authorization

Create shared access signatures

1. Implement secure data solutions

Encrypt and decrypt data at rest and in transit

Create, read, update, and delete keys, secrets, and certificates by using the KeyVault API

1. Monitor, troubleshoot, and optimize Azure solutions (15-20%)
2. Develop code to support scalability of apps and services

Implement autoscaling rules and patterns

Implement code that handles transient faults

1. Integrate caching and content delivery within solutions

Store and retrieve data in Azure Redis cache

Develop code to implement CDNs in solutions

Invalidate cache content (CDN or Redis)

1. Instrument solutions to support monitoring and logging

Configure instrumentation in an app or service by using Application Insights

Analyze and troubleshoot solutions by using Azure Monitor

Implement Application Insights Web Test and Alerts

1. Connect to and Consume Azure Services and Third-party Services (20-25%)
2. Develop an App Service Logic App

Create a Logic App

Create a custom connector for Logic Apps

Create a custom template for Logic Apps

1. Integrate Azure Search within solutions

Create an Azure Search index

Import searchable data

Query the Azure Search index

1. Establish API Gateways

Create an APIM instance

Configure authentication for APIs

Define policies for APIs

1. Develop event-based solutions

Implement solutions that use Azure Event Grid

Implement solutions that use Azure Notification Hubs

Implement solutions that use Azure Event Hub

1. Develop message-based solutions

Implement solutions that use Azure Service Bus

Implement solutions that use Azure Queue Storage queues