◆ 1. Cloud & Hybrid (Azure + Azure Stack)

What to revise:

- Difference between **Azure** (public cloud) and **Azure Stack** (on-prem / hybrid extension).

- How networking, identity, and resource provisioning work in hybrid environments.

- Integration patterns between **on-prem and Azure (VPN, ExpressRoute, Arc, Identity sync)**.

Sample Questions:

- How would you extend an Azure workload to Azure Stack?

- What are key differences in deploying services in Azure vs Azure Stack?

- How would you connect on-prem VNETs with Azure securely?

◆ 2. IaC & Automation (Terraform, Ansible)

What to revise:

- Writing **Terraform modules** (variables, outputs, remote state, workspaces).

- Ansible basics: **playbooks, roles, inventories**, idempotency.

- Secrets management in IaC.

- CI/CD integration of Terraform/Ansible.

Sample Questions:

- How do you structure reusable Terraform modules?

- What's the difference between Terraform and Ansible?

- How would you manage secrets (like TLS certs) in Terraform?

◆ 3. Containers & Kubernetes + Service Mesh

What to revise:

- Deploying & managing **AKS and self-managed K8s clusters**.

- Basics: Pods, Deployments, StatefulSets, Ingress, StorageClasses.

- RBAC and securing clusters.

- **Service Mesh** (Istio/Linkerd): mTLS, sidecars, traffic routing, observability.

Sample Questions:

- Walk me through deploying a secure AKS cluster.

- How does Istio enforce mTLS between services?

- What's the difference between Ingress and Istio Gateway?

◆ **4. CI/CD (Jenkins, GitHub Actions, Azure DevOps)**

What to revise:

- Writing **Jenkins pipelines** (Declarative vs Scripted).

- GitHub Actions YAML structure, re-usable workflows.

- Azure DevOps Pipelines + Environments + Approvals.

- Security in pipelines (secret scanning, artifact signing).

Sample Questions:

- How would you build a pipeline for deploying a K8s app with Terraform + Helm?

- What are some best practices for securing CI/CD pipelines?

- How do GitHub Actions and Azure DevOps differ?

◆ **5. Networking & Security (Core Area!)**

What to revise:

- **Azure networking basics**: VNETs, NSGs, Private Endpoints, Application Gateway.

- PKI: certificates, TLS/SSL termination, key rotation.

- DNS setup for hybrid cloud.

- **Zero Trust** principles in cloud networking.

Sample Questions:

- How would you design secure networking between Azure and on-prem?

- What is PKI and how do you manage cert lifecycles in Azure?

- How would you implement Zero Trust in a hybrid environment?

◆ **6. Identity & Access (Keycloak / OAuth2)**

What to revise:

- Keycloak basics: realms, clients, users, groups, roles.

- Protocols: OAuth2, OIDC, SAML.

- Integrating Keycloak with apps (Java apps in particular).

- Identity Federation with Azure AD.

Sample Questions:

- Explain the OAuth2 authorization code flow.

- How do you configure Keycloak for SSO in Kubernetes dashboards?

- What's the difference between OAuth2 and OIDC?

◆ **7. Scripting & Programming**

What to revise:

- **PowerShell & Bash** for automation (looping, error handling, modules).

- **Python** for API automation or writing Ansible modules.

- **Java basics** (mostly for IDP integration).

Sample Questions:

- How would you write a script to rotate TLS certificates in AKS?

- How would you use Python to call Azure APIs?

◆ **8. Bonus (Nice-to-Haves)**

- **Certifications**: If you have Azure/Azure Security/CKA → mention them.

- **GitOps**: Flux, ArgoCD basics.

- **Container security tools**: Trivy, Aqua, Falco, OPA/Gatekeeper.

- **Compliance**: How to enforce policies (Azure Policy, Gatekeeper).

✅ **Prep Strategy**

1. **Hands-on practice**: Spin up a small AKS cluster, deploy Istio, write a Terraform module, build a GitHub Actions pipeline → demo to yourself.

2. **Whiteboard designs**: Be ready to explain "how would you design a secure hybrid deployment".

3. **Security focus**: Expect deep-dive on TLS, PKI, Zero Trust, Keycloak integration.