DevOps Core Stack Cheat Sheet

Terraform (Infrastructure as Code)

• Purpose: Provision infrastructure (cloud, on-prem)
• Key Concepts: Provider, Resource, Module, State, Variables, Outputs
• Commands: terraform init, terraform plan, terraform apply, terraform destroy
• Tip: Emphasize declarative, idempotent, reusable infra. State management in teams.

Ansible (Config Management & Automation)

• Purpose: Automate software/config deployment on servers
• Key Concepts: Inventory, Playbooks, Tasks, Roles, Handlers, Variables, Vault
• Workflow: SSH → Execute tasks → Gather facts → Idempotent changes
• Tip: Know Ansible vs Terraform, local vs remote execution, example: install Nginx via playbook

Docker (Containers)

• Purpose: Package apps + dependencies into lightweight containers
• Key Concepts: Images, Containers, Dockerfile, Volumes, Networks, Registries
• Commands: docker build -t image ., docker run -d --name container image, docker ps, docker exec -it container bash
• Tip: Explain container vs VM, mention integration with Kubernetes

Kubernetes (Container Orchestration)

• Purpose: Automate deployment, scaling, management of containers
• Key Concepts: Pod, ReplicaSet, Deployment, Service (ClusterIP/NodePort/LB), StatefulSet, ConfigMap, Secrets, etcd
• Commands: kubectl get pods, kubectl describe pod POD_NAME, kubectl apply -f deployment.yaml, kubectl logs POD_NAME
• Tip: Explain rolling updates, scaling, self-healing, Docker + K8s in CI/CD pipelines