**⚡ DevOps Rapid Revision Sheet (Text Version)**

**Docker**

* OS-level virtualization, shares host kernel.
* Lightweight, portable, faster than VMs.
* Persist data → **Volumes / Bind Mounts**.
* Commands: docker run, docker ps, docker exec, docker logs.

**Jenkins**

* CI/CD automation server.
* **Pipelines** → Declarative (simple) vs Scripted (flexible).
* Integrates with GitHub via plugins + webhooks.
* **Agents** = execute jobs, **Controller** = orchestrates.

**Git**

* reset = rewrites history (unsafe), revert = new commit (safe).
* Branching: Feature, Gitflow, Trunk-based.
* Merge conflicts → fix → git add → git commit.

**Terraform**

* IaC tool, state = terraform.tfstate.
* plan = preview, apply = execute.
* **Modules** = reusability.
* Remote state (S3, GCS) for teams.

**Kubernetes**

* **Deployment** = stateless, **StatefulSet** = stateful.
* Services: ClusterIP, NodePort, LoadBalancer.
* Ingress = manages external traffic.
* Commands: kubectl get pods, kubectl describe pod <name>.

**Prometheus + Grafana**

* **Prometheus** = metrics (pull model).
* **Alertmanager** = routes alerts (Slack, Email, PagerDuty).
* **Grafana** = dashboards & visualization.

**Ansible**

* Agentless, uses SSH.
* **Playbook** = tasks, **Role** = reusable playbooks.
* Secrets → ansible-vault encrypt file.yaml.
* Idempotent: safe to rerun.