Here's a structured cheat sheet and visual mind map for **AWS Cloud Practitioner – IAM, EC2, Cloud Basics**. You can copy it to a PDF easily for last-minute revision.

AWS Cloud Practitioner – Cheat Sheet + Mind Map

1. Cloud Basics

- **Elasticity**: Auto-scale resources up/down based on demand.
- **Agility**: Quick provisioning; speed of resource deployment.
- **High Availability (HA)**: Application continues if one AZ fails.
- **Fault Tolerance**: Survive failures without downtime.
- **Shared Responsibility**: AWS = security of the cloud; Customer = security in the cloud.
- **Edge Locations**: Reduce latency (CloudFront).
- **Least Privilege**: Grant only required permissions.
- **Hybrid Cloud**: Combination of on-prem + AWS.

2. EC2 Essentials

- **Purpose**: Run virtual servers in AWS.
- **Instance Types**:
- T-series = Burstable
- M-series = General purpose
- C-series = Compute optimized
- R-series = Memory optimized
- **Connection Protocols**: Linux = SSH; Windows = RDP
- **Security Groups**: Stateful firewall at instance level
- **Network ACLs**: Stateless firewall at subnet level
- **Elastic IP**: Static public IPv4
- **Instance Store**: Ephemeral, lost on stop/terminate
- **EBS**: Persistent block storage
- **Auto Scaling**: Replaces unhealthy instances, scales automatically
- **Spot Instances**: Low cost, can be interrupted
- **Reserved Instances**: Predictable workloads
- **ELB**: Distributes traffic across instances
- **High Availability**: Deploy across multiple AZs

3. IAM Core Concepts

- **IAM User**: Human identity with credentials
- **IAM Group**: Collection of users; inherits policies
- **IAM Role**: Temporary credentials; EC2/Lambda/etc.
- **IAM Policy**: JSON defining permissions; attach to Users, Roles, Groups
- **Root Account**: MFA enabled, use sparingly
- **Least Privilege**: Grant only necessary permissions

- **Temporary Credentials**: Only via IAM Roles
- **AWS Organizations**: Manage multiple accounts, set SCPs

4. Quick Exam Traps

- Elasticity ≠ Agility
- Spot Instances = Cheap & Interruptible
- Security Groups = instance-level, stateful; NACL = subnet-level, stateless
- IAM Role = temporary creds; Policy = permissions
- Edge Locations ≠ AZs
- Instance Store = ephemeral; EBS = persistent

5. Visual Mind Map

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Cloud Basics
├─ Elasticity (Auto-scale)
├─ Agility (Quick Provision)
├─ HA (Multi-AZ)
├─ Fault Tolerance
├─ Shared Responsibility
│  ├─ AWS: Security of cloud
│  └─ Customer: Security in cloud
├─ Edge Locations
└─ Least Privilege

EC2
├─ Instance Types
│  ├─ T-series: Burstable
│  ├─ M-series: General
│  ├─ C-series: Compute
│  └─ R-series: Memory
├─ Connection: Linux=SSH, Windows=RDP
├─ Security Groups: Instance firewall
├─ Network ACL: Subnet firewall
├─ Elastic IP: Static IPv4
├─ Instance Store: Ephemeral
├─ EBS: Persistent
├─ Auto Scaling
├─ Spot / Reserved Instances
└─ ELB

IAM
├─ User: Human identity
├─ Group: Collection of users
├─ Role: Temporary creds
├─ Policy: Defines permissions
```

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├─ Root Account: MFA
├─ Least Privilege
└─ AWS Organizations
```

Usage: Review the mind map visually, then cross-check the table points. Perfect for **10-min last-minute revision**.