

AWS Concepts Quiz (100 Questions)

DevOps Learning Module

This quiz covers fundamental concepts related to Amazon Web Services (AWS). Choose the best answer for each question.

1. What is the core AWS service for scalable virtual servers?
 - A. AWS Lambda
 - B. Amazon S3
 - C. Amazon EC2 (Elastic Compute Cloud)
 - D. Amazon RDS

Answer: C

Explanation: EC2 is the fundamental compute service that allows you to rent virtual servers (instances) by the hour or second.

2. What is an "AMI" (Amazon Machine Image)?
 - A. A running virtual server.
 - B. A template for an EC2 instance, containing the OS and software.
 - C. A block storage volume.
 - D. A load balancer.

Answer: B

Explanation: An AMI is a read-only template that defines the operating system and initial software configuration for an EC2 instance.

3. What is Amazon "S3"?
 - A. A virtual server.
 - B. A relational database.
 - C. A global, object storage service for files, data, backups, and static websites.
 - D. A DNS service.

Answer: C

Explanation: S3 (Simple Storage Service) is an "object store" (not a filesystem) known for its high durability, availability, and scalability.

4. What are the globally unique containers used to store objects in S3 called?
 - A. Folders

- B. Buckets
- C. Instances
- D. Tables

Answer: B

Explanation: All objects (files) in S3 are stored in "buckets." Bucket names must be globally unique across all of AWS.

5. What is an "EC2 Instance Type" (e.g., t3.micro, m5.large)?
 - A. The operating system of the instance.
 - B. The specific combination of CPU, Memory, Storage, and Networking capacity for an instance.
 - C. The billing model for the instance.
 - D. The region the instance is in.

Answer: B

Explanation: The Instance Type defines the hardware resources allocated to your virtual server.

6. What is an "Elastic Load Balancer" (ELB)?
 - A. A DNS service.
 - B. A tool for automatically distributing incoming application traffic across multiple EC2 instances.
 - C. A tool for scaling the number of instances.
 - D. A block storage device.

Answer: B

Explanation: An ELB acts as a single point of contact for clients, distributing traffic to healthy instances in one or more Availability Zones.

7. What is an "Auto Scaling Group" (ASG)?
 - A. A load balancer.
 - B. A DNS service.
 - C. A group of EC2 instances that can automatically scale in (decrease) or scale out (increase) based on demand.
 - D. A collection of S3 buckets.

Answer: C

Explanation: An ASG is used for elasticity and high availability. It can add instances when CPU is high and remove them when CPU is low.

8. What is "Amazon RDS" (Relational Database Service)?
 - A. A NoSQL database.

- B. A managed service for relational databases (like MySQL, PostgreSQL, SQL Server).
- C. A data warehouse.
- D. A file storage service.

Answer: B

Explanation: RDS simplifies database management by handling tasks like patching, backups, and high availability, allowing you to focus on your application.

9. What is the primary benefit of "Multi-AZ" for an RDS database?

- A. It makes the database faster.
- B. It provides high availability and failover support.
- C. It provides a read-only copy for scaling.
- D. It encrypts the database.

Answer: B

Explanation: Multi-AZ creates a synchronous, standby replica of your database in a *different* Availability Zone. If the primary fails, AWS automatically fails over to the standby.

10. What is an "Availability Zone" (AZ)?

- A. A geographic location like "us-east-1".
- B. A single, isolated data center within a Region.
- C. A collection of Regions.
- D. A content delivery network.

Answer: B

Explanation: An AZ is one or more discrete data centers with redundant power and networking. A "Region" is composed of multiple (usually 3+) isolated AZs.

11. What is an AWS "Region"?

- A. A single data center.
- B. A collection of Availability Zones in a specific geographic area (e.g., N. Virginia, Ireland).
- C. A content delivery network.
- D. A virtual private cloud.

Answer: B

Explanation: A Region is a physical, geographic location in the world where AWS has multiple Availability Zones.

12. What is "VPC" (Virtual Private Cloud)?

- A. A physical network connection to AWS.

- B. A logically isolated section of the AWS Cloud where you can launch resources in a virtual network you define.
- C. A global load balancer.
- D. A DNS service.

Answer: B

Explanation: A VPC is your own private network in AWS. You control the IP address range, subnets, route tables, and network gateways.

13. What is a "Security Group" in a VPC?
- A. A firewall for a subnet.
 - B. A virtual firewall that controls *inbound* and *outbound* traffic for an EC2 instance.
 - C. A collection of IAM users.
 - D. A hardware firewall.

Answer: B

Explanation: Security Groups act as a stateful firewall at the instance level. By default, they deny all inbound traffic and allow all outbound traffic.

14. What is a "Network ACL" (NACL) in a VPC?
- A. A firewall for an EC2 instance.
 - B. A virtual firewall that controls *inbound* and *outbound* traffic for a *subnet*.
 - C. A stateful firewall.
 - D. A collection of IAM roles.

Answer: B

Explanation: NACLs are "stateless" firewalls that act at the subnet level. They are an additional layer of defense before traffic reaches a Security Group.

15. What is the main difference between Security Groups and Network ACLs?
- A. Security Groups are stateful; NACLs are stateless.
 - B. Security Groups are stateless; NACLs are stateful.
 - C. Security Groups operate at the subnet level; NACLs at the instance level.
 - D. There is no difference.

Answer: A

Explanation: "Stateful" (Security Group) means if you allow inbound port 80, the return traffic is automatically allowed. "Stateless" (NACL) means you must explicitly allow both inbound port 80 *and* the outbound return traffic.

16. What is "IAM" (Identity and Access Management)?
- A. A service for creating virtual servers.
 - B. A service that helps you securely control access to AWS resources.

- C. A database service.
- D. A monitoring service.

Answer: B

Explanation: IAM is the core security service. It allows you to create and manage AWS users, groups, and roles, and use permissions to allow or deny their access to resources.

17. What is an "IAM User"?

- A. An identity (with a name and password/access keys) for a *person* or *application* that needs to access AWS.
- B. A collection of permissions.
- C. An identity for an AWS service.
- D. A server.

Answer: A

Explanation: An IAM User represents a single entity. It's best practice to create individual IAM users for each person.

18. What is an "IAM Group"?

- A. A collection of EC2 instances.
- B. A collection of IAM users.
- C. A collection of permissions.
- D. A collection of roles.

Answer: B

Explanation: A Group is a collection of IAM users. You can attach a permission policy to the group, and all users in that group will inherit those permissions.

19. What is an "IAM Role"?

- A. An identity with permissions that can be *assumed* by an entity (like an EC2 instance, a Lambda function, or another user).
- B. A collection of IAM users.
- C. A password policy.
- D. A specific, single permission.

Answer: A

Explanation: Roles are the most secure way to grant permissions. Instead of hard-coding access keys on an EC2 instance, you assign a Role to the instance, which it "assumes" to get temporary credentials.

20. What is an "IAM Policy"?

- A. A user.
- B. A role.

- C. A JSON document that defines a set of *permissions* (e.g., "Allow" "S3:GetObject" on "Bucket-A").
- D. A password.

Answer: C

Explanation: A Policy is the document that defines the permissions. You "attach" policies to Users, Groups, or Roles to grant them access.

21. What is "AWS Lambda"?

- A. A virtual server.
- B. A "serverless" compute service that lets you run code without provisioning or managing servers.
- C. A database.
- D. A load balancer.

Answer: B

Explanation: With Lambda, you upload your code and it runs "on-demand" in response to events (like an API call or an S3 file upload). You only pay for the compute time you consume.

22. What is "Amazon Route 53"?

- A. A networking cable.
- B. A highly available and scalable cloud Domain Name System (DNS) web service.
- C. A load balancer.
- D. A VPC component.

Answer: B

Explanation: Route 53 is AWS's managed DNS service. It's used to register domain names and route user traffic to resources like EC2 instances or S3 buckets.

23. What is "Amazon CloudFront"?

- A. A DNS service.
- B. A load balancer.
- C. A global Content Delivery Network (CDN) service.
- D. A file storage service.

Answer: C

Explanation: CloudFront is a CDN. It caches your content (like images and videos) at "Edge Locations" around the world, delivering it to users with low latency.

24. What is "EBS" (Elastic Block Store)?

- A. A global object storage service.
- B. A network-attached, high-performance "virtual hard drive" for your EC2 instances.

- C. A file sharing service.
- D. A serverless compute service.

Answer: B

Explanation: An EBS volume is a block-level storage device that you attach to a single EC2 instance. It's where you install the OS and store persistent data.

- 25. What is an "EBS Snapshot"?
 - A. A running EC2 instance.
 - B. A backup of an EBS volume, stored in S3.
 - C. A copy of an S3 bucket.
 - D. A network configuration.
- 26. What is the difference between EBS and S3?
 - A. EBS is object storage; S3 is block storage.
 - B. EBS is block storage (a hard drive) for one EC2 instance; S3 is object storage (a web-accessible service) for files.
 - C. EBS is free; S3 is not.
 - D. There is no difference.
- 27. What is "Amazon DynamoDB"?
 - A. A managed relational database (like MySQL).
 - B. A fully managed, key-value and document NoSQL database.
 - C. A data warehouse.
 - D. A file system.
- 28. What is "AWS CloudFormation"?
 - A. A monitoring service.
 - B. A service that provides "Infrastructure as Code" (IaC) using YAML or JSON templates.
 - C. A CI/CD pipeline service.

- D. A serverless compute service.

Answer: B

Explanation: CloudFormation allows you to define your entire AWS infrastructure (VPCs, EC2, S3, etc.) in a template file. AWS then creates, updates, or deletes the "stack" for you.

29. What is "Amazon CloudWatch"?

- A. A logging and monitoring service.
- B. A security service.
- C. A DNS service.
- D. A database service.

Answer: A

Explanation: CloudWatch is the central service for collecting metrics (e.g., EC2 CPU), logs (CloudWatch Logs), and setting alarms.

30. What is "Amazon CloudTrail"?

- A. A logging and monitoring service for application metrics.
- B. A service that logs all API calls made in your AWS account for auditing and security.
- C. A network routing service.
- D. A CI/CD service.

Answer: B

Explanation: CloudTrail is for *auditing*. It answers the question, "Who created this S3 bucket?" or "Who terminated this EC2 instance?"

31. What is "EFS" (Elastic File System)?

- A. A block storage service (like EBS).
- B. A scalable, managed NFS (Network File System) that can be mounted by multiple EC2 instances at once.
- C. An object storage service (like S3).
- D. A database.

Answer: B

Explanation: EFS is a "shared filesystem." Unlike EBS (which is for one instance), EFS can be mounted and accessed by many instances simultaneously.

32. What is "Amazon SQS" (Simple Queue Service)?

- A. A fully managed message queuing service.
- B. A notification service (push-based).
- C. A database.
- D. A container orchestration service.

Answer: A

Explanation: SQS is a "pull-based" queue used to decouple applications. One service (a producer) writes messages to the queue, and another service (a consumer) polls the queue to process them.

33. What is "Amazon SNS" (Simple Notification Service)?

- A. A message queue (pull-based).
- B. A fully managed "publish/subscribe" (pub/sub) messaging service.
- C. A DNS service.
- D. A load balancer.

Answer: B

Explanation: SNS is "push-based." You publish a message to a "topic," and SNS pushes that message out to all subscribers (e.g., email, SMS, Lambda functions, SQS queues).

34. What is the AWS "CLI"?

- A. A graphical user interface (GUI).
- B. A (Command Line Interface) unified tool to manage your AWS services from the terminal.
- C. An Infrastructure as Code service.
- D. A monitoring dashboard.

Answer: B

Explanation: The AWS CLI (`aws ...`) is a powerful tool for controlling and automating all AWS services from the command line.

35. What is an "S3 Storage Class" (e.g., Standard, Intelligent-Tiering, Glacier)?

- A. The region the bucket is in.
- B. The name of the bucket.
- C. A classification that determines the durability, availability, and cost of storing an object.
- D. The file type of the object.

Answer: C

Explanation: You choose a storage class based on access patterns. **S3 Standard** is for frequent access. **S3 Glacier Deep Archive** is for long-term, cold storage.

36. Which S3 storage class is designed for long-term, cheapest-possible archival where retrieval times of several hours are acceptable?

- A. **S3 Standard**
- B. **S3 Standard-IA** (Infrequent Access)
- C. **S3 One Zone-IA**
- D. **S3 Glacier Deep Archive**

Answer: D

Explanation: Glacier Deep Archive is the lowest-cost storage class, designed for archiving data that is rarely, if ever, accessed.

37. What is an "RDS Read Replica"?

- A. A synchronous, standby copy for high availability (Multi-AZ).
- B. An asynchronous, read-only copy of your database used to scale read traffic.
- C. A backup of the database.
- D. A different database engine.

Answer: B

Explanation: Read Replicas are for *read scaling*. Your application can send all **SELECT** queries to the Read Replica, reducing the load on the primary write database.

38. What is "Amazon Aurora"?

- A. A NoSQL database.
- B. A proprietary, MySQL and PostgreSQL-compatible relational database built for the cloud.
- C. An S3 storage class.
- D. A monitoring service.

Answer: B

Explanation: Aurora is an AWS-native database that offers higher performance and availability than standard MySQL/PostgreSQL, with a decoupled storage layer.

39. What is "Amazon ElastiCache"?

- A. A CDN (like CloudFront).
- B. A managed in-memory data store/cache service (Redis or Memcached).
- C. An object storage service.
- D. A tool for caching EC2 instances.

Answer: B

Explanation: ElastiCache is used to put a high-speed, in-memory cache in front of your database to reduce latency and load.

40. What is "AWS IAM Best Practice" for giving access?

- A. Give all users Administrator access.
- B. Grant the "Principle of Least Privilege" (only the minimum permissions necessary).
- C. Store AWS access keys directly in your source code.
- D. Use the root user for all daily tasks.

Answer: B

Explanation: The Principle of Least Privilege is the core security concept: always start

with *no* permissions and only grant the specific permissions an entity needs to do its job.

41. What is the "root user" in an AWS account?

- A. A regular IAM user with admin rights.
- B. The identity created when you first open an AWS account, which has full, unrestricted access.
- C. An IAM role for EC2.
- D. A user that can only access EC2.

Answer: B

Explanation: The root user (accessed via your email address) is the "god mode" for the account. Best practice is to *never* use it for daily tasks and secure it with Multi-Factor Authentication (MFA).

42. What is "AWS Shield"?

- A. A managed Distributed Denial of Service (DDoS) protection service.
- B. A tool for managing IAM policies.
- C. A tool for encrypting EBS volumes.
- D. A hardware security device.

Answer: A

Explanation: AWS Shield (Standard and Advanced) is a service that safeguards applications running on AWS from DDoS attacks.

43. What is "AWS WAF" (Web Application Firewall)?

- A. A Network ACL.
- B. A Security Group.
- C. A firewall that helps protect your web applications from common web exploits (e.g., SQL injection, Cross-Site Scripting).
- D. A DDoS protection service.

Answer: C

Explanation: WAF is a "Layer 7" firewall that integrates with CloudFront and Application Load Balancers (ALBs) to filter malicious HTTP/S traffic.

44. What is "AWS KMS" (Key Management Service)?

- A. A service for creating and managing cryptographic keys.
- B. A service for storing passwords.
- C. A service for rotating IAM access keys.
- D. A service for storing SSH keys.

Answer: A

Explanation: KMS is a managed service for creating, controlling, and auditing the "Customer Master Keys" (CMKs) used to encrypt your data (e.g., EBS, S3, RDS).

45. What is "AWS Secrets Manager"?

- A. The same as IAM.
- B. A service for securely storing, managing, and rotating secrets (like database passwords, API keys).
- C. The same as KMS.
- D. A component of S3.

Answer: B

Explanation: Secrets Manager is designed to replace hard-coded credentials. It can automatically rotate database passwords for RDS, and applications can fetch secrets from it via an API call.

46. What is "AWS CodePipeline"?

- A. A source code repository (like Git).
- B. A fully managed continuous integration (CI) service.
- C. A fully managed continuous delivery (CD) service that automates your release pipelines.
- D. A fully managed build service.

Answer: C

Explanation: CodePipeline is the "orchestrator" for CI/CD. It defines the stages (e.g., Source -> Build -> Test -> Deploy) and connects other services (like CodeCommit, CodeBuild, CodeDeploy) together.

47. What is "AWS CodeBuild"?

- A. A source code repository.
- B. A fully managed build service that compiles source code, runs tests, and produces software packages (artifacts).
- C. A deployment service.
- D. A CI/CD pipeline orchestrator.

Answer: B

Explanation: CodeBuild is a serverless "build" service. You provide your code and a `buildspec.yml` file, and it runs your build in a temporary Docker container.

48. What is "AWS CodeDeploy"?

- A. A build service.
- B. A source code repository.
- C. A fully managed deployment service that automates software deployments to EC2, Lambda, and on-premises servers.

- D. A CI/CD pipeline orchestrator.

Answer: C

Explanation: CodeDeploy is the "deployment" service. It manages the complexity of rolling updates, Blue-Green deployments, and health checks during a deployment.

- 49. What is "AWS CodeCommit"?

- A. A build service.
- B. A deployment service.
- C. A fully managed, private Git repository service.
- D. A CI/CD pipeline orchestrator.

Answer: C

Explanation: CodeCommit is AWS's version of GitHub or GitLab—a secure, scalable, and managed source control service that hosts private Git repositories.

- 50. What is the "Well-Architected Framework"?

- A. A specific CloudFormation template.
- B. A set of best practices for building secure, high-performing, resilient, and efficient infrastructure on AWS.
- C. A CI/CD service.
- D. A monitoring tool.

Answer: B

Explanation: The framework is based on five pillars: Operational Excellence, Security, Reliability, Performance Efficiency, and Cost Optimization.

- 51. Which S3 storage class is designed for data with changing or unknown access patterns?

- A. S3 Standard
- B. S3 Intelligent-Tiering
- C. S3 Glacier
- D. S3 Standard-IA

Answer: B

Explanation: Intelligent-Tiering automatically moves your data between a frequent-access tier and an infrequent-access tier based on usage, optimizing your costs.

- 52. What is an "Application Load Balancer" (ALB)?

- A. A Layer 4 (TCP/UDP) load balancer.
- B. A Layer 7 (HTTP/HTTPS) load balancer that can route traffic based on rules (e.g., path, host).
- C. A DNS load balancer.
- D. A global load balancer.

Answer: B

Explanation: ALBs are "application-aware." They can route traffic for /api to one set of instances and /images to another, all on the same domain.

53. What is a "Network Load Balancer" (NLB)?

- A. A Layer 4 (TCP/UDP) load balancer designed for high performance and low latency.
- B. A Layer 7 (HTTP/HTTPS) load balancer.
- C. A DNS load balancer.
- D. A cache.

Answer: A

Explanation: NLBs operate at the TCP level and are ideal for extreme performance, static IP addresses, or use cases where HTTP-level routing is not needed.

54. What is an "Internet Gateway" (IGW)?

- A. A load balancer.
- B. A component that allows communication between your VPC and the public internet.
- C. A VPN connection.
- D. A firewall.

Answer: B

Explanation: An IGW is a horizontally scaled, redundant, and highly available VPC component that provides internet access to your VPC.

55. What is a "NAT Gateway"?

- A. A component that allows public internet traffic to *initiate* connections to private subnets.
- B. A managed service that allows instances in a *private* subnet to *initiate* outbound connections to the internet (e.g., for updates), but prevents the internet from initiating connections to them.
- C. A VPN connection.
- D. An Internet Gateway.

Answer: B

Explanation: A NAT (Network Address Translation) Gateway sits in a public subnet and provides a path to the internet for instances in private subnets, while keeping them secure.

56. To allow an EC2 instance in a public subnet to be reached from the internet, what two things do you need?

- A. A NAT Gateway and a Security Group.
- B. An Internet Gateway (on the VPC) and a Public IP address (on the instance).
- C. A Security Group rule allowing the traffic.

D. B and C.

Answer: D

Explanation: The VPC needs a route to the IGW. The instance needs a Public IP (or Elastic IP). And the instance's Security Group must allow the inbound traffic (e.g., port 22 for SSH).

57. What is an "Elastic IP" (EIP)?

- A. A private IP address.
- B. A static, public IP address that you can allocate to your account and attach to an EC2 instance.
- C. A dynamic IP address.
- D. A DNS hostname.

Answer: B

Explanation: A standard public IP is dynamic and changes if you stop/start the instance. An Elastic IP is a static public IP that you control and can re-map to a different instance.

58. What is "Amazon Redshift"?

- A. A NoSQL database.
- B. A monitoring service.
- C. A fast, fully managed, petabyte-scale data warehouse service.
- D. An in-memory cache.

Answer: C

Explanation: Redshift is an "Online Analytical Processing" (OLAP) database, designed for running complex analytical queries on massive datasets (Big Data).

59. What is "Amazon S3 Transfer Acceleration"?

- A. A tool to compress files before uploading.
- B. A service that enables fast, easy, and secure transfers of files over long distances by using CloudFront's edge locations.
- C. A faster type of S3 bucket.
- D. A physical device for moving data.

Answer: B

Explanation: Instead of uploading directly to a bucket (which might be far away), you upload to a nearby "edge location," and AWS routes the data over its optimized, private network.

60. What is "AWS Trusted Advisor"?

- A. A security service for auditing API calls.

- B. An automated tool that inspects your AWS environment and provides real-time recommendations based on best practices.
- C. A human consultant you can hire from AWS.
- D. A CI/CD service.

Answer: B

Explanation: Trusted Advisor gives you recommendations across five categories: Cost Optimization, Performance, Security, Fault Tolerance, and Service Limits.

61. What is "AWS Config"?

- A. A service for storing secrets.
- B. A service that continuously monitors and records your AWS resource configurations.
- C. A tool for setting up `client.rb` or `knife.rb`.
- D. A CI/CD service.

Answer: B

Explanation: AWS Config is for configuration *history* and *compliance*. It can answer "What did my Security Group look like last Tuesday?" and can trigger alerts if a resource becomes non-compliant.

62. What is "AWS API Gateway"?

- A. A VPC component.
- B. A fully managed service for creating, publishing, and securing APIs at any scale.
- C. A load balancer.
- D. A DNS service.

Answer: B

Explanation: API Gateway acts as the "front door" for your applications. It's often used to create a RESTful API that triggers Lambda functions.

63. What is "AWS CDK" (Cloud Development Kit)?

- A. A command-line tool.
- B. An Infrastructure as Code framework where you define your cloud infrastructure using familiar programming languages (like Python, TypeScript, Java).
- C. A replacement for CloudFormation.
- D. A service for building code.

Answer: B

Explanation: With the CDK, you write code (e.g., in Python), and the CDK "synthesizes" this code into a CloudFormation template, which is then deployed.

64. What is an S3 "Bucket Policy"?

- A. An IAM policy attached to a user.

- B. A JSON policy attached *to an S3 bucket* to define who can access its objects.
- C. A billing policy.
- D. A way to set storage classes.

Answer: B

Explanation: A Bucket Policy is a "resource-based" policy. It's used to grant access to a bucket, such as making all objects public for a website.

65. What is "S3 Versioning"?

- A. A feature that keeps multiple variants of an object in the same bucket.
- B. A feature to name your buckets v1, v2, etc.
- C. A feature to version your IAM policies.
- D. A feature to version your EC2 instances.

Answer: A

Explanation: When versioning is enabled, S3 saves all versions of an object (including all writes and deletes). This is a powerful way to protect against accidental deletion.

66. What is an "EC2 Spot Instance"?

- A. A standard, on-demand instance.
- B. A pre-paid, reserved instance.
- C. An instance that uses spare AWS compute capacity, available at a steep discount, but can be terminated by AWS with a 2-minute warning.
- D. A free-tier instance.

Answer: C

Explanation: Spot Instances are great for fault-tolerant, non-urgent workloads (like batch processing or some CI/CD jobs) where you can trade reliability for a massive cost saving.

67. What is an "EC2 Reserved Instance" (RI)?

- A. A free-tier instance.
- B. A billing discount applied in exchange for a 1-year or 3-year commitment to a specific instance type and region.
- C. An instance that can be terminated at any time.
- D. An instance with a static IP.

Answer: B

Explanation: RIs are a cost-saving model. If you know you will need a specific instance type for 1+ years, you can "reserve" it to get a significant discount compared to on-demand pricing.

68. What is "AWS Organizations"?

- A. A service for managing multiple AWS accounts.

- B. A chat application.
- C. A list of AWS partners.
- D. An IAM feature.

Answer: A

Explanation: Organizations allows you to centrally manage billing, apply security policies (SCPs), and share resources across multiple AWS accounts in your company.

69. What is a "Service Control Policy" (SCP)?
- A. An IAM policy.
 - B. A firewall rule.
 - C. A policy used in AWS Organizations to set "guardrails" on what IAM users/roles in member accounts can do.
 - D. A billing alert.

Answer: C

Explanation: An SCP is a "guardrail." It doesn't *grant* permissions, it only *restricts* them. You can use an SCP to, for example, block all member accounts from ever creating resources in a specific region.

70. What is "Amazon ECS" (Elastic Container Service)?
- A. A Kubernetes service.
 - B. A serverless compute service.
 - C. AWS's proprietary container orchestration service.
 - D. A container build service.

Answer: C

Explanation: ECS is AWS's own container orchestrator, an alternative to Kubernetes (which AWS also offers as EKS).

71. What is "Amazon EKS" (Elastic Kubernetes Service)?
- A. AWS's proprietary container orchestrator.
 - B. A managed service that makes it easy to run, manage, and scale Kubernetes on AWS.
 - C. A container registry.
 - D. A serverless compute service.

Answer: B

Explanation: EKS is AWS's *managed Kubernetes* service. AWS manages the K8s control plane (API server, etcd) for you.

72. What is "Amazon ECR" (Elastic Container Registry)?
- A. A container orchestrator.
 - B. A fully managed, private Docker container registry.

- C. A container build service.
- D. A serverless container service.

Answer: B

Explanation: ECR is AWS's version of Docker Hub. It's a secure, private registry where you can push and pull your Docker images.

73. What is "AWS Fargate"?

- A. A "serverless" compute engine for containers (used with ECS and EKS).
- B. A service for running EC2 instances.
- C. A security tool.
- D. A database.

Answer: A

Explanation: With Fargate, you don't manage the underlying EC2 instances (worker nodes) for your containers. You just define your container and its resources, and AWS runs it.

74. What is an "Application Load Balancer" (ALB) "Target Group"?

- A. A group of listeners.
- B. A group of rules.
- C. A group of registered targets (e.g., EC2 instances) that the load balancer routes traffic to.
- D. A security group.

Answer: C

Explanation: The ALB's "Listener" checks a "Rule" (e.g., path is /api/*), and the rule "forwards" the traffic to a "Target Group."

75. What is "AWS Direct Connect"?

- A. A VPN connection.
- B. A dedicated, private, high-bandwidth network connection from your on-premises data center to AWS.
- C. A load balancer.
- D. The AWS CLI.

Answer: B

Explanation: Direct Connect provides a private, consistent, low-latency link to AWS, bypassing the public internet. It's used for large-scale hybrid workloads.

76. What is an "AWS VPN CloudHub"?

- A. A single VPN connection.
- B. A hub-and-spoke model for connecting multiple on-premises VPNs together via AWS.

- C. A NAT Gateway.
- D. An Internet Gateway.

Answer: B

Explanation: If you have multiple branch offices, they can all connect their VPNs to the AWS VPN CloudHub, which then acts as a central hub for inter-office communication.

77. What is "Amazon Athena"?

- A. A database.
- B. An interactive query service that lets you analyze data in S3 using standard SQL.
- C. A data warehouse.
- D. A CI/CD service.

Answer: B

Explanation: Athena is "serverless." You just point it at your data (e.g., log files) in S3, and you can run SQL queries on it without setting up any infrastructure.

78. What is "AWS Glue"?

- A. A service for sticking hardware together.
- B. A fully managed ETL (Extract, Transform, Load) service.
- C. A SQL query engine.
- D. A monitoring service.

Answer: B

Explanation: Glue is used to "crawl" your data sources (like S3 or RDS), discover their schemas, and run ETL jobs (using Spark) to transform and move data.

79. What is "Amazon Kinesis"?

- A. A service for collecting, processing, and analyzing real-time, streaming data.
- B. A batch processing service.
- C. A database.
- D. A file storage service.

Answer: A

Explanation: Kinesis is used for "streaming data" (e.g., clickstreams from a website, logs from thousands of servers) that needs to be processed in real-time.

80. What is "Amazon EMR" (Elastic MapReduce)?

- A. A relational database.
- B. A managed cluster platform for running "Big Data" frameworks like Apache Spark and Hadoop.
- C. A monitoring service.
- D. A container service.

Answer: B

Explanation: EMR simplifies running big data jobs. It provisions a cluster of EC2 instances and pre-installs Spark, Hadoop, Hive, etc., for you.

81. What is the "Shared Responsibility Model"?

- A. You are responsible for everything.
- B. AWS is responsible for everything.
- C. AWS is responsible for security *of* the cloud; the customer is responsible for security *in* the cloud.
- D. A billing model.

Answer: C

Explanation: AWS manages the physical security of the data centers. You (the customer) are responsible for things like patching your EC2 instance OS, configuring Security Groups, and managing IAM users.

82. What is "Amazon Macie"?

- A. A service that uses machine learning to discover, classify, and protect sensitive data (like PII) in S3.
- B. A log analysis tool.
- C. A data warehouse.
- D. A threat detection service.

Answer: A

Explanation: Macie is a data security service. It scans your S3 buckets to find and alert you about sensitive data (like credit card numbers) that may be publicly exposed.

83. What is "Amazon GuardDuty"?

- A. A data discovery service.
- B. A managed threat detection service that monitors for malicious activity and unauthorized behavior.
- C. A firewall.
- D. A service for managing secrets.

Answer: B

Explanation: GuardDuty is an "intelligent" threat detection service. It analyzes CloudTrail logs, VPC Flow Logs, and DNS logs to find anomalies (e.g., an EC2 instance suddenly crypto-mining).

84. What is "AWS Budgets"?

- A. A tool that automatically optimizes your costs.
- B. A tool that allows you to set custom cost and usage budgets, and get alerted when you exceed them.

- C. A billing-only version of IAM.
- D. A tool for reserving instances.

Answer: B

Explanation: You can set a budget (e.g., "\$500 per month") and configure an alert to notify you via SNS (or email) when your spending reaches 80% of that budget.

85. What is the "AWS Management Console"?
- A. The AWS CLI.
 - B. The web-based, graphical user interface (GUI) for managing your AWS services.
 - C. The API.
 - D. An EC2 instance.

Answer: B

Explanation: The "console" is the website you log into to click buttons and configure services manually.

86. What is "AWS Systems Manager" (SSM)?
- A. A central service for operational tasks, like patch management, configuration management, and running commands on instances.
 - B. A logging service.
 - C. A monitoring service.
 - D. An IaC service.

Answer: A

Explanation: SSM is a powerful management tool. Its "Run Command" feature lets you run scripts on your fleet of instances without SSH. Its "Patch Manager" automates OS patching.

87. What is "AWS EventBridge"?
- A. A network bridge.
 - B. A serverless "event bus" service that makes it easy to connect applications together.
 - C. A CI/CD service.
 - D. A monitoring dashboard.

Answer: B

Explanation: EventBridge (the evolution of CloudWatch Events) is a central event router. AWS services, your own apps, and SaaS apps can send "events" to it, and you can write rules to route those events to targets like Lambda or SQS.

88. What is "AWS Step Functions"?
- A. A CI/CD service.
 - B. A serverless function (like Lambda).

- C. A serverless orchestration service that lets you coordinate multiple Lambda functions into a "workflow".
- D. A monitoring tool.

Answer: C

Explanation: Step Functions lets you visually design and execute a state machine. It's used to handle complex workflows with error handling, retries, and parallel steps, all using Lambda functions.

89. What is an "EC2 Launch Template"?

- A. An AMI.
- B. A set of launch parameters (AMI, instance type, security group, key pair, etc.) used by an Auto Scaling Group.
- C. A CloudFormation template.
- D. A running instance.

Answer: B

Explanation: A Launch Template (the successor to Launch Configurations) defines *what* to launch. An Auto Scaling Group defines *when* and *how many* to launch.

90. What is the "AWS Free Tier"?

- A. A 30-day trial of all services.
- B. A tier of services that are always free.
- C. A tier of services that are free for 12 months, plus some services that are always free (up to a limit).
- D. A simulation of the AWS console.

Answer: C

Explanation: The Free Tier includes 12 months of free usage (e.g., a `t2.micro` EC2 instance) plus an "Always Free" tier (e.g., 1 million Lambda requests per month).

91. What is a "VPC Peering" connection?

- A. A VPN connection.
- B. A networking connection that allows you to route traffic between two VPCs privately.
- C. A Direct Connect.
- D. An Internet Gateway.

Answer: B

Explanation: VPC Peering makes two VPCs (even in different accounts) behave as if they are on the same network. The traffic does not traverse the public internet.

92. What is a "VPC Endpoint"?

- A. An Internet Gateway.
- B. A NAT Gateway.

- C. A component that allows you to privately connect your VPC to supported AWS services (like S3) without using the public internet.
- D. A VPN.

Answer: C

Explanation: By default, to talk to S3, an instance needs internet access. A VPC Endpoint for S3 creates a private route, so traffic stays on the AWS private network.

93. What is "Amazon S3 Object Lock"?

- A. A feature to prevent a bucket from being deleted.
- B. A "Write-Once, Read-Many" (WORM) feature that prevents an object from being deleted or overwritten for a fixed amount of time.
- C. A way to encrypt an object.
- D. A way to make an object public.

Answer: B

Explanation: This is a compliance feature. You can "lock" an object in "Governance" mode (needs special permissions to delete) or "Compliance" mode (cannot be deleted by anyone, including root).

94. What is "Amazon ECS" (again)?

- A. AWS's managed Kubernetes service (EKS).
- B. AWS's managed container registry (ECR).
- C. AWS's proprietary, fully managed container orchestration service.
- D. AWS's serverless container compute engine (Fargate).

Answer: C

Explanation: ECS is the AWS-native orchestrator. It uses "Task Definitions" (like a `docker-compose.yml`) to define how to run containers.

95. What is an "ECS Task Definition"?

- A. A running container.
- B. A cluster of EC2 instances.
- C. A JSON text file that describes one or more containers (the "blueprint" for your application).
- D. A load balancer.

Answer: C

Explanation: The Task Definition specifies the Docker image, CPU/Memory, ports, volumes, and environment variables for the containers in your application.

DONE

96. What is "Amazon CloudWatch Logs"?

- A. A service for monitoring metrics.

- B. A service for centrally storing, monitoring, and analyzing log files from EC2, Lambda, and other services.
- C. A service for auditing API calls (CloudTrail).
- D. A service for analyzing S3.

Answer: B

Explanation: You can install the CloudWatch Agent on EC2 instances to stream your application logs (`/var/log/app.log`) to CloudWatch Logs for centralized storage and analysis.

97. What is a "CloudWatch Alarm"?

- A. A log entry.
- B. A metric.
- C. An object that "watches" a single metric (e.g., EC2 CPU) and performs an action (e.g., send SNS notification, trigger Auto Scaling) if it breaches a threshold.
- D. A dashboard.

Answer: C

Explanation: Alarms are the core of automated monitoring. An alarm is what connects a metric (like high CPU) to an action (like "add another instance").

98. What is an "S3 Access Point"?

- A. A way to make a bucket public.
- B. A network endpoint that you can attach to a bucket to simplify managing data access with a unique policy.
- C. A VPC Endpoint.
- D. A new name for a bucket.

Answer: B

Explanation: If you have a single large bucket with 100s of different permissions, it's complex. An Access Point is a "proxy" in front of the bucket with its *own* policy, simplifying access for a specific team or app.

99. What is the "AWS Well-Architected Framework Pillar" that focuses on running and monitoring systems to deliver business value and continuously improving processes?

- A. Security
- B. Reliability
- C. Operational Excellence
- D. Cost Optimization

Answer: C

Explanation: Operational Excellence is the pillar that covers automating builds, deployments (CI/CD), managing infrastructure as code, and monitoring systems.

100. What is the "AWS Well-Architected Framework Pillar" that focuses on the ability of a system to recover from failures and dynamically acquire resources?

- A. Performance Efficiency
- B. Reliability
- C. Security
- D. Cost Optimization

Answer: B

Explanation: The Reliability pillar focuses on designing for high availability, fault tolerance (e.g., using Multi-AZ), and automated recovery from failure.