1. What are the four main factors that a solutions architect should consider when they must choose a Region? **1 / 1 point**

- (●) Latency, price, service availability, and compliance
- ( ) Latency, taxes, speed, and compliance
- ( ) Latency, high availability, taxes, and compliance
- ( ) Latency, security, high availability, and resiliency

Correct

A solutions architect should consider the following four aspects when deciding which AWS Region to use for hosting applications and workloads: latency, price, service availability, and compliance. For more information, see the *AWS Global Infrastructure* video in week 1.

2. Which statement BEST describes the relationship between Regions, Availability Zones and data centers? **1 / 1 point**

- (●) Regions are clusters of Availability Zones. Availability Zones are clusters of data centers.
- ( ) Availability Zones are clusters of Regions. Regions are clusters of data centers.
- ( ) Data centers are cluster of Availability Zones. Regions are clusters of Availability Zones.
- ( ) Data centers are clusters of Regions. Regions are clusters of Availability Zones.

Correct

The AWS Cloud infrastructure is built around AWS Regions and Availability Zones. An AWS Region is a physical location in the world that has multiple Availability Zones. Availability Zones consist of one or more discrete data centers, each with redundant power, networking, and connectivity, housed in separate facilities. For more information, see the *AWS Global Infrastructure* video in week 1.

3. Which of the following can be found in an AWS Identity and Access Management (IAM) policy? **1 / 1 point**

- ○ Effect
- ○ Action
- ○ Object
- ◉ A and B
- ○ B and C

✓ **Correct**

An IAM policy contains a series of elements, including a Version, Statement, Sid, Effect, Principal, Action, Resource, and Condition. For more information, see *Introduction to Amazon Identity and Access Management*.

4. A solutions architect is consulting for a company. When users in the company authenticate to a corporate network, they want to be able to use AWS without needing to sign in again. Which AWS identity should the solutions architect recommend for this use case? **0 / 1 point**

- ○ AWS account root user
- ○ AWS Identity and Access Management (IAM) user
- ○ IAM role
- ◉ IAM group

✗ **Incorrect**

An IAM user group is a way to attach policies to multiple users at one time. When a company attaches an identity-based policy to a user group, all the users in the user group receive the permissions from the user group. For more information, see the *Role Based Access in AWS* video.

5. A company wants to allow resources in a public subnet to communicate with the internet. Which of the following must the company do to meet this requirement? **1 / 1 point**

- ○ Create a route to a private subnet
- ○ Attach an internet gateway to their VPC
- ○ Create a route in a route table to the internet gateway
- ○ A and B
- ◉ B and C

Correct

Unlike a modem at home, which can go down or go offline, an internet gateway is highly available and scalable. After the company creates an internet gateway, they then need to attach it to a virtual private cloud (VPC) and create a route table to route network traffic through the internet gateway. For more information, see the *Introduction to Amazon VPC* reading.

6. What does an Amazon Elastic Compute Cloud (Amazon EC2) instance type indicate? **1 / 1 point**

- ○ Instance placement and instance size
- ○ Instance Amazon Machine Image (AMI) and networking speed
- ○ Instance tenancy and instance billing
- ◉ Instance family and instance size

Correct

Instance types are named based on instance generation, family, additional capabilities, and size. For more information, see the *Introduction to Amazon EC2* video.

7. What is a typical use case for Amazon Simple Storage Service (Amazon S3)? **1 / 1 point**

- ◉ Object storage for media hosting

- File storage for multiple EC2 instances
- Block storage for an EC2 instance
- Object storage for a boot drive

Correct

Amazon S3 is an object storage service that is designed for large objects, such as media files. Because users can store unlimited objects, and the size of each individual object can be up to 5 TB, Amazon S3 is a good location to host video, photo, or music uploads. For more information, see the *Object Storage with Amazon S3* video.

8. A solutions architect is working for a healthcare facility, and they are tasked with storing 7 years of patient information that is rarely accessed. The facility's IT manager asks the solutions architect to consider one of the Amazon Simple Storage Service (Amazon S3) storage tiers to store the patient information. Which storage tier should the solutions architect suggest? **0 / 1 point**

- Amazon S3 Intelligent-Tiering
- Amazon S3 Standard
- Amazon S3 Standard-Infrequent Access
- Amazon S3 Glacier Deep Archive

Incorrect

The Amazon S3 Standard storage class offers high durability, availability, and performance of object storage for frequently accessed data. For more information, see the *Object storage with Amazon S3* reading.

9. Which task of running and operating the database are users responsible for when they use Amazon Relational Database Service (Amazon RDS)? **1 / 1 point**

- Optimizing the database
- Provisioning and managing the underlying infrastructure

- Installing the relational database management system on the database instance
- Installing patches to the operating system for the database instance

Correct
With Amazon RDS, users are no longer responsible for the underlying environment that the database runs on. Instead, users can focus on optimizing the database because Amazon RDS has components that AWS manages. For more information, see *Explore Databases on AWS*.

10. True or false: A Multi-AZ deployment is beneficial when users want to increase the availability of their database. **1 / 1 point**

- (•) True
- ( ) False

Correct
Placing a workload across multiple Availability Zones increases the availability of resources. For example, say that an environmental hazard in an Availability Zone causes an Amazon Aurora database to stop working. In this case, a read-replica of the Aurora database instance that is in an unaffected Availability Zone will automatically be promoted to a primary database instance. For more information, see *Amazon Relational Database Service*.

11. What are the three components of Amazon EC2 Auto Scaling? **1 / 1 point**

- Scaling policies, security group, EC2 Auto Scaling group
- Amazon Machine Image (AMI) ID, instance type, storage
- (•) Launch template, scaling policies, EC2 Auto Scaling group
- Security group, instance type, key pair

Correct

Amazon EC2 Auto Scaling requires users to specify three main components: a configuration template for the Amazon Elastic Compute Cloud (Amazon EC2) instances (either a launch template or a launch configuration); an EC2 Auto Scaling group to list minimum, maximum, and desired capacity of instances; and scaling policies that scale an instance based on the occurrence of specified conditions or on a schedule. For more information, see *Amazon EC2 Auto Scaling*.

12. An application must choose target groups by using a rule that is based on the path of a URL. Which Elastic Load Balancing (ELB) type should be used for this use case? **1 / 1 point**

- ○ Classic Load Balancer
- ○ Network Load Balancer
- ◉ Application Load Balancer
- ○ Gateway Load Balancer

Correct

Application Load Balancer is a layer 7 load balancer that routes HTTP and HTTPs traffic, with support for rules. For more information, see *Route Traffic with Amazon Elastic Load Balancing*.