1. AWS(Amazon Web Services) is a cloud computing platform provided by amazon offering a wide range of services like storage, computing power, databases on the pay per use pricing model. It helps companies to focus on their core rather than developing and maintaining a infrastructure.
2. AWS (Amazon Web Services) provides services for business and companies that crucial and generally takes a lot of time and energy. Some of the significance of AWS in cloud computing are :
   - Scalability and Flexibility
   - Cost effective
   - Global reach
   - Security
3. AWS architecture is built on a variety of key components that work together to deliver cloud services.
   - Regions and availability zones
   - Elastic Cloud Compute(EC2)
   - Simple Storage Services(S3)
   - Elastic load balancing(ELB)
   - Relational Database Service(RDS)
   - Amazon Virtual Private Cloud (VPC)
   - Identity and Access Management (IAM)
   - CloudFront
   - AWS Lambda
4. Amazon EC2 is a web service that provides resizable compute capacity in the cloud. It allows users to run virtual servers, known as EC2 instances, which can host applications, databases, and other services.

   Amazon S3 is a highly scalable object storage service designed for storing and retrieving any amount of data from anywhere on the web. It's known for its durability, scalability, and security.

   Amazon RDS is a managed relational database service that simplifies the setup, operation, and scaling of databases in the cloud. It supports multiple database engines, including MySQL, PostgreSQL, Oracle, SQL Server, and Amazon Aurora.

   IAM is a service that helps you securely control access to AWS services and resources. It enables you to manage users, groups, roles, and permissions.
5. The benefits of us AWS are it faster, cost effective as it provides pay per use pricing model and can track and monitor metrics
6. **Scalability:** AWS scales resources automatically based on demand, ensuring applications can handle varying workloads without manual intervention.
   Flexibility: AWS offers a wide range of services and configurations, allowing businesses to tailor solutions to their specific needs.
   Cost-Efficiency: AWS's pay-as-you-go pricing eliminates upfront costs, with options like Reserved Instances for long-term savings.

Security: AWS provides robust security features, including encryption, IAM, and compliance certifications, ensuring data protection and regulatory compliance.

7. AWS pricing is primarily based on a pay-as-you-go model, charging users only for the resources they consume. Other pricing options include Reserved Instances for long-term commitments at reduced rates, Spot Instances for discounted, unused capacity, and a Free Tier for new users to explore services at no cost.

8. **Pay-as-You-Go:** Pay only for the resources you use, without upfront costs.
   Reserved Instances: Commit to one- or three-year usage for significant discounts on EC2 instances.
   Free Tier: Access limited AWS services for free for 12 months, ideal for learning and experimentation.

9. Cloud Computing Models:
   - **IaaS:** Provides virtualized computing resources like servers and storage (e.g., AWS EC2).
   - **PaaS:** Offers a platform to develop and manage applications without managing infrastructure (e.g., AWS Elastic Beanstalk).
   - **SaaS:** Delivers fully functional software over the internet, managed by the provider (e.g., Google Workspace).

10. AWS Snowball is a data transport solution that helps transfer large amounts of data to and from AWS using physical storage devices. Snowball devices are rugged and designed to withstand shipping, making them ideal for situations where network bandwidth is limited or transferring data over the internet would be too slow or costly.

11. Load balancing is the process of distributing incoming network traffic across multiple servers to ensure no single server is overwhelmed. AWS offers Elastic Load Balancing (ELB) to manage traffic distribution across EC2 instances or other AWS resources.

12. Auto Scaling is a feature in AWS that automatically adjusts the number of EC2 instances or other resources based on predefined conditions, ensuring that the application always has the right amount of capacity to handle traffic.

13. AWS Lambda is a serverless compute service that lets you run code without provisioning or managing servers. You only pay for the compute time you consume, and the service automatically scales your application by running code in response to triggers such as HTTP requests, file uploads, or changes in a database