Cloud Computing delivers computing services over the internet, including servers, storage, databases, networking, software, and analytics. It offers flexibility, scalability, and cost-effectiveness compared to traditional on-premises infrastructure.

Infrastructure as a Service (IaaS) provides virtualized computing resources over the internet. Examples include Amazon EC2, Google Compute Engine, and Microsoft Azure Virtual Machines. Users can rent virtual servers and storage as needed.

Platform as a Service (PaaS) offers a platform for developing, running, and managing applications without worrying about underlying infrastructure. Examples include Google App Engine, Heroku, and AWS Elastic Beanstalk.

Software as a Service (SaaS) delivers software applications over the internet on a subscription basis. Examples include Gmail, Salesforce, Microsoft Office 365, and Google Workspace.

Containerization packages applications with their dependencies into lightweight, portable containers. Docker is the most popular containerization platform, and Kubernetes orchestrates container deployment and management.

Microservices Architecture breaks down applications into small, independent services that communicate through APIs. This approach improves scalability, maintainability, and enables teams to work independently.

DevOps combines software development and IT operations to shorten development cycles and improve deployment frequency. It emphasizes automation, continuous integration, continuous deployment, and monitoring.