What is Cloud Computing?
Cloud computing is the delivery of computing services·including servers, storage, databases, networking, software

Why Cloud Computing?
Cloud computing allows businesses to avoid or minimize upfront IT infrastructure costs. It enables organizations to

Characteristics of Cloud Computing
On-demand self-service, Broad network access, Resource pooling, Rapid elasticity, Measured service.

Cloud Computing Architecture
Cloud computing architecture comprises front-end and back-end components. The front-end includes client device

Components of Cloud Computing Architecture
Client Infrastructure, Application, Services, Runtime Cloud, Storage, Infrastructure, Management, Security.

Difference between Cloud Computing and Grid Computing
Cloud computing focuses on delivering services over the internet, while grid computing involves distributed comput

How does cloud computing work
Cloud computing works by hosting applications and services on remote servers that users access via the internet.

Cloud Computing Applications
Data storage, Backup and recovery, Web hosting, Big data analytics, Development and testing, Virtual desktops.

What are the Security Risks of Cloud Computing
Data breaches, Account hijacking, Insider threats, Insecure APIs, Denial of service attacks.

Types of Cloud: Public Cloud
Public cloud is a cloud infrastructure that is available to the general public and owned by a cloud service provider.

Advantages of Public Cloud
Cost-effective, Scalable, No maintenance, High reliability.

Disadvantages of Public Cloud
Less security, Limited customization, Potential downtime.

Private Cloud
Private cloud is a cloud infrastructure operated solely for a single organization, offering greater control and security

Advantages of Private Cloud
Enhanced security, Greater control, Customizable.

Disadvantages of Private Cloud
Higher cost, Requires in-house expertise, Limited scalability.

Hybrid Cloud
Hybrid cloud combines public and private clouds, allowing data and applications to be shared between them.

Advantages of Hybrid Cloud
Flexibility, Cost efficiency, Improved security.

Disadvantages of Hybrid Cloud
Complex management, Compatibility issues, Security concerns.

Community Cloud
Community cloud is shared among several organizations with common concerns, such as security or compliance.

Advantages of Community Cloud
Shared cost, Collaborative environment, Customizable.

Disadvantages of Community Cloud
Limited scalability, Shared responsibility, Potential conflicts.

Cloud Service Models : IaaS
Infrastructure as a Service provides virtualized computing resources over the internet. Examples: AWS EC2, Goog

PaaS
Platform as a Service provides a platform allowing customers to develop, run, and manage applications. Examples

SaaS
Software as a Service delivers software applications over the internet, on a subscription basis. Examples: Google

Cloud Service Providers : AWS
Amazon Web Services offers a wide range of cloud services including computing, storage, and databases.

Azure
Microsoft Azure provides cloud services for building, testing, deploying, and managing applications.

GCP
Google Cloud Platform offers cloud computing services including data storage, machine learning, and application