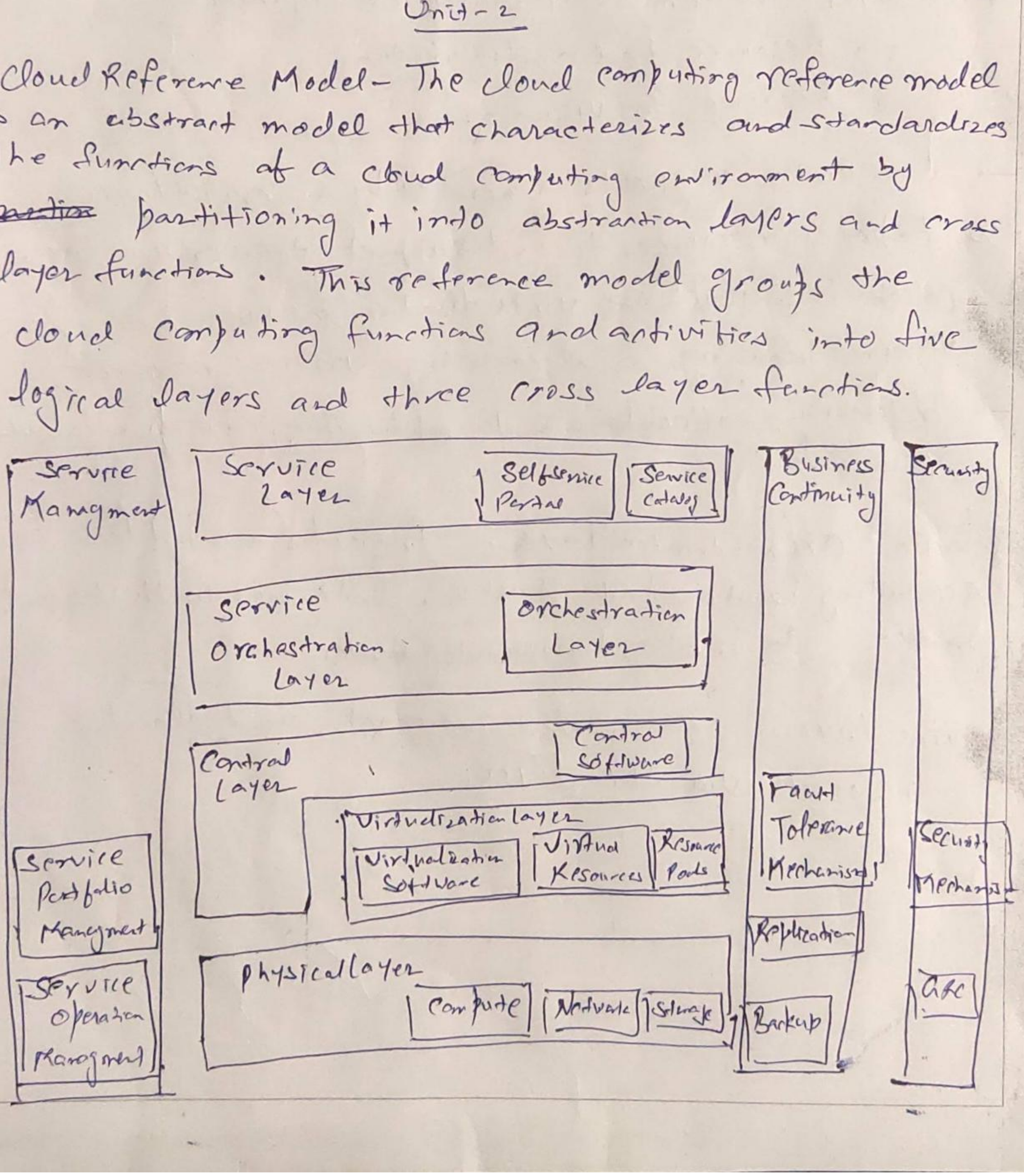
Campus: ..... Course: ..... Class/Section: ..... Date: .....

Name of Faculty: ..... Name of Subject: ..... Code: .....

Unit - 2

Cloud Reference Model - The cloud computing reference model is an abstract model that characterizes and standardizes the functions of a cloud computing environment by ~~function~~ partitioning it into abstraction layers and cross layer functions. This reference model groups the cloud computing functions and activities into five logical layers and three cross layer functions.



~~Physical~~ Physical Layer- Executes requests generated by the virtualization and control layer.

Virtual Layer- Abstracts physical resources and makes them appear as virtual resources (enables multi-tenant environment). Executes the requests generated by control layer.

Control layer- → Enable resource configaration.
→ Resource pool configaration
→ Resource Provisioning.

→ Executes requests generated by a servile layer.
→ Exposes resources to and support the service layer.
→ Collaborates with the virtualization software enables resource planning and creating virtual resources, dynamic allocation and optimizing utilization of resources.

Service Orchestration layer- Provides workflows for executing automated tasks. Interacts with various entities to invoke provisioning tasks.

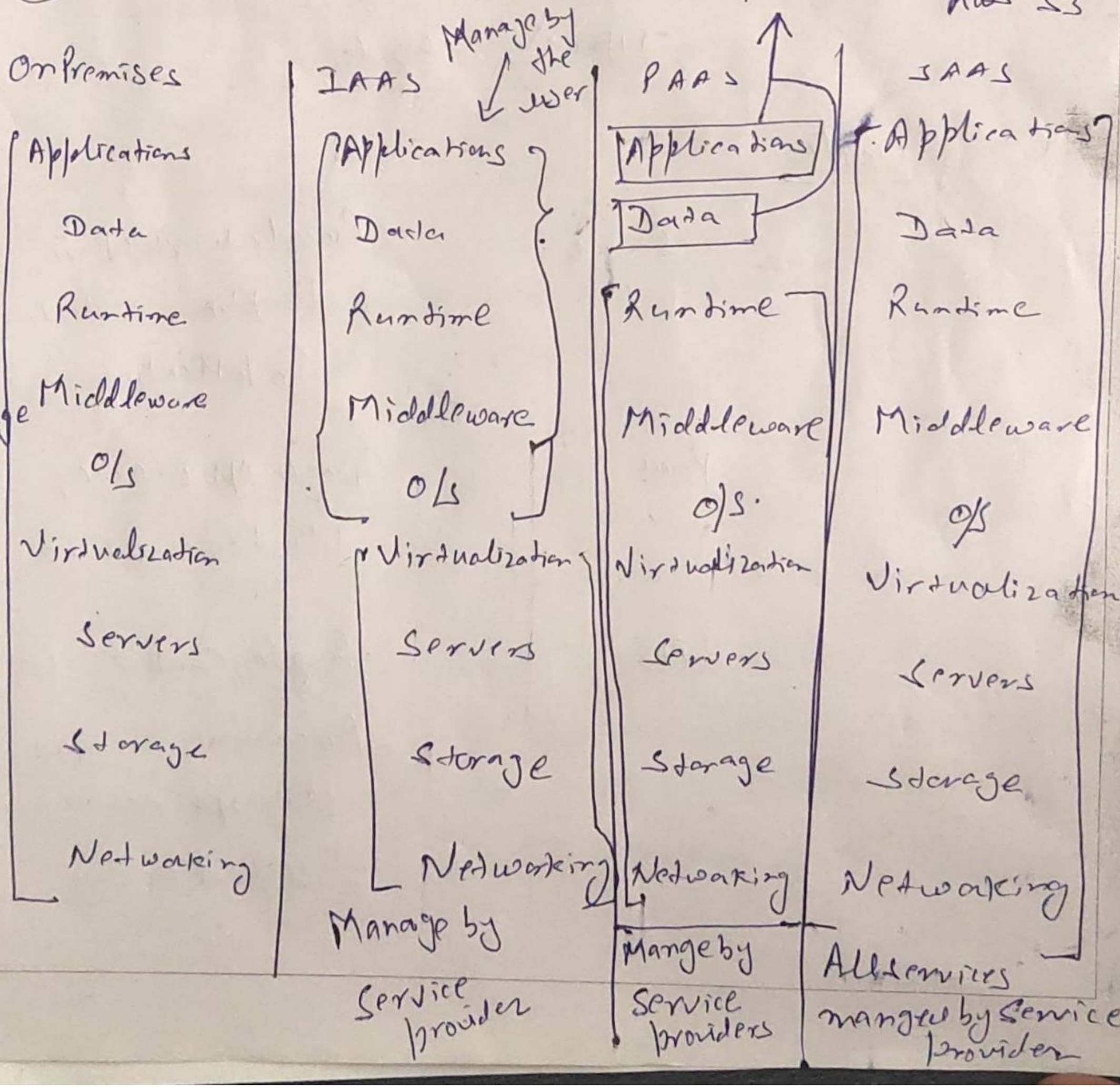
Service Layer- Consumers interact and consume cloud resources via this layer.

Campus: ..... Course: ..... Class/Section: ..... Date: .....

Name of Faculty: ..... Name of Subject: ..... Code: .....

Cloud Computing Services

1. Software As a service → Google Services (Apps)
2. Platform As a service → Azure, AWS
3. Infrastructure as a Service → Manage by users, Rackspace, AWS S3



IAAS- Is on demand access to cloud-hosted physical and Virtual servers, Storage and Networking the backend IT infrastructure for running applications and workload in cloud.

PAAS- Is on-demand access to complete, ready to use, cloud hosted platform for developing, running, maintaining and managing applications.

SAAS- Is on demand access to ready to use cloud hosted application software.

~~Types of cloude~~

Examples.

~~For~~ Saas	Google Workspace, Dropbox, Salesforce, GoToMeeting
Paas	Google App Engine, Windows Azure
IAAS	Google compute Engine, Amazon Web Service Microsoft Azure, Digital Ocean

Campus: ..... Course: .....
Name of Faculty: .....
Class/Section: .....
Name of Subject: .....
Date: .....
Code: .....

Types of Cloud

(1) Public cloud (2) Private cloud (3) Hybrid cloud
(4) Community cloud

Public cloud-

(1) Public clouds are managed by third parties which provide cloud services over the internet to the public, these services are available as pay as you go billing models.

(2) These deploy Globally.

(3) The fundamental charaterstics of a ~~cloud~~ ~~pub~~ public clouds are multitenancy.

(4) A public cloud offer solutions for minimizing IT infrastructure costs and became a good option for handling peak loads on the local infrastructure.

Private cloud- These deploy locally.

(1) Private clouds are distributed systems that work on private infrastructure and provide the users with dynamic provisioning of computing resources.

(2) Instead of a pay-as-you-go model in private clouds, there could by other schemes that manage the usage of the cloud and proportionally billing of the different departments or sections of an enterprise.

Hybrid cloud - Combination of public and private cloud. It is a hetrogeneous distributed system formed by combining facilities of public cloud and private cloud.

Hybrid cloud took advantage of public and private cloud.

Community Cloud -