

## CLOUD COMPUTING INTERNAL ANSWER

### **No-1:- Answer the following questions . (any five)**

**(A) What is mobile computing ?**

Ans. A computing environment in which users access information and application using handheld such as smartphones and tables.

**(B) Write any two features of SaaS service ?**

Ans. (i)The cloud consumer has full control over all the cloud services.

(ii)The cloud provider has full control over software application –based services.

**(C) Write any two advantages of public cloud ?**

Ans. (i)Public cloud is owned at a lower cost than the private cloud and hybrid cloud.

(ii)Public cloud is maintained by the cloud service provider, so don't need to worry about the maintenance.

**(D) Write any two dis-advantages of private cloud ?**

Ans. (i)Skilled people are required to manage and operate cloud service.

(ii)Private cloud is accessible within the organization, so the area of operation is limited.

**(E) Explain hybrid cloud ?**

Ans. Hybrid cloud is combination of the public cloud and the private cloud, we can say:

Hybrid cloud= Public cloud+ Private cloud

For e.g;

Google Application suite

**(F) Write two advantage of hybrid cloud ?**

Ans. (i) Hybrid cloud is suitable for organization that require more security than the public cloud.

(ii) Hybrid cloud helps you to deliver new products and services more quickly.

### **No-2:- Answer the following questions (any Two)**

**(A) What is cloud computing architecture, Explain it ?**

Ans. Architecture of cloud computing is the combination of both SOA

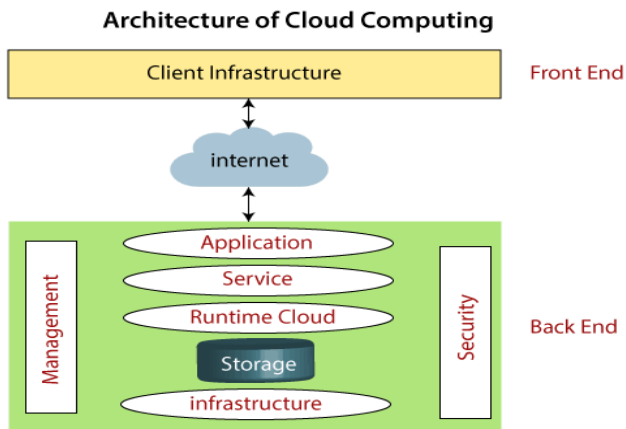
(service oriented architecture) and EDAC (event driven architecture). Client infrastructure, application , service, runtime cloud, storage infrastructure, management & security all these are the component of cloud computing architecture.

Fronted:-

Fronted of the cloud architecture refers to the Client side of cloud computing system. Means it contains all the user interfaces and applications which are used by the client to access the cloud computing services/ resources. For example, use of a web browser to access the cloud platform.

Client infrastructure:-

Client infrastructure is a part of the fronted component. It contains the applications and user interfaces which are required to access to access the cloud platform. In other words, it provides GUI interact with the cloud.



### 1. Client Infrastructure

Client Infrastructure is a Front end component. It provides GUI (Graphical User Interface) to interact with the cloud.

### 2. Application

The application may be any software or platform that a client wants to access.

### 3. Service

A Cloud Services manages that which type of service you access according to the client's requirement.

Cloud computing offers the following three type of services:

i. **Software as a Service (SaaS)** – It is also known as **cloud application services**. Mostly, SaaS applications run directly through the web browser means we do not require to download and install these applications. Some important example of SaaS is given below –

**Example:** Google Apps, Salesforce Dropbox, Slack, Hub spot, Cisco WebEx.

ii. **Platform as a Service (PaaS)** – It is also known as **cloud platform services**. It is quite similar to SaaS, but the difference is that PaaS provides a platform for software creation, but using SaaS, we can access software over the internet without the need of any platform.

**b) what is cloud and explain its characteristics?**

Ans: **1. On-Demand Self-Service**

With cloud computing, you can provision computing services, like server time and network storage, automatically. You won't need to interact with the service provider. Cloud customers can access their cloud accounts through a web self-service portal to view their cloud services, monitor their usage, and provision and de-provision services.

### 2. Broad Network Access

Another essential cloud computing characteristic is broad network access. You can access cloud services over the network and on portable devices like mobile phones, tablets, laptops, and desktop computers. A public cloud uses the internet; a private cloud uses a local area network.

### 3. Resource Pooling

With resource pooling, multiple customers can share physical resources using a multi-tenant model. This model assigns and reassigns physical and virtual resources based on demand. Multi-tenancy allows customers to share the same applications or infrastructure while maintaining privacy and security.

## 4. Rapid Elasticity

Cloud services can be elastically provisioned and released, sometimes automatically, so customers can scale quickly based on demand. Customers can also scale cloud use, capacity, and cost without extra contracts or fees. With rapid elasticity, you won't need to buy computer hardware. Instead, can use the cloud provider's cloud computing resources.

## 5. Measured Service

In cloud systems, a metering capability optimizes resource usage at a level of abstraction appropriate to the type of service. For example, you can use a measured service for storage, processing, bandwidth, and users. Payment is based on actual consumption by the customer via a pay-for-what-you-use model.

### c) Define paas and laas and its features?

**Ans:**

**Paas** : Platform as a Service (PaaS) provides a runtime environment. It allows programmers to easily create, test, run, and deploy web applications. In PaaS, back end scalability is managed by the cloud service provider, so end- users do not need to worry about managing the infrastructure. Here developers can construct and deploy apps on a cloud platform without necessary need to know how many processors or how much memory their applications would use.

Feature of PaaS: the cloud provider has entire rights or control over the provision of cloud services to consumers. The cloud consumer has selective control based on the resources they need or have opted for on the application server database or middleware. Consumers get environments in which they can develop their application or database. These environments are usually very visual and very easy to use. Provider option for Scalability and security of the user resources .

**laaS**: infrastructure as a service offers storage and computer resources that developers computer hardware as a service. It may also include the delivery of os and virtualization technology to manage the resources . Here the more important point is that laaS customers rent compeering resources instead of buying and installing them in their data centers. The service is typically paid for on a usage bias. The service may include dynamic scaling so that if the customers need more resources than expected, they can get them immediately.

Feature of laas: The consumer has full partial control over the infrastructure of the cloud server and database. The consumer has control over the virtual machines implementation and maintenance. The consumer has a choice of already installed VM machines with pre-installed operating systems. The cloud provider has full control over the data centers and the other hardware involved in them.