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UNIT TEST - I
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Miracle
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**Q1.** Deployments models of cloud are as follows:

(a) PUBLIC CLOUD
(b) PRIVATE CLOUD
(c) HYBRID CLOUD
(d) COMMUNITY CLOUD

→ A private cloud uses virtualization technology to combine resources sourced from physical hardware into shared pools. Due to this the cloud doesn't have to create environments by virtualization resource one at a time from a bunch of different physical systems.

→ Adding management software gives admin control to infrastructure, application etc that will be used helping cloud admins & optimize use.

Q2. There are 3 cloud service models :

(I) SAAS - It is a software methodology that provides licensed multithnat access to software and its functions remotily as a web based server.

(II) PAAS - It provides all the facilitahs required to support the completr life cycle of building and delayed web application & services entirely from internet.

(III) IAAS- It is the delivery of technology infrastruc as a demand scalable source.

- It provides self contcined. It environment

IAAS is suitable for storing large amount of data and performing heavy computation task of scientific research lab.

**Q3.** VIRTUALIZATION – It's an ability to run applications, operating systms on systm services in a logically distinct systm services in a environment that is independent of a specific physical computer systm.

### TYPES OF VIRTUALIZATION

**(I) APPLICATION VIRTUALIZATION** – It is the process of compiling application into machine indepent byte code that can be executed on any systm.
Eg. JVM

**(II) DESKTOP VIRTUALIZATION** – Ability to display graphical desktop from one computer systm on another computer systm.
Eg. Microsoft's remoh desktop

**(III) NETWORK VIRTUALIZATION** – It refers to network resource logically rather than having to refer to specific physical network devices.

Few othere types are SERVER/ MACHINE VIRTUALIZATION, and STORAGE VIRTUALIZATION, etc.–

→ XEN VIRTUALIZED ENVIRONMENT :- It is an open source
paravirtualization technology
- It supports several os.

ENVIRONMENTS

(1) Xen hypervisome
(II) Domain o Guest - It is modified linux kernel
(III) Domain U Guest - It has no access to physical hardw
(IV) UHVM Guest - It does not have the PV driver.

**Q4.** CLUSTER COMPUTING - It is a set of computers that work together so that they can be viewed as a single system. A computation process on such computer network i.e. cluster is called cluster computing.

| CLUSTER COMPUTING | GRID COMPUTING |
|---|---|
| - Nodes must be homogenous | - Nodes can be homogenous or hetrogenous |
| - Computers in a cluster are dedicated to same work | - Computer in a grid contribute their unused processing resources to one network. |
| - they are in a centralised network topology | - they are in distributed or decentralized network topology |
| - Computer are close to each other & are connected by high speed local area network bus. | - computer may at huge distance and connected by a low speed. |

RESOURCE POOLING ARCHITECTURE - A resource pooling architit. is based on use of one or more resource pool, in which identical IT resource are grouped & maintained by system that automatically ensures syncing

Examples
→ storage service Gateway
→ Virtual server pool, storage pool, network pool

→ Resource pools can become highly complex with multiply pools created for specific cloud consumers or application

→ A hirarchical structure can be establish to form parent sibling & nestd pools in order to facilitah organizatio of diverse resources pooling requirements