SHEET OF CH. 4

1. How does cloud computing provides on-demand functionality?

   Cloud computing is a metaphor used for internet. It provides on-demand access to virtualized IT resources that can be shared by others or subscribed by you. It provides an easy way to provide configurable resources by taking it from a shared pool. The pool consists of networks, servers, storage, applications and services.

2. What is the difference between scalability and elasticity?

   Scalability is a characteristic of cloud computing through which increasing workload can be handled by increasing in proportion the amount of resource capacity. It allows the architecture to provide on demand resources if the requirement is being raised by the traffic. Whereas, elasticity is being one of the characteristic provide the concept of commissioning and decommissioning of large amount of resource capacity dynamically. It is measured by the speed by which the resources are coming on demand and the usage of the resources.

3. What are the different layers of cloud computing?

Cloud computing consists of 3 layers in the hierarchy and these are as follows:

1. Infrastructure as a Service (IaaS) provides cloud infrastructure in terms of hardware like memory, processor speed etc.
2. Platform as a Service (PaaS) provides cloud application platform for the developers.
3. Software as a Service (SaaS) provides cloud applications which are used by the user directly without installing anything on the system. The application remains on the cloud and it can be saved and edited in there only.

4. What is the security aspects provided with cloud?

Security is one of the major aspects which come with any application and service used by the user. Companies or organizations remain much more concerned with the security provided with the cloud.

There are many levels of security which has to be provided within cloud environment such as:

- **Identity management:** it authorizes the application service or hardware component to be used by authorized users.
- **Access control:** permissions has to be provided to the users so that they can control the access of other users who are entering the in the cloud environment.
- **Authorization and authentication:** provision should be made to allow the authorized and authenticated people only to access and change the applications and data.

5. What are some examples of large cloud providers and their databases?

Cloud computing has many providers and it is supported on the large scale. The providers with their databases are as follows:

- **Google bigtable:** it is a hybrid cloud that consists of a big table that is spilt into tables and rows. MapReduce is used for modifying and generating the data.
- **Amazon SimpleDB:** is a webservice that is used for indexing and querying the data. It allows the storing, processing and creating query on the data set within the cloud platform. It has a system that automatically indexes the data.
- **Cloud based SQL:** is introduced by Microsoft and it is based on SQL database. it provides data storage by the usage of relational model in the cloud. The data can be accessed from the cloud using the client application.

6. How user will gain from utility computing?

Utility computing allow the user to pay per use means whatever they are using only for that they have to pay. It is a plug in that needs to be managed by the organizations on deciding what type of services has to be deployed from the cloud. Utility computing allows the user to think and implement the services according to them. Most organizations go for hybrid strategy that combines internal delivered services that are hosted or outsourced services.

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Top 40 CC model

{1, 3, 4, 6, 16, 17, 30, 32, 36, 37,