Q.1) what is cloud?

Ans. Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user.

The cloud" refers to servers that are accessed over the Internet, and the software and databases that run on those servers. Cloud servers are located in data centers all over the world. By using cloud computing, users and companies don't have to manage physical servers themselves or run software applications on their own machines.

Q.2) what are the types of cloud?

Ans.

• Private cloud: A private cloud is a server, data center, or distributed network completely dedicated to one organization.

• Public cloud: A public cloud is a service run by an external vendor that may include servers in one or multiple data centers. Unlike a private cloud, public clouds are shared by multiple organizations. Using virtual machines, individual servers may be shared by different companies, a situation that is called "multitenancy" because multiple tenants are renting server space within the same server.

• Hybrid cloud: Hybrid cloud deployments combine public and private clouds, and may even include on-premises legacy servers. An organization may use their private cloud for some services and their public cloud for others, or they may use the public cloud as backup for their private cloud.

• Multicloud: Multicloud is a type of cloud deployment that involves using multiple public clouds. In other words, an organization with a multicloud deployment rents virtual servers and services from several external vendors – to continue the analogy used above, this is like leasing several adjacent plots of land from different landlords. Multicloud deployments can also be hybrid cloud, and vice versa.

Q.3) Advantages of cloud?

Ans.

1. **Less Costs**  
   The services are free from capital expenditure. There are no huge costs of hardware in cloud computing. You just have to pay as you operate it and enjoy the model based on your subscription plan.
2. **24 X 7 Availability**  
   Most of the cloud providers are truly reliable in offering their services, with most of them maintaining an uptime of 99.9%. The workers can get onto the applications needed basically from anywhere. Some of the applications even function off-line.
3. **Flexibility in Capacity**  
   It offers flexible facility which could be turned off, up or down as per the circumstances of the user. For instance, a promotion of sales is very popular, capacity can be immediately and quickly added to it for the avoidance of losing sales and crashing servers. When those sales are done, the capacity can also be shrunk for the reduction of costs.
4. **All over Functioning**  
   Cloud computing offers yet another advantage of working from anywhere across the globe, as long as you have an internet connection. Even while using the critical cloud services that offer mobile apps, there is no limitation of the device used.
5. **Automated Updates on Software**  
   In cloud computing, the server suppliers regularly update your software including the updates on security, so that you do not need to agonize on wasting your crucial time on maintaining the system. You find extra time to focus on the important things like ‘How to grow your businesses.
6. **Security**  
   Cloud computing offers great security when any sensitive data has been lost. As the data is stored in the system, it can be easily accessed even if something happens to your computer. You can even remotely wipe out data from the lost machines for avoiding it getting in the wrong hands.
7. **Carbon Footprint**  
   Cloud computing is helping out organizations to reduce their carbon footprint. Organizations utilize only the amount of resources they need, which helps them to avoid any over-provisioning. Hence, no waste of resources and thus energy.
8. **Enhanced Collaboration**  
   Cloud applications enhance collaboration by authorizing diverse groups of people virtually meet and exchange information with the help of shared storage. Such capability helps in improving the customer service and product development and also reducing the marketing time.
9. **Control on the Documents**  
   Before cloud came into being, workers needed to send files in and out as the email attachments for being worked on by a single user at one time ultimately ending up with a mess of contrary titles, formats, and file content. Moving to cloud computing has facilitated central file storage.
10. **Easily Manageable**  
    Cloud computing offers simplified and enhanced IT maintenance and management capacities by agreements backed by SLA, central resource administration and managed infrastructure. You get to enjoy a basic user interface without any requirement for installation. Plus you are assured guaranteed and timely management, maintenance, and delivery of the IT services.

**Q.4) what is EC-2?**

**Ans.** Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers. Amazon EC2’s simple web service interface allows you to obtain and configure capacity with minimal friction. It provides you with complete control of your computing resources and lets you run on Amazon’s proven computing environment.