**Take away CAT 1 Group work (Code Clan)**

Cloud computing takes the emphasis away from local computers. It is less about the machine you use at home or on the move about what is happening on computers many miles away.

**Question 1**

**Explain with clear details including an illustration.**

Instead of storing information on PC, smart phone or tablet, data can be kept remotely. It will then be made available to any device that is capable of reading it. The benefit of this is very clear: no one needs to be tied to a computer or phone; all that is needed is a way of accessing the data and that can be done from any machine.

Significant improvement in science and technology has changed our lives and our life styles. Cloud computing, Big data and data mining are the hottest topics or research areas in the fields of Networking and information technology. In contrast to the improvement in other areas, healthcare

services are improving.

Cloud assisted health monitoring, which applies the prevailing communication and cloud computing technologies to provide feedback decision support, has been considered a revolutionary approach to improving the quality healthcare service while lowering the healthcare cost. In current hospitals patients have to stand in a queue and fill forms manually. There is no permanent records of the patients and no global accessibility. In emergency doctor needs to diagnose every time, tests, report generations.

Cloud carrier is the intermediary which provides connectivity and transport of cloud services between the cloud provider and the cloud user (gram panchayat and hospital). The study of the cloud carrier is important as the cloud users have no control over the network through which the data transports. This leads to an efficient data exchange between user and server with a tool to search and segregate available data/options according to user requirement.

**Question 2**

**Explain the history and evolution of cloud computing.**

**In 1950s**

In the 50s mainframe computers were huge, occupying entire rooms. Due to the cost of buying and maintaining mainframes, organizations couldn’t afford to purchase one for each user. The solution was “time sharing” in which multiple users shared access to data and CPU time. The term “time sharing” is the premise of cloud computing.

**In 1969s**

J.C.R. Licklider developed the ARPANET (Advanced Research Projects Agency Network) – the network that became the basis of the internet. His vision was for everyone on the globe to be interconnected and accessing programs and data at any site, from anywhere.

**In 1970s**

IBM released an operating system called VM that allowed admins to have multiple virtual systems, or “Virtual Machines” (VMs) on a single physical node. The VM operating system took the 50s “time sharing” model to the next level and most of the basic functions of any virtualization software that you see nowadays can be traced back to this early VM operating system.

**In 1990s**

Telecommunications companies started offering virtualized private network connections, which meant it was possible to allow for more users through shared access to the same physical infrastructure. This change enabled traffic to be shifted as necessary to allow for better network balance and more control over bandwidth usage. Meanwhile, virtualization for PC-based systems started in earnest, and as the Internet became more accessible, the next logical step was to take virtualization online.

**In 1977s**

The term “cloud computing” is coined by University of Texas professor Ramnath Chellappa in a talk on a “new computing paradigm.”!

However, the term may actually have been used a year earlier in Compaq.

**In 2002**

Amazon created Amazon Web Services (AWS), providing an advanced system of cloud services from storage to computation.

**In 2006**

Amazon introduced the Elastic Compute Cloud (EC2) as a commercial web service. The EC2 let small companies rent computers on which they could run their own computer applications.

**In 2009**

Google and Microsoft entered the playing field. The Google App Engine brought low-cost computing and storage services, and Microsoft followed suit with Windows Azure.

**In 2010**

The Oneserve field service management software moves to the cloud. Ok, so we know this isn’t quite such a historical landmark as the rest of the cloud’s history but it’s noteworthy for us!