Q.13 Explain Different type of Operating System.

Ans. 1) Batch Operating System :-

In Batch Operating System data is collected over a period of time and the processing of the data is deferred to all later time.

This operating system was used very commonly in past.

In Batch processing the data have first to be captured, normally as a form of source documents.

Batch processing suitable in application on where there are large amounts of data and when the turnaround times are not critical.

Batch system provides simple program control method.

Batch operating system allow little or no interaction between users and executing programs.

Advantages :- → After input process is over while processing is going on the user can attain other jobs.
→ This operating system is less complicated.

Disadvantages :- → Turnaround time is very long.
→ Difficult to provide two or more task.

2) Multi Programming Operating System :-

This operating system which can handle more than one program in main memory at a time are called multi programming operating system.

In multi programming operating system one or more program are work in main memory.

The CPU switch from one program to another program immediately.

The main advantage of this operating system is the CPU can allocate time to several program.

In this operating system all the program appears to be process simultaneously.

Advantages :- → Many program can work simultaneously.
→ Time is not wasted
→ Maximum work done at a time.

Disadvantages :- → This operating system is more complicated.
→ Require to large memory.
→ Require memory protection

3) Time Sharing Operating System :-

Time Sharing Operating system allow the number of users to work simultaneously.

This operating system divided among all the users on a schedule basis.

The time sharing operating system keeps only a few program in main memory.

The main advantages of time sharing operating system share different task with different type.

Advantages :- → Turnaround time is less.
→ All program get equal attention.
→ Avoid duplication of software.

Disadvantages :- → This operating system is more complicated.
→ Question of security.
→ Problem of data communication.

4) Online Operating System :-

Online processing is also known as direct access or random access processing.

The main feature of this system is to get immediately and direct access to record.

In an online system the terminal used while the operator is connected to the main computer.

It is used in application requiring fast response from the computer for example airline reservation system.

Advantages :- → Turnaround time is less.
→ Access and retrieve of any record is quickly and direct.

Disadvantages :- → This operating system is more expensive and complicated.
→ Question of security.
→ Data transaction facility is require.

5) Real Time Operating System :-

This Operating System is used immediate response from the computer require.

The real time operating system are always online but online system need not be real time operating system.

The real time system are require highly readable because even minute / second problems may result in fatal accident.

For example :-

In stock market, air traffic control product intently etc.

Advantages :- → Response time is very less.
→ Error messages are immediately.
→ Source documents are available at the time error occurs.
→ Faster than online system.

Disadvantages :- → Complicated system.
→ Very expensive.
→ Not easy to maintain

6) Cloud Computer Operating System :-

In easy words “Cloud Computing” is a new technology where online servers, better to say web servers are combined with each other in order to process something in a batter way.

Cloud is not just a natural from of smoke . It is also the must hyped term in the IT industry right now.

The operating system is designed for network, mobile internet devices, and PCs that are mainly used to browser the internet.

In Simple technical terms you can say that “Cloud computing” is internet-based computing. Where by shared resource, software and information are provided to computers and other devices on demand.

When used as a standalone operating system, hardware requirements can be very low.

Q.14 Explain Emerging technology.

Ans. 1) Remote sensing :-

Remote sensing is an application of space science.

Remote sensing refuge to collection of information about an object without physical contact.

Remoter sensing are used to distance content with any object.

An Indian satellite IRS –1A and IRS-1B used this remote sensing facility.

Application :
→ In Cyclone study's
→ In Monsoon study's
→ In Ground water study
→ In Agriculture study's etc.

2) GIS (Geographical Information System) :-

GIS is stand for Geographical Information System.

GIS is a computer system for capturing, storing, checking, integrating, manipulating, analyzing and displaying data related to position on the Earth's surface.

GIS is use for handling maps.

The GIS integrates hardware, software and data for capturing, managing, analyzing and displaying all forms of geographically referenced information.

GIS allows us to view, understand. Question interpreter and visualize data in many ways.

A GIS helps you answer questions and solve problem by looking at your data.

GIS is unique because, it combines location and information about the location.

Using GIS you can not only see the place but find out more information about the place.

Application :-
→ In agriculture
→ In Business
→ In electrical
→In Environment
→ In Forest

→ In Risk Management
→ In Military
→ In site planning

3) GPS (Global Positioning System) :-

GPS is stand for Global Positioning System.

GPS is a satellite navigation system which work through space.

It provides information regarding location and time in all weathers anywhere on the earth where GPS satellite reaches

GPS was originally intended for military application, but in the 1980s the government made the system available for civilian use.

GPS Works in any weather conditions, anywhere in the world, 24 hour a day.

GPS is the satellite base method of collecting in the data for various scientific applications.

Advantages :- → GPS provides occur ate information about position velocity and time.
→ There are 24 satellite in GPS.
→ Each of satellite are constantly moving and making information 24 hours.

Disadvantages :- → Tourist also used this technology to act on particular location.

Application :-
→ In air traffic control.
→ In deference
→ In agriculture
→ In tourism

4) Bluetooth :-

It is the radio base wireless technology.

It allows devices to share information over the maximum range of 10 meters.

Bluetooth is a specification for the use lower power radio communication.

Bluetooth technology was designed primary to support simple wireless networking of personal consumer devices and peripherals, including cell phones, PDAs, and wireless headsets.

Bluetooth devices generally communicate at less than, Mbps.

Bluetooth technology has grown and has become very popular in the word today.

Bluetooth devices communication with earth other through radio frequency. This is 2.4 Ghz radio frequency that allow devices.

Each Bluetooth enable device has an individual identity in the form of a PIN.

Now a days there are various types of Bluetooth devices available. For example Inbuilt Bluetooth, Bluetooth Headsets, Stereo Headset, Bluetooth equipped printer, Bluetooth enabled webcam, Bluetooth GPS device, Bluetooth keyboard and mouse etc.

5) Wi-fi :-

Wi-fi is stand for wireless fidelity.

Wi-fi works with no physical wired connection between sender and receiver by using radio frequency technology.

It is use to get internal access.

Wi-fi is support by many applications and devices including video game consoles, home networks, PDAs (personal digital assistances), mobile phones, major operating system and other types of consumer electronics.

Advantages :- → Allows LAN to be displays without cabling.
→ wi-fi is an economical networking option.
→ wi-fi products are widely available in the market.
→ you can set up wi-fi so that it is widely available in large areas.

Disadvantages :- → compare to Bluetooth power consumption is high.
→ wi-fi networks have limits range.
→ if set up of wi-fi is not done properly default wi-fi network are open that can be unwanted devices which may read or copy the data over the network.

6) Infrared :-

Infrared technology started with very small usages.

You can use an infrared communication system every time you control your television with a remote control.

The remote control transmits pulses of light that carry codded instructions to a receiver on the TV.

Infrared light is a form of electromagnetic waves.

Infrared can be seen as red or violate.

Most infrared waves give heat after more work.

Application :-
→ Communication devices
→ Car locking systems.
→ Computer (mouse, keyboard, printer, etc) emergency response system
→ Control system, home security system, navigation system etc.
→ Toys, TVs, CD Players, Telephones

7) Modem :-

The word Modem means Modulator or Demodulator.

Modem is typically used to send digital data over a phone line.

Modem is a device that modulators outgoing digital signal from computer.

Modems are available to different band with capacity.

There are three types of modem available

i. External modem
ii. Internal modem
iii. PC card modem

i. **External modem :-** This is simplest type of modem to install because you don't have to open the computer.

External modem have their own power supply and connect with a cable to a computer serial port

ii. **Internal modem :-** internal modem are more directly integrated into the computer system and do not need any special attention.

Internal modems are activated when you run a communication program.

iii. **PC card modem :-** This modems designed portable computer are the size of credit card and into the PC card slot an notebook and handheld computer.

This modem are removed when a modems is not needed.