

Assignment No

Name

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Semester

2nd

Subject

Computer

Id

17019

QNO 1:Part A:

Differentiate between plotter and printer.

Printer:

A printer provides the output file data in a format such as bitmap or pixels.

Plotter:

A plotter provides the output in a format that is similar to a vector graphic / image created with lines.

Explanation Of Plotter:

A plotter gets defined in a simple manner as a device that draw pictures on the page with the help of commands given through a computer. The main benefit of such devices is that they draw lines and figures on the page with the support of a pen and



and therefore produce continuous lines. pens range in the size, shape and colour and there is no compulsion of having just one for each device.

On other way vector graphic printer that gives the exact hard copy of the output based on the information provided in the softcopy on the computer. Most commonly used to draw the designs of automobiles such as cars and ships.

## Explanation of Printer:

Printer gets a defined as a device that draws image and texts on the page with the help of commands given through a computer. It accept the text and graphic output from the computer and takes all the information and prints it out on the paper. Two main types of printers exist are the impact and non impact printers.



The fastest printer is laser printer and gets measured as characters per second. They also consume more ink as compared to other devices.

**Q No 1:**

**Part B:**

What is barcode?

**Barcode:**

A machine readable code in the form of numbers and pattern of parallel lines of varying widths, printed on a commodity and used especially for stock control.

What is a barcode reader?

**Barcode Reader:**

A barcode reader is an optical scanner that can read printed barcodes, decode that data contained in the barcode.



and send the data to a computer. Like a flatbed scanner, it consists of a light source, a lens and a light sensor translating for optical impulses into electrical signals. Additionally, nearly all barcodes readers contain decoder circuitry that can analyze the barcode's image and send the sensor content to the scanner's output port.

QNO2:

Part A:

Write a note on a flatbed scanner.

**flatbed scanner:**

A flatbed scanner is an optical scanner which makes use of a flat surface for scanning documents. The scanner is capable of

capturing all elements on the documents and does not require movement of the document. Flatbed scanners are effective scanning devices for delicate materials such as vintage photographs, papers and other documents which are fragile.

It is also known as simply as a flatbed.

They are also known for their high quality scans.

It requires only the user to lay document onto the glass and close the lid.

Drawbacks of flatbed scanners include being large and bulky. They consume more space than other scanners and are also expensive.



## Inkjet printing

Inkjet printing is a type of computer printing that recreates a digital image by propelling droplets of ink onto paper and plastic substrates. Inkjet printers are commonly used type of printers, ranging from small inexpensive consumer models to expensive professional machines.

### Inkjet Printer Process:

The ink is replaced with thermoplastic and wax materials which are held in molten state. When printed liquid drops of these materials instantly cool and solidified.

In inkjet printing process are implemented by <sup>landscape</sup> ~~build~~ materials and supplied materials. Being held in a molten state inside too heated reservoirs. These materials are each jet to an inkjet print head which moves in x-y plane and shoots tiny droplets to the required locations to form one layer of



The part. Both materials instantly  
 cools and solidified. After a  
 layer has been completed a  
 milling head moves across the  
 layers to smooth the surface. The  
 particles resulting from this  
 cutting operations are vacuumed away  
 by the particle collector. The plate-  
 form and lowers the build plate  
 layer can be built. The next  
 process is repeated for each  
 layer and the part is com-  
 pleted. And the part can be remo-  
 ved. The wax support ma-  
 terial can be melted away.

Q3: Explain (WAN) with suitable examples.

**Def:**

WAN is a Telecommunication  
 network that extends over a large  
 geographical area for the primary  
 any purpose of connect comp  
 user networking. (WAN) are upon  
 established with leased Tele-  
 communication circuit.



## Explanation:

as education and Businesses as well as government entities use (WAN) to relay data to staff, students, buyers, suppliers and clients from various locations across the world. In essence this mode of telecommunication allow a business to effectively carry out its daily function regardless of its location. The internet may be considered as (WAN).

## Examples:

Similar types of networks are personal area network, local area networks, campus area networks, metro politans area networks.

The best example of (WAN) is the internet itself. Other smaller examples of (WAN) are networks of bank cash dispensers. A company network with several branch offices geographically distant



School networks usually a LAN. LANs are often connected to WANs. For example: school networks could be connected to the internet. WANs can be connected together using the internet, leased lines or satellite link.

## Topology:

In mathematics, topology derived from Greek words topo- means place or location and logy means study.

## Def:

Topology can be defined as "the study of particular place specifically". It is concerned with the properties of geometric object that are preserved under continuous deformations, such as stretching, twisting, crumpling, and bending, but not tearing or gluing.



## Bus Topology:

Bus Topology is a topology for (LAN) in which all nodes are connected to a single cable.

## Advantages:

A few advantages of

bus topology are:

The primary advantage of bus topology is that it makes ~~such~~ linear connections much easier to complete. Peripherals and computers can be added to the topology of network in a linear fashion without the same demands for the cable length that a star topology link would require. It works when you have small networks. It requires less cable length than a star topology.

## Media Used for Storage:



# Media Storage:

Media storage is a system process that is needed when you view, download, play and stream images, videos, audios, files.

## Common Storage Medias:

- Hard disc drives
- Solid state drives
- magnetic tape
- optical media
- cloud

## Hard Disc Drives:

(HDD) are used everywhere. They work by using two or more ~~enex~~ magnetic heads attached to a moving arm which reads the data from one more ~~segeds~~ discs. They are very cheap have long life time. Making them and all around reliable media. However, the moving parts will



eventually lead to them regarding and can be damaged, if the disc received a shock.

## Solid State drive:

(SSDs) work by storing persistent data on microchips. They don't have moving parts. They were first introduced with SATA interface. Normal condition the power off retention time of (SSDs) is measured in years.

## Magnetic Tap:

They are usually made of thin magnetized coating on plastic film. Due to linear nature of tap, the drive must move to the part of the tap where data is stored to access it. It is the best method for achieving data at reasonable price.

## Optical Media:

It is the magnative optical device. A



laser is used to read data. They were hampered by small maximum capacity (256mb to 9.1gb). They highly reliable cheaper and flash memory devices.

### Cloud:

A quickly growing storage media is data cloud media. It transfer your data over the internet to the data centers. Data owned by the service providers. If you lose network connectivity you also lose access to your files that are stored in your clouds.

### Media Used for Transmission Information:

They are two types of transmission - media namely guided and unguided.

### Guided Transmission Media:

They are cables fibre



Twisted pair cables, coaxial cables and fiberoptic cables.

## Unguided Transmission Media

They are wireless such as infrared, radio waves and microwaves.

Now we discuss the guided transmission media:

### Twisted Pair Cables:

They have been around for a long time. They were mainly invented for voice transmission. They were lighter, cheaper, flexible, and more easily to install.

### Coaxial Transmission Media:

They have central copper conductor, insulator layer, conducting shield and the outermost plastic sheath. It is used for long distance communication have a better resistance.



## Optical fibers:

It is used - light waves transmission. These cables are well suited for voice, data and video transmission. Now we discuss unguided transmission media.

## Radio Waves:

It is an ~~radio~~ electromagnetic waves of frequency between about  $10^4$  and  $10^{11}$  or  $10^{12}$  Hz as used for distance communication.

## Infra-Red Waves:

Having length just greater than that of the red and of the visible light spectrum, but less than that of microwaves. Wave length ranges from 800nm to 1mm.

## Microwaves:

They are form of electromagnetic radiations



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waves length ranges from ultra  
1m to 1mm. :