

Q

1

Explain CRT unit display:-

→ The

CRT display is made up to small picture element called pixels.

→ The

smaller the pixels, the better the image clarity, or resolution.

→ It takes

more than one illuminated pixel to form whole character, such as the letter 'e', in the word help.

→ A finite

number of characters can be display on a screen at once.

→ The screen

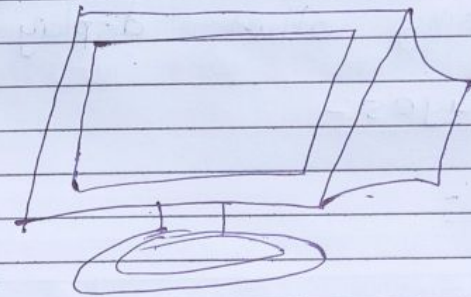
can be divided into a series of character boxes - fixed location on the screen where a standard character can be placed.

→ Most

screens are capable of displaying 80 characters of data horizontally and 25 lines vertically. There are some disadvantages of CRT.

→ Large in size

→ High power consumption



CRT Monitor

• Advantages:-

• Resolution and Aspect Ratio

→ They

operate any resolution, geometry and



aspect ratio without the need for rescaling the image.

• Highest Resolutions:-

→ CRTs

run at the highest pixel resolutions generally available.

• Cost:-

→ CRTs

are less expensive than comparable display using other display technologies.

disadvantages:-

• Brightness:-

→ Relatively

bright but not as bright as LCDs. Not suitable for very brightly lit environments.

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[2] Explain LCD and LED in detail.

• LCD

→ LCD is

full name is liquid crystal display.

→ LCD is

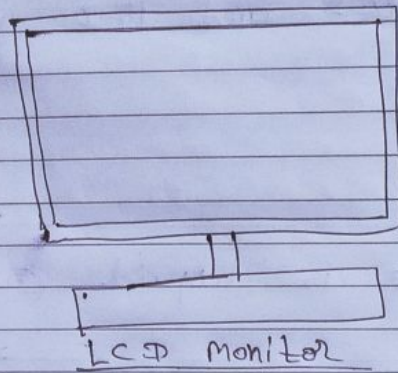
a flat panel display technology commonly used in TVs and computer monitors. It is also used in screens for mobile devices, such as laptops, tablets and smart-phone.

→ LCD

displays don't just look different than bulky CRT monitors, the way they operate is significantly different as well.

→ Instead

of firing electrons at a glass screen, an LCD has backlight that provides light to individual pixels arranged in a rectangular grid.



→ Each

pixel has a red, green and blue sub-pixel that can be turned on or off.

• LED

→ Light-em-

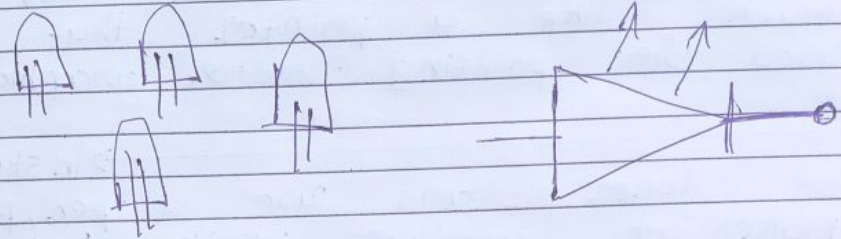
itting diodes, or LEDs, are widely used as a standard source of light in electrical equipment.

→ It has

a wide array of applications ranging from your mobile phone to large advertising billboards.

~~Light Emitting diodes~~

• Light Emitting diodes.



→ Below is

the demonstration of the LED symbol. The symbol is similar to that of the p-n junction diode.

→ The

difference between these two symbols is that two arrows indicate that the diode is emitting the light.



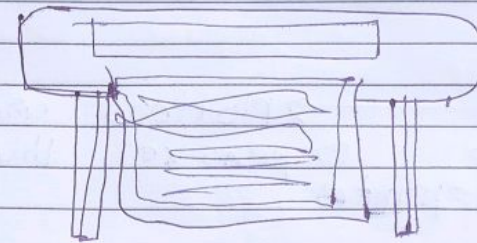
[3] Write a note on Plotters.

→ A plotter is a computer hardware device much like a printer that is used for printing vector graphics.

→ Instead of toner, plotters use a pen, pencil, marker, or another writing tool to draw multiple, continuous lines onto paper rather than a series of dots like a traditional printer.

→ Though once widely used for computer aided design, these 'devices' have more or less been phased out by wide format printers. Plotters produce a hard copy of schematic and other similar applications.

plotters →



Plotters

Advantages :-

→ Plotters can work on very large sheets of paper while maintaining high resolution.

→ Plotters allow the same pattern to be drawn thousands of times without any image degradation.



disadvantages :-

→ Plotters are quite large compared to a traditional printers.

→ Plotters are also much more expensive than a traditional printer.

Invented:

→ The first plotters was invented in 1953 by Remington-Rand. It was used in conjunction with the UNIVAC computer to create technical drawings.



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Q.4] Explain Fax in detail:-

- Short for facsimile machine, a device that can send or receive pictures and text over a telephone line.
- Fax machines work by digitizing an image -- dividing it into a grid of dots.
- Each dot is either on or off, depending on whether it is black or white.
- Electronically, each dot is represented by a bit that has a value of either 0 (off) or 1 (on).
- In this way, the fax machine translates a picture into a series of zeros and ones (called a bit map) that can be transmitted like normal computer data.
- On the receiving side, a fax machine reads the incoming data, translates the zeros and ones back into dots, and reprints the picture.
- The idea of fax machines has been around since 1842, when Alexander Bain invented a machine capable →

name:-makwana Pritam P.

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- of receiving signals from a telegraph wire and translating them into image on paper.
- A fax machine consists of an optical scanner for digitizing images on paper, a printer for printing incoming fax messages, and a telephone for making the connection.
- The optical scanner generally does not offer the same quality of resolution as stand-alone scanners. Some printers on fax machines are thermal, which means they require a special kind of paper.

Advantages:-

(1) Reliability:-

- Emails require your recipient to have the right software or technical knowledge to open any document you send.

(2) Security:-

- Computer and emails can be hacked, with document you send intercepted. If you'd like your office to be secure, a fax machine is the safest form of communication you can have.

Name :- Makwana Pritam P.
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(3) convenient method :-

→ As mentioned, when you send a fax, your recipient gets it immediately. While emails do move quickly they can take time if the file is large.

(4) Ease of Use :-

→ Since fax machines have been used in offices for decades now, most people know how to use them.

Disadvantages :-

(1) Technology Failure :-

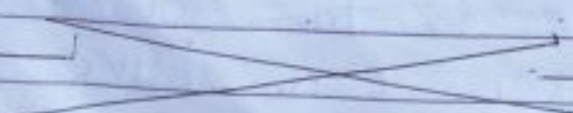
→ If you depend too much on your fax machine and it fails for some reason, you'll have some problems finding a new way to operate.

(2) Security Questions :-

→ Fax you depend too much on your ~~for~~ ~~me~~ Fax machines are very secure, since they cannot be hacked like emails can.

(3) Less Convenient :-

→ Faxes are convenient in terms of speed, but they also cannot be reached easily.



Name: Makhwana Prithvi P.

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15] Write a note on google glass:-

- Google glass is a wearable, voice and motion controlled Android device that resembles a pair of eyeglasses and display information directly in the user's field of vision.
- Google glass offers an augmented reality experience by using visual, audio and location-based inputs to provide relevant information. For example, upon entering an airport, a user could automatically receive flight status information.
- Google glass is designed in the shape of a pair of eyeglasses. It will be displayed in smart phone.
- People who wear this can communicate with internet through voice commands.
- It also has a camera attached to it. It's an alternative approach of having a software package.
- The memory is 2GB RAM. The storage consists of 16 GB flash memory.

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→ The Google Glass operating system (OS) is based on a version of Android. The OS can run application virtualization tools called ~~classware~~ that are optimized for the device.

→ classware allows the device to deliver an app to the user, instead of a full desktop. The glasses have built-in Wi-Fi and Bluetooth connectivity and a camera for taking photographs and videos.

→ The smart eyewear uses motion and voice recognition to process commands from the wearer. A touch-pad is also available on the glasses' rim.

→ Google Glass then uses a field sequential color (FSC) liquid crystal on silicon (LCOS) system to display images on the lens, allowing wearers to view the image in true colors.

Features:-

→ The ability to take photos and video and then share exactly what the user is seeing through Google Hangouts.

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→ The option to use the Google search engine through the glasses, using Wi-Fi or a smartphone's data connection.

→ The ability to have translations streamed straight to the wearer ~~through~~ through the screen.

→ Reminders to complete certain chores or tasks with an added visual aspect that will prompt a notification to appear on the user's screen every time they look at a particular object.

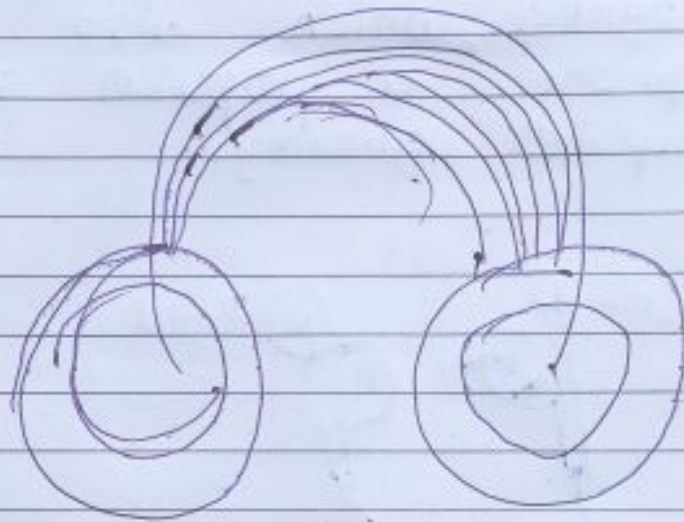
→ The ability to sync the glasses to calendars stored on phones or computers in order to receive reminders of events and meetings.

→ Support of both voice and video calls. In the video calls, wearers can show the other person exactly what they're looking at instead of talking face-to-face.

→ The ability to respond to facial and head movements, such as allowing the user to tilt their head to scroll through a page or operate the device with eye movements.



[6] Explain Headphones.



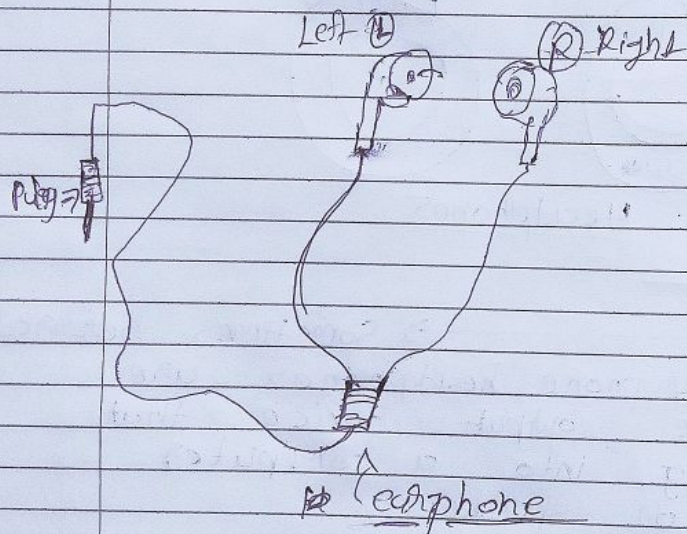
Headphones

→ Sometimes referred to as earphone, headphones are a hardware output device that either plug into a computer's line out or speakers.

→ Headphones allow you to listen to audio or watch a movie without disturbing people around you.



→ The picture is an example of a USB headset from Logitech, which also include a microphone a popular solution for computer gaming.



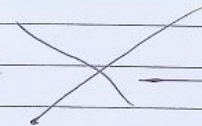
→ If you have speakers connected to your computer, connecting headphones to the line out or headphone connection results in sound only being output to the headphone.



→ The first pair of audio headphone were invented by Nathaniel Baldwin in 1910.

→ The US Navy ordered 100 pairs them because they recognized the potential advantage, despite many people being skeptical about their usefulness.

→ The most basic type of headphone, earbuds are small and fit inside your ear. They are usually shaped in a specific way to be as comfortable as possible.



Name :- mukwana Pritham P.

UR No :- 2020BCAG7

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[7] Write a note on SGD.

- Speech-generating devices (SGDs), also known as voice output communication aids, are electronic augmentative communication (AAC) systems used to supplement or replace speech or writing for individuals with severe speech impairments, enabling them to verbally communicate.
- SGDs are important for people who have limited means of interacting verbally, as they allow individuals to become active participants in communication interactions.
- They are particularly helpful for patients suffering from amyotrophic lateral sclerosis (ALS) but recently have been used for children with predicted speech deficiencies.
- speech-generating device can produce electronic voice output by using digitized recordings of natural speech or through speech synthesis - which may carry less emotional information but can permit the user to speak novel ~~for~~ messages.
- The first known SGD was prototyped in the mid-1970s.

name:-mekwan Pritam P.
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- The content, organization and updating of the vocabulary on an SCD is influenced by a number of factors, such as the user's needs and the contexts that device will be used in.
- There are multiple methods of accessing messages on devices: directly or indirectly, or using specialized access devices.
- Fixed display devices refer to those in which the symbols and items are 'fixed' in a particular format. Some sources refer to these as "static" display. Such display devices have a simpler learning curve than some other devices.
- Fixed display devices replicate the typical arrangement of low-tech AAC devices (low-tech is defined as those devices that do not need batteries, electricity or electronics), like communication boards. They share some of disadvantages; for example they are typically restricted to a limited number of symbols and hence message. It is important to note that with technological advances made in the twenty-first century, fixed-display SCDs are not commonly used anymore.

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- There are several input and display methods for users of varying abilities to make use of SCDs.
- Some SCDs have multiple pages of symbols to accommodate a large number of utterances, and thus only a portion of the symbols available are visible at any one time, with the communicator navigating the various pages.
- Speech generating devices can produce electronic voice output by using digitized recordings of natural speech or through speech synthesis - which may carry less emotional information but can permit the user to speak novel messages.
- The content, organization, and updating of the vocabulary on an SCD is influenced by a number of factors, such as the user's needs and the context that device will be used in.
- Vocabulary items should be of high interest to the user, be frequently applicable, have a range of meaning, and be pragmatic in functionality.