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Q-II

☆ Classification of computers by processing capabilites:-

- Based on processing capabilites and size computers can be broadly categorized as follows.

1. Micro Computer
2. Mini Computer
3. Mainframe Computer
4. Super Computer

1. Micro Computer:

- Microcomputer are the most common kind of Computers in use as of today.

- The term "Microcomputer" was introduced with the advent of system based on single chip microprocessor

- Microcomputers are classified into two types
1. Desktops
2. Portables

The difference is portable can be used while travelling whereas desktops cannot be carried around.

- The different portable computers are:-
1. Laptop
2. palmtops (hand-held)
3. Notebooks
4. Wearable Computers

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2. Mini Computers:-

- A minicomputers are a medium-sized computers
- That is more powerful than a microcomputer
- These computers are usually designed to ~~server~~ serve multiple users simultaneusly (Parallel porocessing)
- They are more expensive then micro-Computers
- Examples are: Digital alpha, Sun Ultra

3. Mainframe Computers:-

- Computers with large storage capacity and very high speed of processing (compared to mini and micro) are know as mainframe computers
- They support a large number of terminals for simultaneous use by a number of user like ATM transactions
- They are also used as central host computers in distributed data processing system.
- Mainframe Computer are powerful, used

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primarily by corporate and government organizations for critical applications, bulk data processing

4. Super Computers:-

- Super computers have extremely large storage capacity and computing speeds which are many times faster than other computer
- A super computer is measured in terms of tens of millions instructions per second (mips) an operation is made up of numberous instructions
- These are used mainly for large scale numerical problems in scientific and engineering disciplines such as weather anylysis
- Examples: param, Cray, IBM blue gene

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2] Explain Secondary Storage Devices in detail:-

→ This type of memory is also know as external memory or non-volatile.

→ It is solwer than main memory.

→ These are used for storing data/information permanenty.

→ CPU directy does not access these memories instead they are accessed via input-output routines.

→ contents of secondary memories are first transfard to main memory, and then CPU can access it. for example: disk, CD-ROM, DVD etc....

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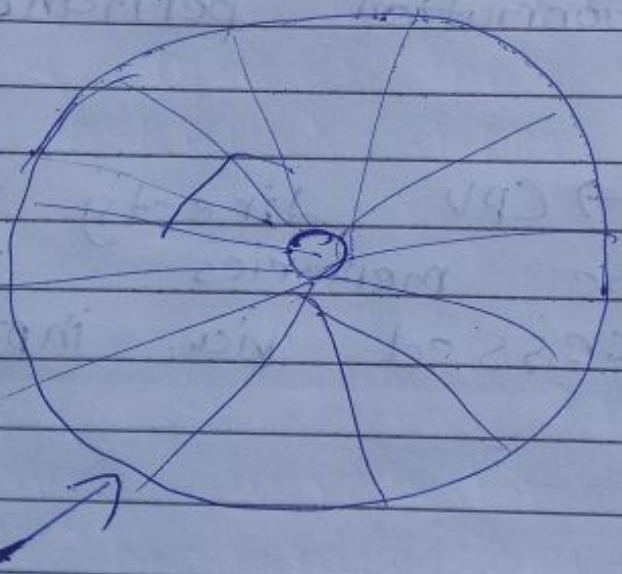
examples...

HDD



CD

USB

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characteristic

→ These are magnetic and optical memories.

→ It is know bakup memory.

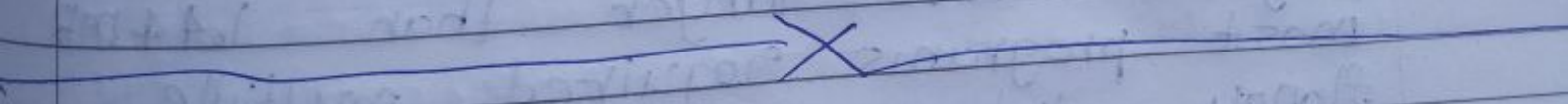
→ It is non-volutile memory.

→ Data is permanetly stored even if power is switched of.

→ it is used for storage of data in a computer.

→ Computer may run without secondary memory.

→ Slower the primary memories



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3. Write a note on Processors :-

⇒

→ A Process is an integrated electronic circuit that performs the calculations that run a computer.

→ A processor performs arithmetical, logical, input/output and others basic instructions that are passed from an operating system.

→ most other processer are dependent on the operations of a processor.

→ The terms processor, central processing unit (CPU) and microprocessor are commonly linked as synonys.

→ Most pepole use the word 'processor" interchangably with the term 'CPU' nowadays, it is technically not correct since the CPU is just one of the processor inside a PC.

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→ The Graphics Processing Unit (GPU) is another processor, and even some hard drives are techically capable of performing some processing.

→ Processors are found in many modern electroin devices, including PCs, smartphone, tables and other handheld devices.

→ A processor includes an arithmetical logic and control unit (CU) which measure capabillty in terms of the following.

- Ability to process instructions at a given time.
- Maximum number of bits / instructions.
- Relative clock speed.

→ They work together to process instructions and complete multiple tukes at the same time.

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→ modern desk-top and laptop computers now have a separate processor to handle graphic rendering and send output to the display monitor devices.

→ Since this processor, the GPU, is specifically designed for this task, computers can handle all applications that are especially graphic-intensive such as video games more efficiently.

→ A processor is made of ~~four~~ basic elements: logic unit arithmetic (ALU), the floating point unit (FPU), registers, and the cache memories.

→ The ALU and FPU carry basic and advanced arithmetic and logical operations on numbers, and then results are sent to the registers, which also store instructions.

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4 Explain Floppy Disk and Hard disk.

- Floppy Disk:-

→ Early computers did not have CD-ROM drives or USB and floppy disks weres the only way to intall a new program onto a computer or backup your information.

→ If the program was small the program could be installed from one floppy disk.

→ Holwever, Since most programs were larger than 1.44 MB most programs required multiple floppy diskettes.

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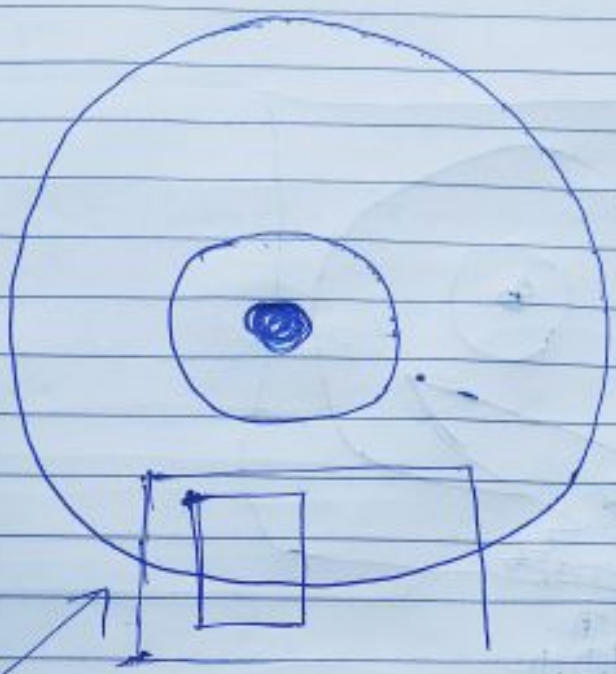

Floppy Diskette

——→ The first disk was introduced in 1972

- Hard disk :-

——→ A hard disk drive (HDD) is non-volatile data storage device.

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→ Internal hard disks reside in a drive bay, connected to the motherborad using an ATA, SCSI or SATA cable.

→ It is usullay installed internally in a computer attached direclly to the disk controller of the computer's motherboard.

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5 Write a note on backup and restore :-

→ Backup and restore refer to technologies and practices for making periodic copies of data and applications to a separate, secondary device and then using those copies to recover the data and applications and the business operations on which they depend in the event that the original data and applications are lost or demaged due to a power outage, cyber attack, human error, disaster, or some other unplanned event.

→ Hard disk drives or solid-state drives most data today is backed up to a hard disk drive or solid state drive whether that drive is a standalone external drive or part of a backup sever.

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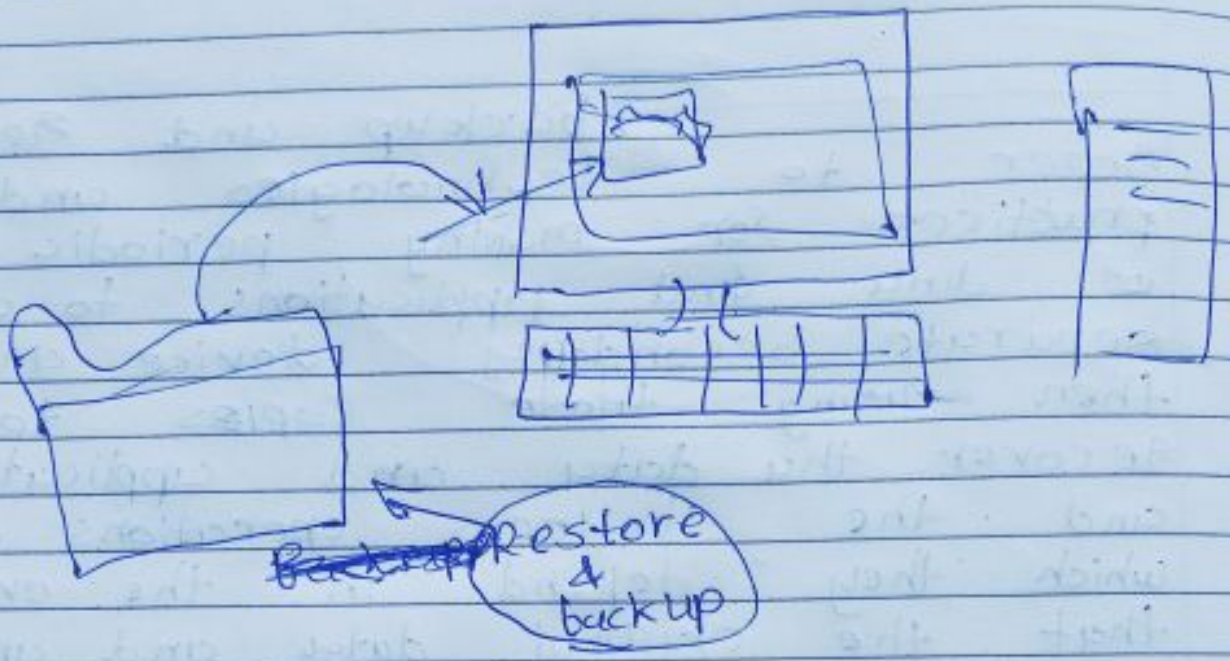

=> SDDs are incran gly popular because they offer faster read/write time then HDD, require less physical spuce to store the same amount of data and consume less power..

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→ Colud backup backs up your data and application via a corporate network or internet connection to a physical or virtual backup server at a remote data data center operated by your company, a hosting provider or a ~~cloud~~ cloud services provider.

→ cloud backup is typically the most flexible type of backup. You can use it to back up file, application data or entire physical or virstual servers.

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Fundaments

Q. [6] Explain all types of printer in detail

->

(1) Impact Printers :-

-> The impact printers print the characters by striking them on the ribbon which is then pressed on the paper.

-> characteristics of Impact Printers are following:-

-> Very low consumable costs

-> Very noisy

-> User for bulk printing due to low.

Non-imupact Printers :-

-> Non-impact printers print the characters without using ribbon. These printers print a complete page at a time so they are also called as page Printers.

-> charateristics of Non-Impact Printers

-> Faster than impact printer

-> Support many fonts and different character size

-> They are not noisy

-> High quality

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Q:1 Explain impact and non-impact printers with its sub types.

=>

- Printers
  - (A) Impact Printers
    - (i) Character Printers
      - Dot matrix Printers
      - Daisy wheel printers
    - (ii) Line Printers
      - Drum Printers
      - Chain Printers
  - (B) Non-Impact Printers
    - Laser Printers
    - Inkjek Printers

(A) Impact printers

(i) Character Printers

(I) Dot Matrix Printer (DMP)

-> In the marke one of the most popular printers is Dot Matrix Printer.

-> Each character printed is in form of patterm of dots and head consists of a Matrix of pins of size (5*7, 7*9, 9*7 or 9*9) which come out to form a character that is why it is called Do Matrix Printer.

-> This Printer is Advantages ~~Inexpen~~ Inexpensive, widely Used, other language characters can be printed.

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-> Dot Matrix printer is Disadvantages is slow speed, poor Quality.

(2) Daisy wheel :-

-> Head is lying on a wheel and pins corresponding to characters are like petals of Daisy (flower name) that is why it is called Daisy wheel Printer.

-> Daisy wheel is Advantages more reliable than DMP, Better quality, The fonts of character can be easily changed.

-> Daisy wheel is Disadvantages slower than Dmp, Noisy, more expensive than DMP.

(ii) Line printers

(1) Drum Printers :-

-> This printer is like a drum in shape so it is called drum printers. The surface of drum is divided into numbers of tracks. Total tracks are equal to size of paper i.e. for a paper width of 132 characters, drum will have 132 tracks.

-> Drum printers is Advantage is very high speed and disadvantage very expensive, charcters' fonts cannot be changed.

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(2) chain Printer:-

→ In this printer, chain of character sets are used so it is called chain printer. A standard set may have 48, 64 or 96 characters.

→ chain Printer is Advantages is character fonts can easily be changed, Different language can be used with the same printer.

→ chain Printer is Disadvantages is Noisy.

(B) Non-impact printers

(1) Laser Printers

→ These are non-impact page printers. They use laser to produce the dots needed to form the characters to be printed on a page.

→ Laser Printer Advantages very high speed, very high quality output.

→ Disadvantages is Expensive and cannot be used to produce multiple copies of a document in a single printing.

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(2) Inkjek Printers :-

-> Inkjek printers are non-impact character printers based on a relatively new technology. They print characters by spraying small drops of ink onto paper. Inkjet printers produce high quality output with presentable features.

-> Advantages is High quality printing and more reliable.

-> Disadvantages is Expensive as cost per page is high and slow as compared to leser printer.

Assignment

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Write a note on : UPS

UPS :-

-> An uninterruptible power supply or uninterruptiple power source (UPS) in electrical apparatus emergeny power to a load when the input power sorce or mains power fails

-> A Ups differs form an auxilicary or emergency power system or standly generator in that it will provide near-instanteneous protection form input power interruptions, by supplying energy stored in batteries, supercapacitors or flywheels.

-> The on-battey run-time of most uninterrupitble power sources in is relatively short (only a few minutes) but sufficient to start a standby power sauce or properly shut down the protected eqelment. It is a type of continual power system.

- Advantages :-

-> No delay between swiching from the primery power source to the UPS.

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-> Can better support critical instruments compared to genrators.

-> ~~Can better support~~ Consumers can choose the type and size of UPS, depending on the amount of power they need to ~~supply~~ supply to a device.

-> Upss are silent.

-> Maintenace of Ups systems is cheaper compared to generators.

Disadvantagns:-

-> The inability to run heavy applicances- bearase Upss are run off of batteries.

-> If substandard batteries are used user may and up replacing the batteriesoften.

-> Ups may need professional instantiations

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