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Course : CSE-2331 — Computer Organization And Assembly Language.

Ans to the Q NO: 01

(a) Define Computer: Computer is an electronic device that is designed to work with information. The term computer is drive from the latin term. Computer this means to calculate or program able machin. Computer cannot do anything without a progdame. It represents the decimal number through a string of Binar digits. The word 'Computer' usually refers to the canter Processor unit plus Internal memmory.
charles Babbage is called the 'Grand father' of the Computer. The first mechanical Computer designed by charles Babbage was called Analytical engine. It use read-only mamory in the form of punch Card.

This Computer is an electronic device that take input from the user & process this data under the control of a set of instruction (call programme) & give the result (output) & save future use.

Computer Organization Diagram:-

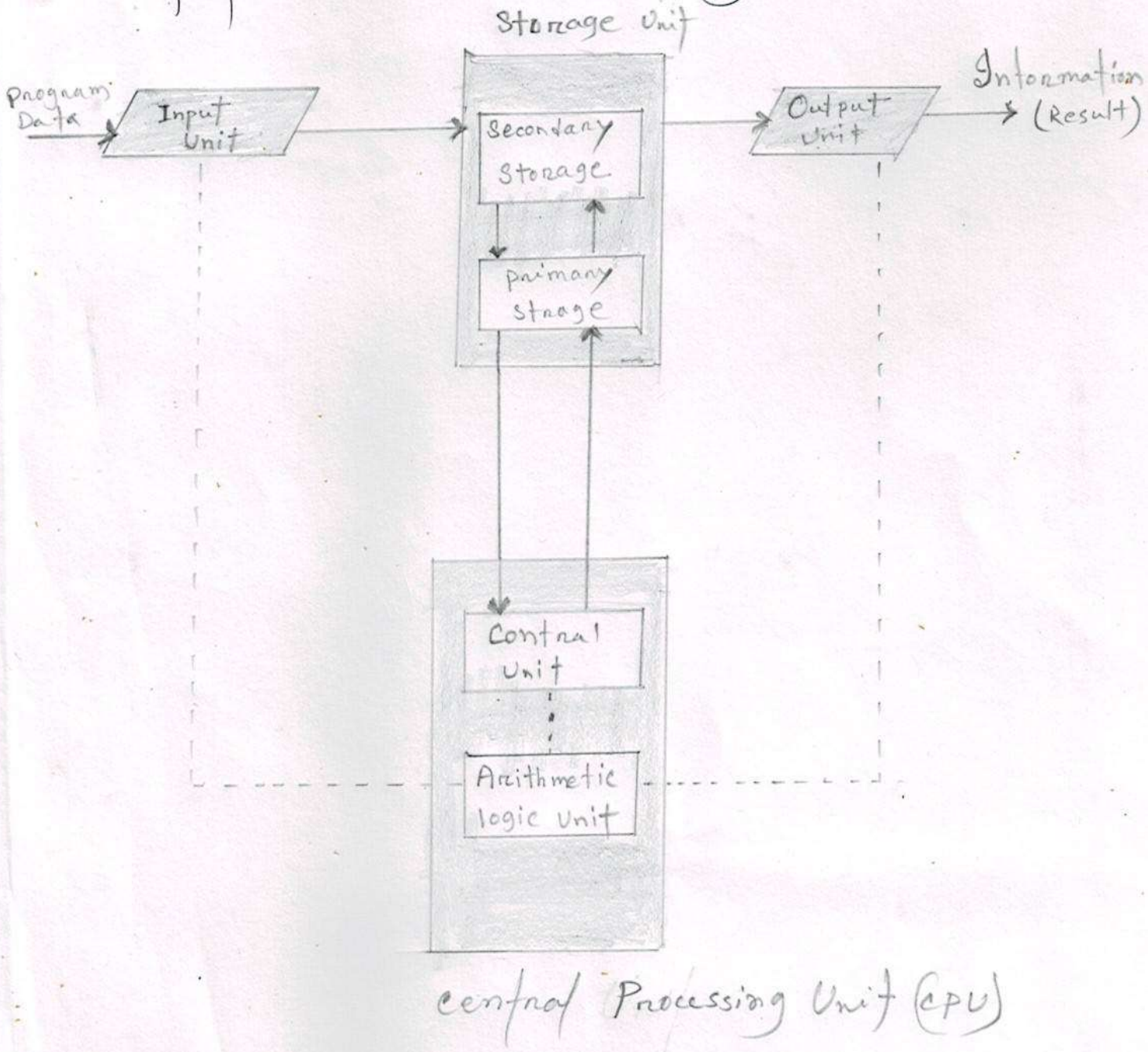
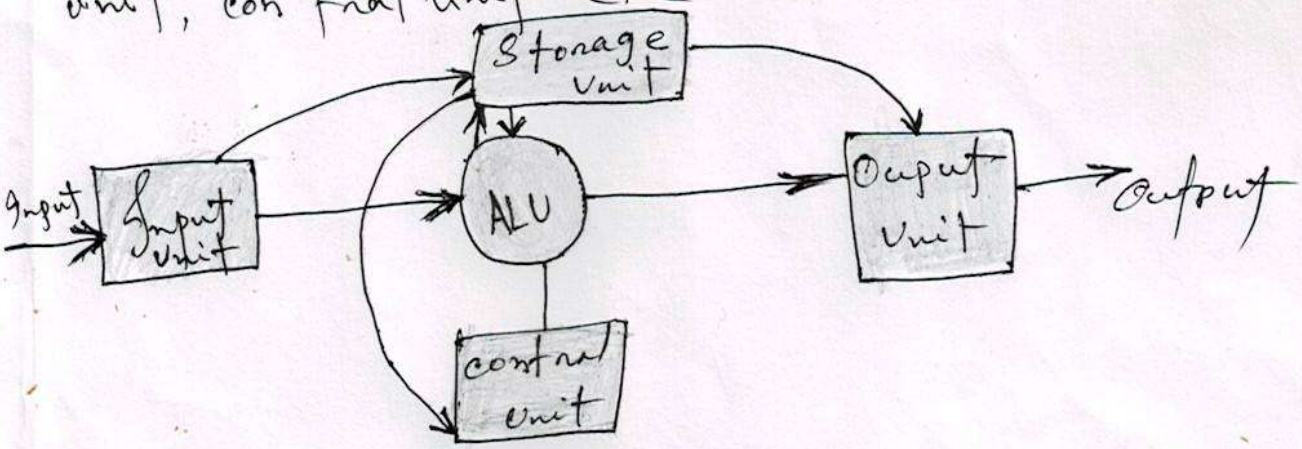


Fig: Computer Organization Diagram.

Ans to the Q:NO:02

(a) Ans: A Computer system is basically a machine that Simplifies complicated takes. It should maximize performance & reduce cost as well as power consumption, the different components in the computer system Architecture are Input Output unit, Storage unit, Arithmatic logic unit, control unit etc.



Input unit: The input unit provides data to the computer system from the outsite. So basically it linking the external environment with the computer. It takes data from the input device converts it into machin language & then leads it into the computer system, keyboard, mouse, printer, etc are the most commonly used input device.

Output unit: The Output unit provides the result of computer process to the user. ie it links the computer with the external environment. Most of the Output data is the form of Audio or video. The different Output Device are monitors printer speker, Headphones etc.

Storage unit: Storage Unit contains many computer components that are used to store data, It is traditionally divided into primary storage and Secondary Storage. Primary storage Algo known as then main memory & is the memory directly Accessibly by the cpu. Secondary or external storage is not Accessibly by the CPU. The data from secondary storage needs to be brought into the primary Storage before the cpu can use it.

Arithmetic logic Unit: All the calculation related to the computer system are performed by the arithmatic logic Unit. It can perform Operation like Addition, subtraction, Multiplaction division etc. The control Unit transfer datas from Storage unit to Arithmatic Unit Calculation need to be perform.

The arithmatic logic & the control unit together form the central processing Unit.

Control Unit (CPU):

This unit Controls all the others units of the computer system & so is known as the central nervous system. It transfers the thought out the Computer system as are required including from storage unit to central processing unit and vice versa. The control unit also dictates how the memory, Input Output device Arithmetic logic unit etc, should behave.

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(b) Ans: Difference between primary & Secondary memory :-

Comparison parameters	Primary memory	Secondary memory
storage validity	→ Primary memory is the main memory & stores data temporarily.	→ Secondary memory is the external memory & stores data permanently.
Access	→ The cpu can directly access data.	→ The cpu can't directly Access data.
volatility	→ Primary memory is volatile. It loses data in case a power Outage.	→ Secondary memory is non-Variable data is stored even during a power failure.
Storage	→ Data is stored inside costly semiconductor chip	→ Data is stored on external hardware device (Hard Drive, Disk)
Division	→ It can be divided into RAM & ROM	→ The do not have such a classification, Secondary memories are permanent storage device like CDs, DVDs, etc.
speed	faster	→ Slower
stored data	→ It saves the data that the Computer is currently using.	→ It can Save various types of data in various formats & huge size.

Ans: to the Q no: 03

Ans: Translator: A translator is a programming language processor that modifies a computer programme from one language to another. It takes a programme written in the source programme & modifities it into a macnen programme. It can find & detroy the error during translation.

⊞ Different Types of translator: (i) Compiler
(ii) Interpreter
(iii) Assembler

⇒ Examples of translator:

⇒ Compiler translator → Example

Microsoft visual studio
GNU Compiler collection
common busness oriented language.

⇒ Interpreter → Ocaml, list processing (LISP), python.

⇒ Assembler → Fortron Assembly programme (FAP)
Macro Assembly programme (MAP)
Symbalic Optimal Assembly programme (SOAP)

High level language convert to machine code:

A High level language to machine code can be done by Interpreter coding. A translator, in software programming issuing dynamic force that could refer to a compiler assembler or interpreter, any thing that convert higher level code into another high level code (e.g., Basic, C++, prowster, Java) Or lower level codes that the processor can understand. Such as assembly language Interpreter: An Interpreter translates code like a complier but reads that code and there for is initially faster then a compiler.

compiler: A Compiler is a Computer programme that translates a programme with in a high-level language of compiler. The compiler is used to translate source code into programme code or compiled code.