**JOHNSON VICTOR**

**18/SCI01/045**

**CSC 202- INTRODUCTION TO COMPUTER HARDWARE**

**ASSIGNMENT: FUNCTIONS OF A CPU**

**ANSWER**

The function of CPU is to read, interpret and process the information and instruction. The computer does its primary work in a part of the machine we cannot see, a control center that converts data input to information output. This control center, called the central processing unit (CPU), is a highly complex, extensive set of electronic circuitries that executes stored program instructions.

Just like humans, computers use a brain to process information. For a computer, the brain is the central processing unit (CPU). The CPU is the chip that executes all of the computer's programs. It sits on the motherboard and communicates with all of the other hardware components inside the computer.

A CPU possess various parts that do different functions such as

* Arithmetic Unit
* Control Unit
* Memory Unit
* Input/output unit

**Memory unit:**

The primary job of the memory unit is to store data or instructions and intermediate results. Memory unit supplies data to the other units of a CPU. In Computer Organization, memory can be divided into two major parts primary memory and secondary memory. Speed and power and performance of a memory depends on the size and type of the memory.

When an instruction is processed by the central processing unit, the main memory or the RAM (Random Access Memory) stores the final result before it is sent to the output device. All inputs and outputs are intermediate and are transmitted through the main memory.

**Control unit:**

It is the unit which controls all the operations of the different units but does not carry out any actual data processing operation. Control unit transfers data or instruction among different units of a computer system. It receives the instructions from the memory, interprets them and sends the operation to various units as instructed. Control unit is also responsible for communicating with all input and output devices for transferring or receiving the instruction from the storage units. So, the control unit is the main coordinator since it sends signals and find the sequence of instructions to be executed.

**Arithmetic and logic unit:**

ALU can also be subdivided into 2 sections namely, arithmetic unit and logic unit. It is a complex digital circuit which consists of registers and which performs arithmetic and logical operations. Arithmetic sections perform arithmetic operations like addition, subtraction, multiplication, division etc. All other Complex operations can also be performed by repetition of these above basic operations. The logic unit is responsible for performing logical operations such as comparing, selecting, matching and merging of different data or information.

So basically, ALU is the major part of the computer system which handles different calculations. Depending on the design of ALU it makes the CPU more powerful and efficient.