

- Name: madiha shah Roll num:16265
- Department :((DT)

**Course:** Computer Skills/ Applications  
**Semester:** 4<sup>th</sup>  
**Instructor:** Zakir Rahim  
Due Date: 21 August, 2020

**Program:**BS(DT/RAD/MIC)  
**Total Marks:** 30  
**Time:** 4 Hours

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**Instructions:**

- Students are required to solve the provided assignment and upload it on SIC within specified time.
  - The solutions must be type-written.
  - The solutions must be uploaded either in Ms-Word format or pdf format.
  - Students are required to save the file with their name and student id. For example ahmad\_12345.
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Q1. (a) In your opinion what are the 3 most important characteristics of computers, Explain each characteristic?

## Characteristics of computer :

### ★High speed:

- Computer is a very fast device .
- It is capable of performing calculation of very large amount of data.
- The computer has units of speed in microsecond ,nanosecond,and even the picosecond.

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•It can perform millions of calculations in a few seconds as compared to man who will spend many months to perform the same task.

## ★Accuracy :

- In addition to being very fast computers are very accurate .
- The calculations are 100% error free.
- Computers perform all jobs with 100% accuracy provided that the input is correct .

## ★Storage Capability :

- Memory is very fast important characteristic of computers.

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- A computer has much more storage capacity than human beings.
- It can store large amount of data.
- It can store any type of data such as imagine ,videos ,text,audio ,etc.

## ★Diligence :

- Unlike human beings ,a computer is free from monotypic tiredness ,and lack of concentration
- It can work continuously without any error and boredom .
- It can perform repeated tasks with the same speed and accuracy .

## ★Versatility :

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- A computer is very flexible in performing the jobs to be done .
- This machine can be used to solve the problems related to various fields .
- At instance ,it may be solving a complex scientific problem and the very next moment it may be playing a card game. A computer is a very versatile machine .

(5)

(b) Write key characteristics of fourth generation of computers? (5)

**Ans:**

**★Generation of computers:**

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- VLSL technology used.
- 2:Very cheap.
- 3:Portable and reliable.
- 4:Used of pc's.
- 5:very small size .
- 6:Pipeline processing.
- 7:No A.C , needed .
- 8:Concept of internet was introduced.
- 9:Great development in the fields of networks .
- 10:Computer became easily available .



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Q2. (a)Discuss the importance of Arithmetic logic unit and Control unit of a computer system?

Ans:

## ★ Arithmetic logic unit (ALU):

- An arithmetic logic unit (ALU) is a digital circuit used to perform arithmetic and logic operations .
- It represents the fundamental building block of the central processing unit (CPU) of a computer .Modern CPUs contain very powerful and complex ALUs.In addition to ALUs,modern CPUs contain a control unit (CU).

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- Most of the operations of a CPU are performed by one or more ALUs, which load data from input registers. A register is a small amount of storage available as part of a CPU. The control unit tells the ALU what operation to perform on that data, and the ALU stores the result in an output register .

The control unit move the data between these register ,the ALU,and memory .

- The control unit (CU) is a component of a computer 's central processing unit (CPU) that directs the operation of the processor .it tells the computer's memory ,arithmetic and logic unit and input and output devices how to respond to the

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instructions that have been sent to the processor.

(5)

(b)Write a detailed note on importance of RAM (Random Access Memory)? (5)

**★Ram (Random Access Memory ):**

•Computer random access memory (RAM) is one of the most important components in determining your system's performance .RAM gives applications a place to store and access data on a short-term basis .



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It stores the information your computer is actively using so that it can be accessed quickly .



Q3. Write a detailed note on Basic Organization of a computer System along with the functions of each part. (10)

**Ans :**

★ A computer is an electronic data processing device ,which accepts and stores data input ,processes the data

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input and generates the output in a required formed .

OR:

★Computer is an electronic device ,it is used to calculated and mainpulate (operate ) data. If we give any introduction to the computer it gives us output (Result ).

★OR:

•A computer is an electronic device that can perform

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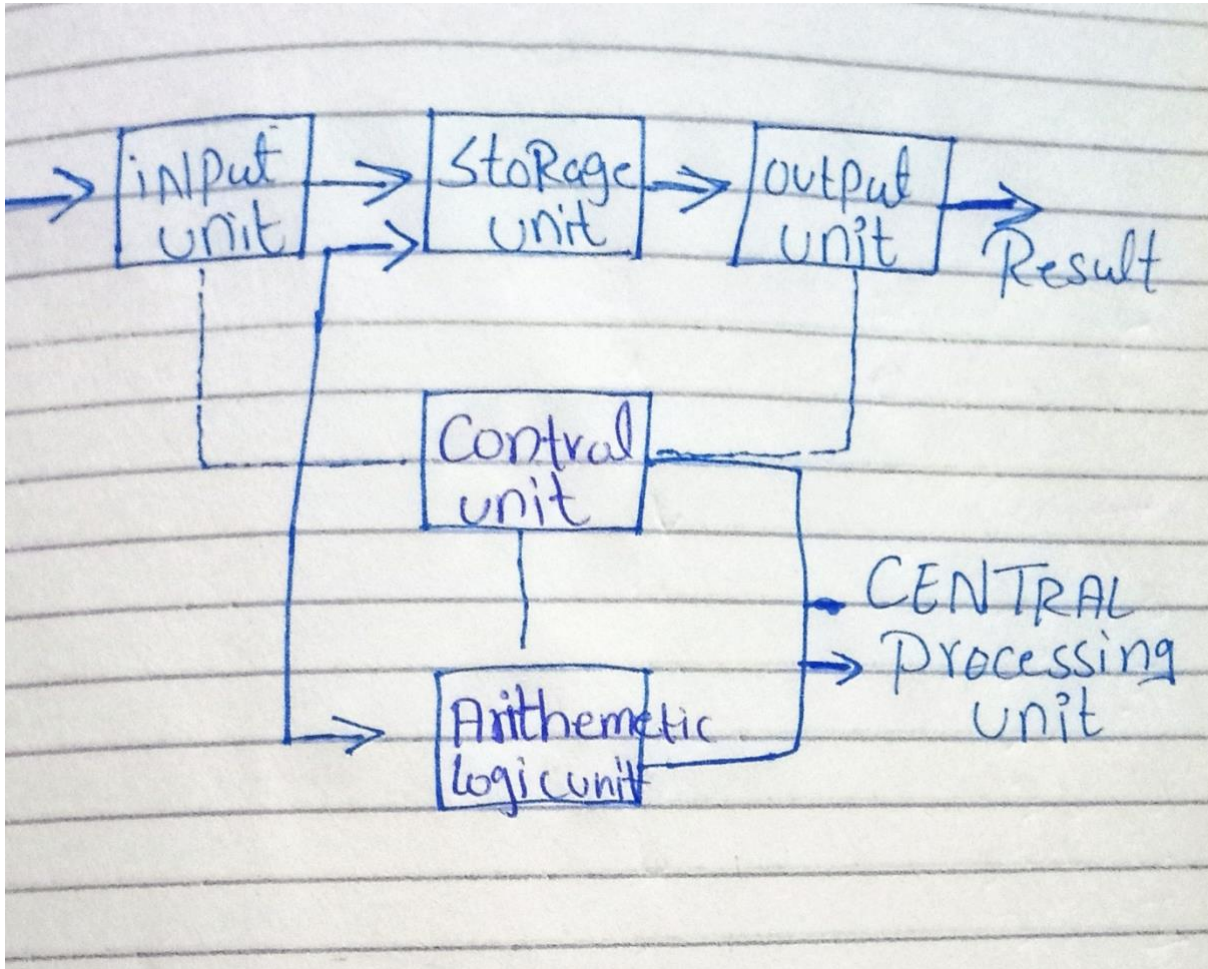
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arithmetic operation at high speed.

A computer is also called a data processor because it can store, process, and retrieve data whenever desired .

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★ Input:

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1:It accepts (or reader ) instructions and data from outside world.

2:It converts these instructions and data in computer acceptable form.

3:It supplies the converted instructions and data to the computer system for further processing .

### ★Output Unit:

1:It accepts the results produced by the computer

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,which are coded form and hence,cannot be easily understood by us .

2:It converts this coded results to human acceptable (readable)form.

3:It supplies the converted results to outside world.

### ★Storage Unit:

1:Data and instructions required for processing (received from input devices).

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2:Intermediate results of processing .

3:Final results of processing ,before they are released to an output device .

★Two Types Of Storage :

1:Primary storage

2:Secondary storage

★Primary Storage :

- Used to hold running program introductions used to hold data,intermediate results ,and

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results of ongoing processing  
of job (s)

fast in operation

Small capacity

Expensive

Volatile (losses data on power  
dissipation)

**★Secondary Storage :**

Used to hold stored program  
instructions used to hold data  
and information of stored jobs.

Slower than primary storage

Large capacity .



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Lot cheaper than primary storage .

Returns data even without power.

**Arithmetic Logic Unit(ALU):**

Arithmetic logic unit of a computer system is the place where the actual executions of instructions takes place during processing operation .

**★Control Units(CU):**

Control unit of a computer system manages and

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coordinates the operations of all other components of the computer system .

★Central Processing Unit(CPU):

It is the brain of a computer system .

It is responsible for controlling the operations of all other units of a computer system .



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