FUNDAMENTALS OF IT & PROGRAMING

ASSIGNMENT-1

Q1. What are the four fundamental parts of computer? Explain it with the help of diagram.

Ans:-

Input Unit, CPU, Primary Memory, and Output Unit are the four basic components of a computer system.

Explanation:

A computer has **four main components**: Input Units, the central processing unit or CPU, the Primary memory, and Output units.

- **Input Unit** - The devices to input information, such as a **keyboard, and mouse**.
- **CPU** - The CPU is further broken up into **ALU, Control Unit, and Instruction Unit**.
- **Primary Memory** - Computer program instructions converted into machine code are stored in primary storage or memory.
- **Output Unit** - The devices to output information, such as a **printer, monitor, and speaker**.

Q2. Discuss about the classification of computer based size and capacity.

Ans. Computers are classified on different parameters, such as, storage capacity, processing speed and component (CPU) used in computers. Depending upon the components used and features of different computers, they are classified into four groups, Microcomputers, Minicomputers, Mainframe computers and Supercomputers.

1 **Micro Computers**

Micro Computer is a computer whose CPU (Central Processing Unit) is a microprocessor. All the components of a microprocessor are on a single integrated circuit chip. Micro computer can be categorized as the desktop, programmable and workstation. The microprocessor based computers are called third generation computers. They are the backbone of the modern

computer era. The first and second generation computers are based on vacuum tubes and bipolar junction transistors.

2 ***Mini Computers***

Minicomputers were introduced in early 1960s. They were faster than micro computers. Basically these computers were mainly multi-user systems, where many users work on the systems. Generally these types of computers had larger memories and greater storage capacity. They had large instruction set and address field. These kinds of computers have efficient storage for handling of text, in comparison to lower bit machines. Due to more efficient processor, speed and memory size, minicomputer was used in variety of applications and could support business applications along with the scientific applications. Minicomputer was a multi-user system which means more than one user could use this system simultaneously.

3 **Mainframe Computers**

Mainframe computers are large and expensive machines. The word length of mainframe computers may be 48, 60 or 64 bits, memory capacity being in some megabytes and storage capacity in some terabytes. Generally they handle huge volumes of information and data. In terms of speed, they are having significant processing capacity. They are used in research organizations, large industries, airlines reservation where a large database has to be maintained.

4 **Super Computers**

Super Computers are the fastest computer in current era. The processing capabilities of super computer lies in the range of GIPS2, word length 64-128 or may be in 256 or so. The memory capacity of super computer is in some gigabytes or in terabytes. The storage capacity of this type of computer is in exabytes.

Q3 what are the meaning of computer generation? How many computer Generation are defined? What technology were /are used?

Ans:- The generation of computer means the gap between the development of the computer in terms of the technologies. Each generation of computer is characterized by a major

technologies development that fundamentally changed the way computer operate, resulting i smaller, cheaper, and more powerful, efficient and reliable device

There are 5 computer generations are defined.

Generation 1 — Vacuum Tubes

Generation 2 — Transistors

Generation 3 — Integrated Circuits

Generation 4 — Microprocessors

Generation 5 — AI

Q4 Different between volatile and non- volatile memories.

Ans:- **Volatile Memory:**
It is the memory hardware that fetches/stores data at a high-speed. It is also referred as temporary memory. The data within the volatile memory is stored till the system is capable of, but once the system is turned off the data within the volatile memory is deleted automatically. RAM (Random Access Memory) and Cache Memory are some common examples of volatile memory. Here, data fetch/store is fast and economical.
Non-Volatile Memory:
It is the type of memory in which data or information is not lost within the memory even power is shut-down. ROM (Read Only Memory) is the most common example of non-volatile memory. It's not economical and slow in fetch/store as compared to volatile memory however stores higher volume of data. All such information that needs to be stored for an extended amount of time is stored in non-volatile memory. Non-volatile memory has a huge impact on a system's storage capacity.

Q5. Distinguish among system software , application software and open source software on the basis of their features

Ans:-

Sr. No.	Key	System Software.	Application Software.
1	Definition	System Software is the type of software which is the interface between application software and system.	On other hand Application Software is the type of software which runs as per user request. It runs on the platform which is provide by system software.

Sr. No.	Key	System Software.	Application Software.
2	Development Language	In general System software are developed in low level language which is more compatible with the system hardware in order to interact with.	While in case of Application software high level language is used for their development as they are developed as some specific purpose software.
3	Usage	System software is used for operating computer hardware.	On other hand Application software is used by user to perform specific task.
4	Installation	System software are installed on the computer when operating system is installed.	On other hand Application software are installed according to user's requirements.
5	User interaction	As mentioned in above points system software are specific to system hardware so less or no user interaction available in case of system software.	On other hand in application software user can interacts with it as user interface is available in this case.
6	Dependency	System software can run independently. It provides platform for running application software.	On other hand in application software can't run independently. They can't run without the presence of system software..
7	Examples	Some examples of system software's are compiler, assembler, debugger, driver, etc.	On other hand some examples of application software's are word processor, web browser, media

Q6. (a)Create a file in Ms- word to insert a paragraph about yhour self and save it with file name "yourself" describe all steps involve in it

Ans:- click on start menu, all program ms office, open ms word, click new file

Q6. (b) write steps regarding followings

To chang the fount style

To change the style of text, follow these steps:

1. Click the Home tab and then select the text you want to **change**.
2. Click a **Style** icon, such as Bold or Underline.
3. Repeat **Step** 2 **for** each additional **style** you want to apply to your text (such as italic and underlining

To change the font size

1. Select the text or cells with text you want to change. To select all text in a Word document, press Ctrl + A.
2. On the **Home** tab, click the font size in the **Font Size** box.

To change the font color

1. Select the **text** that you want **to change**.
2. On the Home tab, in the **Font** group, choose the arrow next to **Font Color**, and then select a **color**. You can also use the formatting options on the Mini toolbar to quickly format **text**

Q8. creat a file in Ms-word of the following document and save it with file name "equation"

Ans equations

$X_2+Y_5=30$

$Z^3+Q^5=50$

$A_2+B^8=X_2+Y^8$

Q11. create a following worksheet in Ms- excel and save it with name "book1"

Ans:-

Description	Formula
the sum of the marks using AutoSum in a range of cells (C2:C11)	**=sum(c2:11)**
average of the marks in a range of cells (C2:C11)	**=average(c2:c11)**
highest marks in a range of cells (C2:C11)	**=max(c2:c11)**
minimum marks in a range of cells (C2:C11)	**=min(c2:c11)**

Q14 b) write the steps for the following action for creaton of power point presentation

- Open a Blank presentation

- Select the File tab to go to Backstage view.
- Select New on the left side of the window, then click **Blank Presentation**.
- A new **presentation** will appear.

- Save the presentation as Lab1.pptx

The following are the basic steps to save a presentation.

1. Step 1 − Click on the File tab to launch the Backstage view and select **Save**.
2. Step 2 − In the **Save** As dialog, type in the file name and click "**Save**".
3. Step 3 − The default file format is . **pptx**.

Q15Q15. Write steps for creation of a set of PowerPoint slides that demonstrates your skill to use

the tools of PowerPoint. It should include the following things

- Title slide &bullet list

  Start Microsoft PowerPoint.
- Open arbitrary existing PowerPoint presentation.
- Click the New **Slide** button on the Formatting toolbar. ...
- Click the **Bulleted List** layout, as shown in the above figure. ...
- Click the **title** placeholder (where it says: “Click to Add **Title**”). ...
- Type some text.

Inserting Excel Sheet

To **insert** a new **worksheet** in front of an existing **worksheet**, select that **worksheet** and then, on the Home tab, in the Cells group, click **Insert**, and then click **Insert Sheet**. Tip: You can also right-click the tab of an existing **worksheet**, and then click **Insert**. On the General tab, click **Worksheet**, and then click OK.

Q16. What is the difference between Machine Language and High Level Language?

Ans:- **Machine language**, or **machine code**, consists **of** binary **code** and is the only **language** that is directly understood by the **computer**. ... Both **machine code** and **assembly languages** are hardware specific. A **high-level language** is a **programming language** that uses English and mathematical symbols in its instructions.

Q17. Discuss about different data types of C programming Language.

Ans:- There are 4 data types in C language. They are:-

- **int** – This data type is used to define an integer number (-….-3,-2,-1,0,1,2,3….). A single integer occupies 2 bytes.
- **char** – Used to define characters. A single character occupy 1 byte.
- **float** – Used to define **floating point numbers** (***single precision***). Occupies 4 bytes.
- **double** – Used for double precision floating point numbers(***double precision***). Occupies 8 bytes.