

Assignment-1

Q.1:- 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 basic components of a computer system.

Explanation:

A computer has four main components:

- **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 printer, monitor, and speaker.



Basic parts of a Computer

Q2. Classification of Computer On the Basis of Size

We can classify computers on the basis of size as below:

1.Super computer

Super computer is the fastest, most expensive, big in size, and most powerful computer that can perform multiple tasks within no second. It has multi-user, multiprocessing, very high efficiency and large amount of storage capacity. It is called super computer because it can solve difficult and complex problem within a nano second.

Application

Used to forecast the weather and global climates

Used in military research and defense systems

In automobile, aircraft, and space craft designing

Used in seismography, plasma and nuclear research

Study of genetic engineering

Digital film recording

Example

C-DAC (Center for Development of Advanced Computer) of India has developed PARAM series of Super Computer. ANURAG is also Indian Super Computer. Other Super Computers are CRAY XMP/14, CDC-205 etc. Mr. Seymour Cray was a pioneer person in the field of supercomputer production. He had developed the first super computer Cray-1 in 1976.

2.Mainframe Computer

Mainframe Computer is the large sized computer that covers about 1000 sq feet. It is general purpose computer that is designed to process large amount of data with very high speed. It accepts large amount of data from different terminals and multiple users and process them at same time. More than 100

users are allowed to work in this system. It is applicable for large organization with multi-users for example: large business organization, Department of examinations, Industries and defense to process data of complex nature. It uses several CPU for data processing.

Application Areas

Government and civilian

Credit card processing

Back Account management

Example

IBM S/390, IBM S/709, ICL 39, CDC 6600

3. Minicomputer

Mini Computers are medium sized computer. So, these are popular as middle ranged computer. It is also multiple user computer and supports more than dozen of people at a time. It is costlier than microcomputer.

It is also used in university, middle range business organizations to process complex data. It is also used in scientific research, instrumentation system, engineering analysis, and industrial process monitoring and control etc.

Example

Languages, multimedia, graphics, 3D graphics and games. These are popular among students, professionals and home users due to small size, low price and low maintenance.

4. Microcomputer

Most popular general purpose computers which are mostly used on day to day work are microcomputers. These are popular as Home PC or Personal Computer (PC) because these are single user computers and mostly used for personal use and application. These support many higher level application cost and easy in operation.

Example

IBM PCs, Apple Mac, IBM PS/2, All computer available with Pentium Models etc.

Q.3 What is the meaning of computer generation ? How many computer Generation are defined ? What technologies were/are used?

Ans. "Generation" in computer talk is a step in technology . It provides a framework (structure) for the growth of computer industry . It was used to distinguish between various hardware and software technologies in the development of computer i.e. due to technological advancement ; different changes have come in the computer system.

Computer Generation :

1. First Generation: {1946-1959} Uses in vacuum tubes / Thermion valve , large in size , hard to operate.
 - Input was based on punched cards and paper tape .
 - Only machine and assembly languages were used.
 - The UNIVAC & ENIAC computer are example in 1st generation computing devices.

2. Second Generation:{1959-1964} uses in Transistor .Concept of CPU , Input & Output devices & memory unit was introduced + Programming language (COBOL, FORTRAN)

- They were much smaller in size.
- Faster than the 1st generation computers.

3. Third Generation: {1964-1971}

[IC – Integrated circuits]

IC is also called chips. Transistor & capacitor on thin sheet of silicon.

- e.g. + IBM – 360, ICL – 1900, IBM – 370, VAX – 750.
- First to use the OS (Operating system).
- Uses of HLL.

4. Fourth Generation: {1971-Onwards}

- Uses in Microprocessor .

Use of VLSIC (Very large scale IC) on silicon chip , called microcomputer.

- VLSIC replaced by LSIC.
- They are much smaller and cheaper than third generation computers.
- They had faster and larger primary and secondary storage .

5. Fifth Generation: [AI – Artificial Intelligence]

- Computer that can think & work like humans & is called thinking machines.
- Fifth generation computers are several times more powerful than fourth generation computers.

Q.4:- Differentiate between Volatile & Non-Volatile memories.

Memory	Memory
Volatile 1. Memory is the type of which data is lost as it is powered-off Contents of Volatile. 2. Memory is stored temporarily. 3. It is faster than non-volatile memory. 4. RAM (Random access memory) is an example of volatile memory. 5. In volatile memory, data can be easily transferred in comparison to non-volatile memory. 6. In Volatile memory, process can read and write. 7. Volatile memory generally has less storage capacity.	Non-volatile 1. Memory is the type of memory in which data remains stored even if it is powered-off Non-volatile. 2. Memory is stored permanently. 3. It is slower than volatile memory. 4. ROM (Read only memory) is an non-volatile memory. 5. In non-volatile memory, data can not be easily transferred in comparison to volatile memory. 6. In Non-volatile memory, process can only read. 7. Non-volatile memory generally has more storage capacity than volatile memory.

Q5:-

SYSTEM SOFTWARE	APPLICATION SOFTWARE
• Computer software designed to provide a platform to other software. • Manages resources and helps to run hardware and application software. • Runs when the system starts and runs till the end. • Developed using languages like c, c++, Assembly. • Essential for the proper functioning of a system. • Ex: operating system, language processors and device drivers.	• Software designed to perform a group of coordinated functions, tasks or activities for the benefit of the user. • Performs a specific task according to their type. • Runs when the user requires. • Developed using languages like Java, c, c++, Visual Basic. • Not extremely important for the functioning of the system. • Ex: Word processor, Spreadsheet, Presentation software, web browsers, graphics software.

open source software:-

Open source software is software with source code that anyone can inspect, modify, and enhance.

"Source code" is the part of software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software—a "program" or "application"—works. Programmers who have access to a computer program's source code can improve that program by adding features to it or fixing parts that don't always work correctly.

Q6 b) Write steps regarding followings

- To change the font style
- To change the font size
- To change the font color
- To highlight (in yellow) the line that reads “need to get IMS’s address”.

Ans: -

- **Steps to change the font style** – Click the (Home) tab > Locate the “Font” group. From the lower-right corner of the “Font” dialog box will open. Choose the font style and size you would like to use by default.
- **Steps to change the font size** –
 1. Select the text you want to modify
 2. Click the drop-down arrow next to the Font box on the Home tab. The Font drop-down menu appears.
 3. Move the mouse pointer over the various fonts. A live preview of the font will appear in the document.
 4. Select the font you want to use.
- **Steps to change the font color**
 1. Select the text you want to modify
 2. Click the Font Color drop-down arrow on the Home tab. The font color menu appears.
 3. Move the mouse pointer over the various font colors. A live preview of the color will appear in the document.
 4. Select the font color you want to use.
- **Steps to highlight the line** –
 1. Click the home tab. In the Font group, click the Text highlight button. Word is now in highlighting mode.
 2. Drag the mouse over the text you want to highlight.
 3. Click the text highlight button again to return the mouse normal operation.

Q7:-

MS Word

MS Word is widely used commercial word process developed Microsoft.

MS word is application software, which is capable of

- **Creating,**
- Editing,
- **Saving, and**
- **Printing any type of document**

Q8: Create a file in Ms-word for the following document and save it with file name **equation**. Describe all steps involve in it.

Equations:

$$X_2 + Y_2 = 30$$

$$Z^3 + Q^4 = 50$$

$$A_2 + B^4 = X_2 + Y^8$$

Steps to involve in it are as follows:

- Click on the insert tab.
- In a symbol section choose equation and write these formulas.
- Then save it as filename 'Equation'.

Q.9

Select the text you want to convert.

Select the **Insert** tab.

Click on **Convert Text to Table**, a new dialog box appears

Here set number of columns.

Click on OK Finally Selected text convert in table.

Select the text you want to convert.	Select the Insert tab.
Click on Table command. A dialog box appears.	Click on Convert text Table , a now dialog box appears
Here set number of columns.	Click on OK Finally Selected text convert in tanle.

Q10:-

Go to insert > select table > select rows and columns > click ok.

Q11:-

Roll No	Name	Marks
1	n1	60
2	n2	70
3	n3	80
4	n4	90
5	n5	40
6	n6	50
7	n7	77
8	n8	44
9	n9	88
10	n10	55

Q12:-

Roll No	Name	Marks	Roll No	Name	Marks	Roll No	Name	Marks
1	n1	60	1	n1	60	1	n1	60
2	n2	70	2	n2	70	2	n2	70
3	n3	80	3	n3	80	3	n3	80
4	n4	90	4	n4	90	4	n4	90
5	n5	40	5	n5	40	5	n5	40
6	n6	50	6	n6	50	6	n6	50
7	n7	77	7	n7	77	7	n7	77
8	n8	44	8	n8	44	8	n8	44
9	n9	88	9	n9	88	9	n9	88
10	n10	55	10	n10	55	10	n10	55
	MINIMUM	40		SUM	654		AVG	65.4
Roll No	Name	Marks						
1	n1	60						
2	n2	70						
3	n3	80						
4	n4	90						
5	n5	40						
6	n6	50						
7	n7	77						
8	n8	44						
9	n9	88						
10	n10	55						
	HIGHEST MARK	90						

Q 13. a) : Describe various steps involved in the following

- To modify column width of a worksheet
- To modify the row height of a worksheet
- To delete rows and columns of a worksheet

Ans: **Select to modify column width of a worksheet-**

- Select the column that you want to change.
- On the Home tab, in the Cells group, click Format.
- Under Cell size, click column width
- In the column width box, type the value that you want.
- Click OK.

Steps to modify the row height of a worksheet –

- Click the Select All button, and then drag the boundary below any row heading.
- To change the row height to fit the contents, double click the boundary below the row heading.

Steps to delete row and columns of a worksheet

- Right –click in a table cell, row, or column you want to delete
- On the menu, click deletes Cells.
- To delete the row, click delete entire row. To delete the column, click delete entire column.

Q13 b): Describe the following terms in the worksheet

- Absolute reference and relative reference in formula
- Cell address

Ans: **Absolute reference and relative reference in formula:** - Absolute reference is an address or pointer that does not change and remain constant. And Relative references change when a formula is copied to another cell.

Q14 A) PowerPoint Tools

1. Home

The Home tab holds the **Cut** and **Paste** features, **Font** and **Paragraph** options, and what you need to add and organize slides.

2. Insert

Click **Insert** to add something to a slide. This includes pictures, shapes, charts, links, text boxes, video and more.

3. Design

On the **Design** tab, you can add a theme or color scheme, or format the slide background.

4. Transitions

Set up how your slides change from one to the next on the **Transitions** tab. Find a gallery of the possible transitions in the **Transition to This Slide** group – click **More** at the side of the gallery to see all of them.

5. Animations

Use the **Animations** tab to choreograph the movement of things on your slides. Note that you can see many possible animations in the gallery in the Animation group, and see more of them by clicking **More**.

6. Slide Show

On the **Slide Show** tab, set up the way that you want to show your presentation to others.

7. Review

The **Review** tab lets you add comments, run spell-check, or compare one presentation with another (such as an earlier version).

8. View

Views allow you to look at your presentation in different ways, depending on where you are in the creation or delivery process.

9. File

At one end of the ribbon is the **File** tab, which you use for the behind-the-scenes stuff you do with a file, such as opening, saving, sharing, exporting, printing and managing your presentation. Click the **File** tab to open a new view called the Backstage.

Click from the list on the side to do what you want to do; for example, click **Print** to find the options and settings for printing your presentation. Click **Back** to return to the presentation that you were working on.

10. Tools tabs

When you click some parts of your slides, such as pictures, shapes, SmartArt or text boxes, you might see a colorful new tab appear.

In the example above, the **Drawing Tools** tab appears when you click a shape or text box. When you click a picture, the **Picture Tools** tab appears. Other such tabs include SmartArt Tools, Chart Tools, Table Tools and Video Tools. These tabs disappear or change when you click something else in your presentation.

Q.16 What is the difference between Machine language and High level language?

Ans.

High level language	Machine language
1. It can be considered as a programmer friendly language. 2. It is easy to understand. 3. It is easy to debug. 4. It is simple in terms of maintenance. 5. It can be run on different platforms. 6. It is less memory efficient i.e. it consumes more memory in comparison to low-level languages.	1. It is considered as a machine (Binary) friendly language. 2. It is not easy to understand. 3. It is difficult to debug. 4. Its maintenance is also complex. 5. It depends on the machine; hence it can't be run on different platforms. 6. It requires an assembler that would translate instructions.

Q.17 Discuss about different data types of C programming language?

Ans. A data type is a classification of data which tell the compiler or interpreter how the programming intends to use the data. Most programming languages support various types of data, including integer, real, character, or string, and Boolean.

Each variable in C has an associated data type. Each data type requires different amounts of memory and has some specific operations which can be performed over it. Let us briefly describe them one by one:

Following are the examples of some very common data types used in C:

- char: The most basic data type in C. It stores a single character and requires a single byte of memory in almost all compilers.
- int: As the name suggests, an into variable is used to store an integer.
- float: It is used to store decimal numbers (numbers with floating point value) with single precision.
- double: It is used to store decimal numbers (numbers with floating point value) with double precision.

Different data types also have different ranges upto which they can store numbers. These ranges may vary from compiler to compiler. Below is list of ranges along with the memory requirement and format specifies on 32 bit gcc compiler.

Data Type	Memory (bytes)	Range	Format Specifier
short int	2	-32,768 to 32,767	%hd
unsigned short int	2	0 to 65,535	%hu
unsigned int	4	0 to 4,294,967,295	%u
int	4	-2,147,483,648 to 2,147,483,647	%d
long int	4	-2,147,483,648 to 2,147,483,647	%ld
unsigned long int	4	0 to 4,294,967,295	%lu
long long int	8	-(2 ⁶³) to (2 ⁶³)-1	%lld
unsigned long long int	8	0 to 18,446,744,073,709,551,615	%llu
signed char	1	-128 to 127	%c
unsigned char	1	0 to 255	%c
float	4		%f
double	8		%lf
long double	16		%Lf

Q18:-

1)

SYNTAX FOR IF-ELSE STATEMENT:-

```
if (test expression)
{
    // code
}
```

2) for Loop

A for loop is a repetition control structure which allows us to write a loop that is executed a specific number of times. The loop enables us to perform n number of steps together in one line.

Syntax:

```
for (initialization expr; test expr; update expr)
{
    // body of the loop
    // statements we want to execute
}
```

3.Syntax For do while loop :-

The syntax of a **do...while** loop in C programming language is –

```
do {
    statement(s);
} while( condition );
```