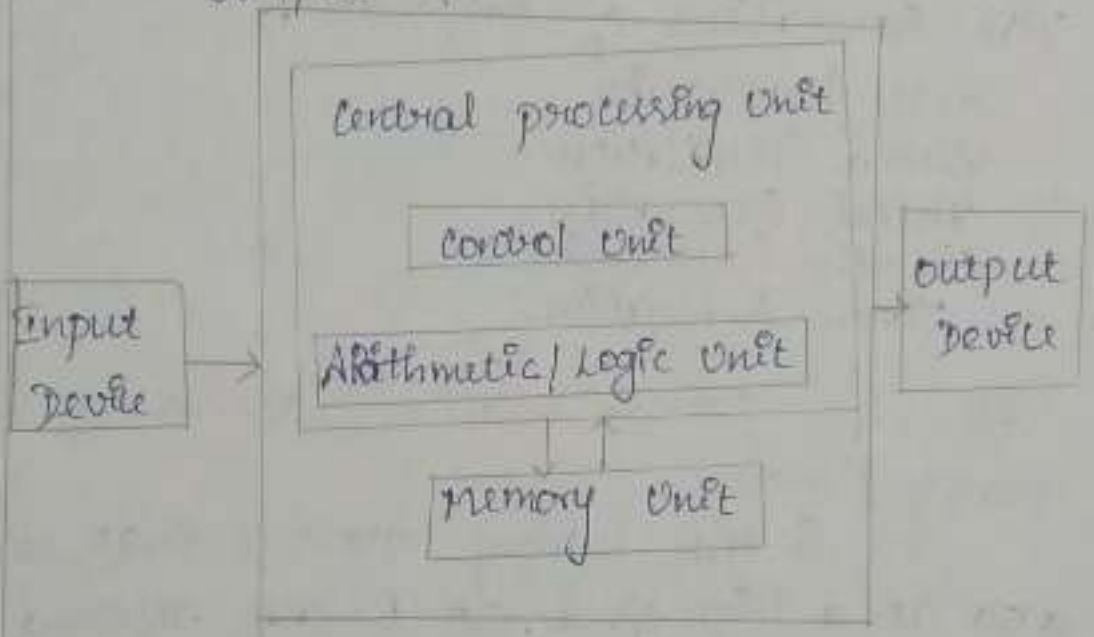
CCA - 101 - FUNDAMENTALS OF IT & PROGRAMMING

ASSIGNMENT - I

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

A computer has four main components;

Input units,
The central processing unit (or) CPU,
The primary memory and
Output units.



2) Discuss about the classification of computers based on size and capacity.

Based on size and capacity, computers are classified as follows:

Super computers,
Mainframe computer,
Mini computers,
Micro computers.

3) What is the meaning of computer generation? How many computer Generations are defined? What technologies were / are used?

The evolution of digital computing is often divided into generations. Each generation is characterized by dramatic improvements over the previous generation in the technology used to built computers, in terms of the internal organization of computer and Programming languages.

Five Generations of computers;

First Generation
Second Generation
Third Generation
Fourth Generation
Fifth Generation.

4) Differentiate between volatile & Non-volatile memories.

Volatile Memory:

It is the memory hardware that 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.

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 is the most common example of non-volatile memory. It is not economical and slow in store as compared to volatile memory and stores higher volume of data. Non-volatile memory has huge-impact on system's storage capacity.

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

System software:

It is a type of source is designed to run a computer's hardware and application programs software like operating systems, compilers, editors drivers, etc., A computer cannot function without the presence of these. If we think of the computer system as a layered model, the system software is the interface between the hardware and user application.

Application software:

It is software created for a specific purpose, used by end users. It can be called an application or simply an app.

Open-source software:

OSS is a type of computer software in which source code is released under a license in which the copyright holder grants users the rights to study, change and distribute the software to anyone and for any purpose. The Linux operating system is the best-known examples of open source software technology.

6) a) Create a file in MS-word to insert a paragraph about yourself and save it with file name "yourself". Describe all steps involved in it.

To create a new document.

Click the Microsoft office button/ File tab

Select New. The New Document dialog box appears.

Select Blank document. It will be highlighted by default.

A New blank document appears in the word window.

Now you can create document by inserting text.

Finally save document

Save document using Save AS command.

click the Microsoft office button / file tab.

Select Save. AS - Word Document

Select the location where you want to save the document using the drop-down menu.

Enter a name for the document

click the save button.

6)b) Write steps regarding followings:

i) To change the font style:

Select the text you want to modify

click on font style box on the Home tab. The font style drop down menu appears.

Move your cursor over the various font style.

Left-click the font style you want to use.

Then font style will change in the document.

(ii) To change the font size:

Select the text you want to modify:

click on increase / decrease font size commands in the font group on the Home tab

Then font size will change increase / decrease in the document.

(iii) To chang the font color:

select the text you want to modify

click on the font color box on the Home tab.

The font color menu appears.

Move your cursor over the various font colors.

Left - click the font color you want to use

Then font color will change in the document.

(iv) To highlight the line that reads "need to get IMS's address:

Select the text

click on the text Highlight color in font group on the Home tab.

various color will appears.

Move your cursor over the various colors.

click on color you want to use.

Then text highlight color will change in the document.

7) Create a file in M.S.Word for the following documents and save it with the file name 'ms-word'. Describe all steps involved in it.

MS Word:

MS word is a widely used commercial word processor developed by Microsoft.

MS word is application software, which is capable of * creating
* editing
* saving
* printing any type of document

8) Create a file in MS-Word to insert a table
10) in the document. Describe all steps involved in it.

To insert a table:

Place your insertion point in the document when you want to insert table.

Select the insert tab.

click the table command.

Drag your mouse over the diagram squares to select the number of columns and rows in the table.

Left click your mouse and the table appear. In the document

Enter text into the table.

9) Create a file in MS-Word that convert existing highlight text to table as shown below and save it as file name 'text-to-table'. Describe all steps involved in it.

Select the text you wanna to convert.
Select the Insert tab
click on Table command. A dialogue box appears
click on convert Text to Table, a new dialog box appears
Here set number of columns
click on ok finally selected text convert in a table.

Select text you want to convert	Select the Insert tab
click on Table command. A dialog box appears	click on convert text to Table, a new dialog box appears
Here set number of columns.	click on ok finally selected text convert in a table.

11) Create a following worksheet in MS-excel and save it with name 'book1'.

Book1

	A	B	C
1	ROll NO	NAme	Marks
2	1	n1	60
3	2	n2	70
4	3	n3	80
5	4	n4	90

6	5	n5	40
7	6	n6	60
8	7	n7	77
9	8	n8	41
10	9	n9	88
11	10	n10	55

12) Calculate the following things of range (C2:C11) of data in the worksheet created in q no 10

→ The sum of the marks using Autosum in a range of cells (C2:C11)

Autosum - help you to add the contents of a cluster of adjacent cell.

	A	B	C	D
1.		Jan	Feb	
2.	Maths		50	
3.	science		65	
4.	physics		80	
5.	chemistry		87	
6	botany		93	
7	zoology		86	
8	social science		78	
9	Tamil		96	
10	English		64	
11	Hindi		74	
12	Total	= SUM(C2:C11)	773	

⇒ Average of the mark in a range of cell (C

	A	B	C	D
3.	Science		65	
8	Social Science		78	
10	English		64	
11	Hindi		74	

The average mark in (C5:C11) - 773

= 77.3

→ Highest marks in a range of cell (C5:C11)

The highest marks in a range cell (C5:C11) is

C9 : Tamil - 96

→ Minimum marks in a range of cell (C5:C11)

Minimum marks in a range cell (C5:C11) is

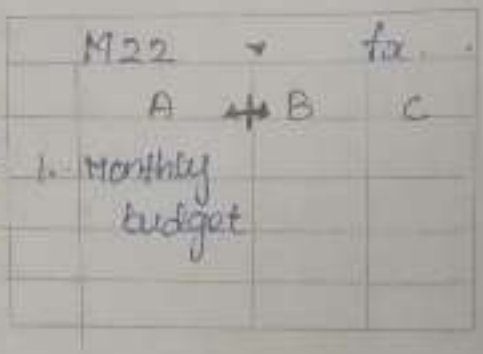
C5 - Maths - 50.

13) Describe various steps involved in the following.

a) → To modify column width of a worksheet

* position the cursor over the column line in the column heading and a double arrow will appear.

* left - click the mouse, then drag the cursor to the right to increase the column width or to the left to decrease column width.



* Release the mouse button.

* Click the Format command in the cells group on the Home tab. A menu will appear

* Select column width to enter a specific column measurement

* Select Autofit column width to adjust the column so all to the text will fit.

If you see pound signs (# # #) in a cell, it means that the column is not wide enough to display the cell content simply increase the column width to show the cell content

=> To modify the row height of a worksheet
* Position the mouse over the row line you want to modify, and a double arrow will appear
* Left-click the mouse, then drag the mouse upward to decrease the row height or downward to increase the row height
* Release the mouse button
* Select Row Height to enter a specific row measurement
* Select AutoFit Row Height to adjust the row so all of the text will fit
-> To delete rows and columns of a worksheet
* Select the row or column you'd like to delete
* Click the delete command in the cells group on the Home tab

13)b) Describe following terms in the worksheet
=> Absolute reference and relative reference in a formula

We saw how cell references in formulas automatically adjust to new locations when the formula is pasted into different cells. This is called a relative reference

Sometimes when you copy and paste a formula you don't want one or more cell references to change. An absolute reference solves this problem. Absolute reference cell formula always refers to the same cell or cell range in a formula. If a formula is copied to a different location, the absolute reference remains the same.

⇒ Cell address:

Each cell has a name, or a cell address, based on the column and row where it is located. For example, the cell is C3 because it is where column C and row 3 intersect.

You can also select multiple cells at the same time. A group of cell is known as a cell range. Rather than a single cell address, you will refer to a cell range using the cell addresses of the first and last cells in the cell range, seperated by a colon. For example, a cell range that included cells A1, A2, A3, A4 and A5 would be written as A1:A5

1A) What tools are available to customize our a) power point presentation?

A power point presentation is an excellent way of presenting information or ideas to an audience. The software is easy to use and offers a lot of cool effects for your slideshows too. Here, contents are helpful to learn about creation of presentation using Microsoft powerpoint 2007 and upper version.

1A)b) Write the steps for the following action for creation of powerpoint presentation

⇒ open a Blank presentation:

To use one of built-in templates to create a new presentation, follow these steps.

* Select office button → New. The New presentation window appears
* In the left side of the New presentation window, click Installed Templates
* Click a template to select it.
* Click Create

* Save the presentation as Lab1.pptx

Locate and select the Save command on the Quick Access Toolbar.

If you're saving the file for first time, the save as pane Lab1.pptx will appear in backstage view. You'll then need to choose where to save the file and give it a file name.

The save as dialog box will appear.

* Add a title to the first slide: The name of your college.

please click on the title, View, Ruler. and save the file name.

* Add a new slide which has a Title and content

on the Home tab, click the New slide button in the slides group. powerpoint adds a blank slide to your presentation.

And we give the title name as powerpoint presentation.

Then, It is also shown in the following slide view of presentation.

15) 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.

=> Inserting an Excel sheet:

The great thing about the Microsoft office suite is the fluid interaction of each application type. By embedding the Excel document into your presentation or document you can use it to make a point more effectively with numbers or even graphs.

* In powerpoint, select the Insert tab & click the Insert tab.
* Click the object command in the text group...
* A dialogue box will appear...
* Locate and select the desired Excel file, then click Insert..

⇒ Presentation of slides:

* Open Microsoft power point
* Go to file at the top of the screen and click New
* In the "New presentation" dialog box, click on "From design Template".

(When we start a new presentation powerpoint, we have the opportunity to choose a theme or template. A theme is a slide design that contains matching colors, fonts and specific effects etc).

* DO slide Design.
* Adding text
* Adding Pictures
* Save your presentation.
* Give the presentation.
* to slow

⇒ slide show effects:

To start the presentation at the first slide, in the start slide show group, click From Beginning.

For starting the presentation from where you are, click from current slide.

Part -2.

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

Machine Language:

Machine language or Machine code is the only language that is directly understood by the computer, and it does not need to be translated. All instructions use binary notation and are written as a string of 1s and 0s. A program instruction in machine language may look something like: 1 1001010110010100111111 0 101

High level language:

A high-level language is a programming language that uses English and mathematical symbols like +, -, *, and many others, in its instructions. When using the term 'programming languages', most people are actually referring to high-level languages. High-level languages are the language most often used by programmers to write programs. Example of high level languages are C++, Fortran, Java and Python.

To get a flavor of what a high-level language actually looks like, consider an ATM machine where someone wants to make a withdrawal of $100. This amount needs to be compared to the account balance to make sure there are enough funds. The instruction in a high-level computer language could look something like this:

```
x = 100
if balance x:
print 'Insufficient balance'
else:
```

print 'please take your money'.

This is not exactly how real people communication, but it is much easier to follow than a series of 1s and 0s in binary code.

There are a number of advantages to high-level languages.

The first advantage is that high-level languages are much closer to the logic of a human language.

The second advantage is that the code of most high-level languages is portable and the same code can run on different hardware.

17. Discuss about different data types of c programming language.

Int, double. The c language provides the four basic arithmetic types specifiers char, int, float and double, and the modifiers signed, unsigned, short and long.

18 19. Describe the syntax of the following statement:

a) If-else statement:

```
If (condition)
{
  statement 1;
}
else
{
statement 2;
}
```

b) for loop:

```
for (initialization ; condition; increment;)
    condition
```

```
{
  statement;
}
```

c) While loop:

```
Initialization
while (condition)
{
 statements;
 Increment;
}
```

d) do-while loop:

```
Initialization
do
{ statements; Increment
}
while condition);
}
```

18. Find the output of the following expressions

a) x = 20 | 5 * 2 + 30 - 5 = 33

b) y = 30 - (40 | 10 + 6) + 10 = 30

c) z = 10 * 2 | 10 - 2 + 10 = 16

20) Find the output of the following program segments.

a)
```
#include <stdio.h>
int main()
{ int i;
 for (i=1; i<2; i++)
 { printf("IMS Ghaziabad \n");
 }
}
```

Output:

IMS Ghaziabad.

b)
```
#include <stdio.h>
int main ( )
{
  int i=1;
  while (i<=2)
  {
    printf ("IMS Ghaziabad\n");
    i=i+1;
  }
}
```

Output:

IMS Ghaziabad
IMS Ghaziabad

c)
```
#include <stdio.h>
void main ()
{
  int a=10, b=100;
  if (a>b)
  print ("Largest number is %d \n", a);
  else
    print ("Largest number is %d \n", b);
}
```

output:

Largest No I- is 100