ASSIGNMENT – 1

CCA- 101:- Fundamentals of IT & programming

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

Answer:- Four fundamental parts of computer are :-

- Input
- Output
- Central processing unit
- Memory unit

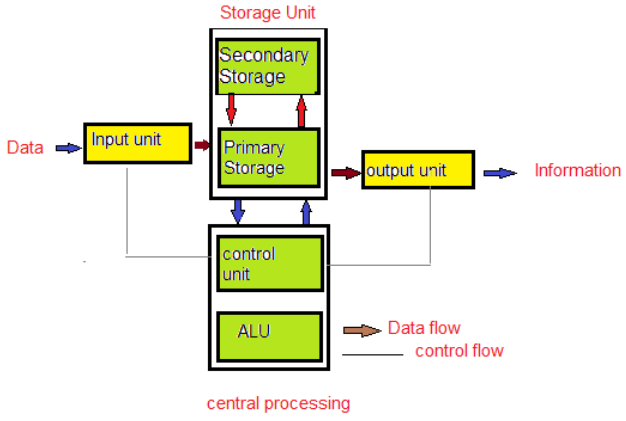


Fig:- Block Diagram

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

Answer:- Microcomputers, Minicomputers, Mainframe computers and Supercomputers

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

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

Answer:- We are using 5th generation of computers.
There are fives generation of computers.

*Generation in computer terminology is a change in technology a computer is/ was being used. Initially, the generation term was used to distinguish between varying hardware technologies. Nowadays, generation includes both hardware and software, which together make up an entire computer system.

Q. 4. Differentiate between volatile & Non – volatile memories.

Answer:- Volatile Memory is used to store computer programs and data that CPU needs in real time and is erased once computer is switched off . RAM and Cache memory are volatile memory. Where as Non – volatile memory is static and remains in the computer even if computer is switched off. ROM and HDD are non volatile memory.

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

Application software (an application) is a set of computer programs designed to permit the user to perform a group of coordinated functions, tasks, or activities. Application software cannot run on itself but is dependent on system software to execute. Program- A set of instructions telling a computer what to do.

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

Answer:-

" It is a very simple process if you do it step. Following are the step to save a file:
Open the File Explorer
Click on the home tab.
Click on the new item button.
Select a file type.
Enter a name for the file as per your choice or need.
Press the enter button.
Your file will be saved on the desired location.

Q. 6. 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".**

Answer:-

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 styles.
- Left click the font style you want use.
- Then font style will change in the document.

To change the font size:-

- Select the text that you want to modify.
- In Home tab locate the font group.
- In font group click the drop- down arrow next to font size box.
- Font size menu appears.
- Select the desired font size with a left click.
- Select the text and click the increase or decrease font size buttons.

To change 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.

To highlight (in yellow) the line that reads "need to get IMS's address".

- ❖ Click the Home tab.
- ❖ In the font group, click the text Highlight button. Word in now in Highlighting mode.
- ❖ Drag the mouse over the text you want to highlight. …..
- ❖ Click the text Highlight button again to return the mouse to normal operation.

Q. 7. Create a file in MS-Word for the following document and save it with 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 a application software, which is capable of

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

Answer:-

Creating and Editing in MS word

Click Edit Document > Edit in word for the web to make changes to a document when you Open a document from one drive, word for the web displays to your in it Reading view. To make changes to your document, switch to Editing view, where you can add and delete content and do other things, such as: Add tables and pictures.

To create a new blank document:

Click the Microsoft office button.

Select New. The New Document dialog box appears.

Select Blank document under the blank and recent section. It will be highlighted by default.

Click Create. A New blank document appears in the word window.

Saving and printing in MS- Word

1. Open a document.
2. Type some text.

3. Go to file and save as.
4. And type a file name. And then create a document. And for printing after open document select ctrl+ p. Then it Print and save document.

Q. 8. Create a file in MS- Word for the following document and save it with file name 'equation '. Describe all steps involved in it.

Equation

$$X_{2+}y_5 = 30$$

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

$$A_{2+}B^8 = X_2 + Y^8$$

Answer:- Save a document as a template

Open the Word document that you want to save as a complete. One the file menu, click save as box, type the name that you want to use for the new template

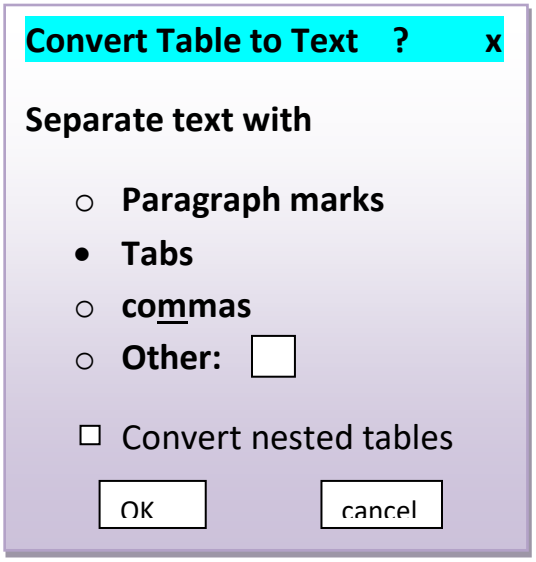
Q. 9. Create a file in MS-Word that convert existing highlight text to table as shown below and save it as file name 'text_ to_ table'. Describe all steps involved in it.

Select the text you 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

Select the 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 command	Click on OK Finally selected text convert in table

Answer:- There may be times when you want to convert an existing table into text. To do this, follow these steps:

- Select the entire table you want to convert to text.
- Make sure the layout tab of the ribbon is displayed
- In the data group, click the convert to Text tool. Word displayed the convert table to Text dialog box. (see figure 1.)



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

1. Open a blank Word document.
2. In the top ribbon, press Insert.
3. Click on the Table button.
4. Either use the diagram to select the number of columns and rows you need , or click insert Table and a dialog box will appear where you can specify the number of columns and rows.
5. The blank table will now appear on the page.

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

	A	B	C
1	R0ll 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	90
8	7	n7	77
9	8	n8	44
10	9	n9	88
11	10	n10	55
12			
13			
14	Sheet 1	Sheet 2	

Answer:- Save a Worksheet

- Right- Click the worksheet name tab.
- Click Select Move or copy.
- Click on the Move selected sheet to book drop- down menu. Select (new book).
- Click OK. Your new workbook opens with your moved worksheet. …….
- Click file> Save in your new workbook.

Q. 12. Calculate the following things of a range (C2: C11) of data in the worksheet created in question no 10

- **The sum of the marks using AutoSum in a range (C2: C11)**
- **Average of the marks in a range of cells (C2: C11)**
- **Highest marks in a range of cells (C2: C11)**
- **Minimum marks in a range of cells (C2: C11)**

Answer:- To create the formula:

Type = SUM in a cell, followed by an opening parenthesis (To enter the first formula range, which is called an argument (a piece of data the formula needs to run), type A2:A4 (or select cell A2 and drag through cell A4).

Type comma (,) to separate the first argument from the next

Type the second argument, C2:C3 (or drag to select the cells).

Type a closing, and they press Enter.

Each argument can be a range, a number, or single cell reference, all separated by commas.

= SUM (A2:A4, 2429 10482)

= SUM (4823, A3: A4, C2:C3)

= SUM (4823, 12335, 9718, C2:C3)

= SUM (A2, A3, A4, 2429, 10482)

Or

Quick Grand Total for a range of cells

Select the range of cells, and the bank row below the range, and the blank cells

In the column to the right (cells A1:d5 in the example below)

Click the AutoSum button on the Ribbon's Home tab. A SUM formula will be automatically entered for each Total.

Q. 13. A) Describe various steps involved in the following

- **To modify columns which of a worksheet**
- **To modify the row height of a worksheet**
- **To delete rows and columns of a worksheet**

Answer:- **To modify column**

- Position the **cursor** over the **column line** in the column heading.

- And a double arrow will appears.
- Left- Click the mouse, than drag the cursor to the right to increase the column width or to the left decrease the column width.
- Release the mouse button.

Or

On the home tab in the Ribbon menu, Click Delete and select delete Sheet Columns. You can also right click the highlighted column and select Delete Ribbon menu is used to delete a column or row a worksheet

Q. 13. B) Describe following terms in the worksheet

- **Absolute reference and relative reference formula**
- **Cell address**

Answer:-

Absolute cell reference

When a formula appears = A$4 the column is relative and the row is fixed.
When a formula appears = A4 the column is fixed and the row is fixed. Absolute cell references do not change when a formula is copied from one cell to another.
or
An absolute Reference ; cell references in a formula always refer to the some cell or cell range. If a formula is copied a different location the absolute reference remains the same.
Absolute reference
An absolute reference is designated in the formula by the addition of a dollar sing (s). It can precede the column reference or the row reference, or both Examples of absolute referencing include:-
SAS2:- The column and the row do not change when copied.
AS2:- The row does not change when copied.
SA2:- The column does not change when copied.

Q. 14. a) What Tools are available to customize our PowerPoint presentation?

Answer:- A

Is 1.a electronic page in a PowerPoint Presentation

6. edit

7. PPTX is the default presentation file format for new PowerPoint presentations. Support for loading and saving PPT files is built into PPTX. …. The default file extension is. PPTX.

Q. 14. B) Write the steps for the formula action for creation of power point presentation

- **Open Blank presentation**
- **Save the presentation as Lab1.pptx**
- **Add a Title to the first slide: the name of your college**
- **Type your first name and last name and last in the subtitle section**
- **Add a new Slide which has a Title and Content**

Answer:-

Open blank presentation

1. Choose file→ New, Backstage view Opens, view opens, displaying this for various types of presentations you can create.
2. Lick the blank presentation tile. A new blank presentation opens.
3. Choose4 File→ Close the new presentation. …
4. Press Ctrl+ N. …
5. Choose File→ Close to close the new presentation.

Save presentation steps

1. On the file tab, select Save As
2. Under save As, do one of the following:
3. Under Recent folders, select Browse, pick a path and file folder, and then name the file.
4. In the save as type list, pick the file format that you want.
5. Select save.

Add title steps:-

- Click to add title
- Click to add text
- Title slide
- Title and content Slide

Type name steps:-

- Open Power Point and scroll to the slide to add the signature.
- Click a text box on the slide or add one by clicking the text box button and dragging the mouse to first to form the text box.
- Type the phrase “created by” in the text box. Proceed to either the “With Graphic” or” By Hand” section.

Add a New Slide

- In the slide thumbnail pane on the left, click the slide that you want your new slide to follow.
- On the Home tab, click new Slide. Learn more about slide layouts.
- Select add Slide.

Q. 15. Write steps for creation of a set of Power Point slides that demonstrates your skill to use the tools of Power Point. It should include the following things

- **Title slide and bullet list**
- **Inserting Excel Sheet**
- **Clip art and Text**
- **Slide sow effects**

Answer:- On the slide, select the lines of text in a text placeholder or table that you want to add bullets or numbering to HOME tab, in paragraph group, click Bullets on Numbering. To change all lines of text, select the outline of the text object, and then apply the bullet or numbering.

Inserting Excel Sheet

- In PowerPoint, Select the insert tab and click the insert tab.
- Click the object command in the Text group.

- A dialog box will appear.
- Locate and select the desired **Excel file.**
  Then click Insert.

Clip art and Text

- Click the insert tab
- In illustrations group click on the picture button.
- Insert picture dialog box appears.
- With a click select the desired picture.
- Click Insert, the picture will be added to the slide.
- Click and drag the picture to move it to desired location.

Slide sow effect steps

On the left Side on the slide window, in the pane that contains the Outline and Slides tabs, click the **Slide tab.** Select any slide thumbnails of the slides on which you want to apply or change a slide transition. On the transitions. On the Transitions tab, in the transition to this slide group, click a slide transition effect.

Q. 16. What is the difference between Machine Language and high level Language?

Answer:- Explanation:-

Machine language, or machine code, it 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 Os. A program instruction in machine language may look something like this:

100101011001010-01111101010011011100101

A high- level language is a programming language that use English and mathematical symbols, like +, -, % and many others, in its instructions. When using the term ‘programming language,’ most people are actually referring to high- level languages. High- level languages are the languages most often used by

programmers to write programs. Examples of high level languages are C++, Fortran, java and python.

To get a flavor of what a high- level language actually look 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 would 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 communicate, but it is much easier to follow than a series of 1s and Os in binary code.

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

The first advantage is that high-level language are much closer to the logic of a human language.
This second advantage is that the code of must high- level languages is portable and the some cod can run on different hardware.

Q. 17. Discuss about different data types of C Programming Language.

Answer:-

Explanation:

C language is one of the basic computer languages and is quite commonly used. There are different things that need to be learned to before programming. Some of these are;

Data types;

This represents the type of data, whether is a string, integer, floating point etc. This is important because without selecting write data type, we might not get desired output.

Q. 18. Find the output of the following expressions

a) X= 20/5*2+30-5 b) Y=30 - (40/10+6) + 10 c) Z= 40*2/10 – 2 + 10

a) $X = \frac{20}{5*2} + 30 - 5$

$= \frac{20}{5-2} + 25$

$= \frac{20+75}{3}$

$X = \frac{95}{3}$

b) $Y = 30 - (\frac{40}{10+6}) + 10$

$= 30 - \frac{40}{16} + 10$

$= \frac{480-40+160}{16}$

$= \frac{640-40}{16}$

$Y = \frac{600}{16} = \frac{75}{2}$

C) $Z = 40*\frac{2}{10} - 2 + 10$

$= 40 - \frac{2}{10} - 2 + 10$

$= 40 - \frac{1}{5} - 2 + 10$

$= \frac{200-1-10+50}{5}$

$= \frac{250-11}{5} = \frac{239}{5}$

Q. 19. Describe the syntax of the following statements

a). If – else statement b). For loop c). While loop d). do - while loop

Answer:- a) If – else statement

The general form of if – else is as follows: if (test – expression) { true block of statements} Else {False block of statements} Statements; n this type of a construct, if the value of test – expression is true, then the true block of statements will be executed.

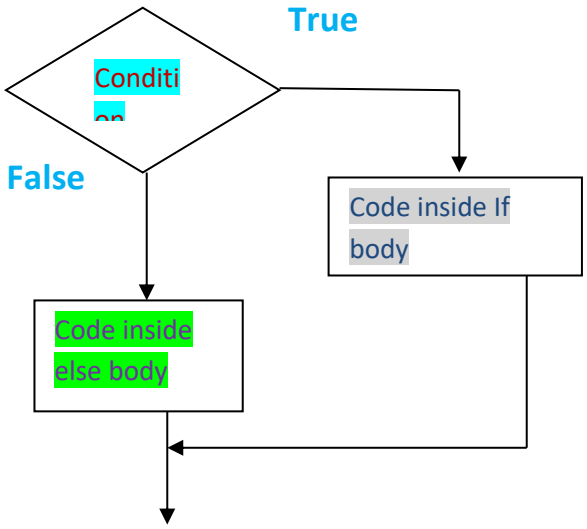
Or

Syntax of if else statement

If condition returns true then the statements inside the body of "if" are executed and the statements inside body of "else" are skipped.

If condition returns false then the statements inside the body of "if" are skipped and the statements in "else" are executed.

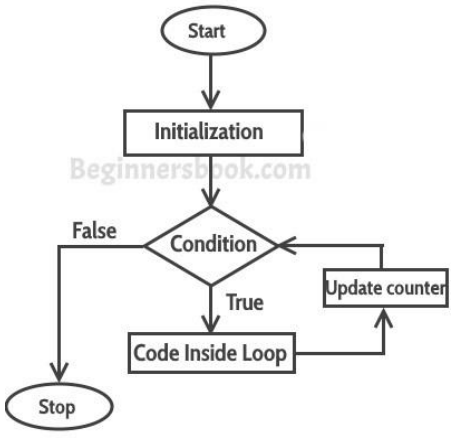
Flow diagram of if else statement



b) For loop

```
1     for   (initialization statement;   test
2   // statements
3   }
```

The for loop starts with a for statement followed by a set of parameters inside the parenthesis. The for statement is in lower case. Please not that this is case sensitive, which means the **for** command always has to be in lower case in C programming language. The **initialization statement** describes the starting point of the loop, where the loop variable is initialized with a starting value. A loop variable counter is simply a variable that controls the follow of the loop. The **test expression** is the condition until when the loop is repeated. **Update statement** is usually the number by which the loop variable is incremented.



C) While loop

The While construct consists of a book of code and condition/ expression. The condition/ expression is evaluated, and if the condition/ expression is true, the code with in all of their following in the block is executed. This repeats until the condition/expression becomes false.

d) do – while loop

Syntax. Do { statement(s); while (condition) ; Notice that the conditional expression appears at the end of the loop, so the statement (s) in the loop executes one before the condition is true, the flow of control jumps back up to do, and the statements (s) in the loop executes again.

Q. 20. Find the output of the following program segments

a)

```
#Include < stdio.h>
int main()
Int;
For (i=1; i<2; i++)
{
Printf("IMS Ghaziabad\n");
   }
}
```

b)

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

C)

```
#include<stdio.h>

 Void main()
{
Int a 10, b= 100;
If(a>b)
Printf("Largest number is %d\n",a);
```

```
    Else
        printf(Largest number is %d\n",b);
  }
```

Answer:- The given program outputs the word

a) IMS Ghaziabad\n

b) i + 1;

c) ("Largest number is %d\n",a);