CCA-101: Fundamentals of IT & Programming

Assignment -1

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

Ans: A computer has four main components: Inputs unit, the Central processing unit or CPU, the Primary memory, and Output unit. The device to input information, such as a keyboard, and mouse. CPU- The CPU is further broken up into ALU, Control Unit, and Instruction Unit.

Q2: Discuss about the classification of computers based on size and capacity.

Ans: On the basis of size there are four types of computer. They are minicomputer, microcomputer, mainframe computer and super computer.

Q3: What is the meaning of computer generation? How many Computer Generations are defined? What technologies were/are used?

Ans: There are five computer generations known till date. Each generation has been discussed in detail along with their time period and characteristics. In the following table, approximate dates against each generation has been mentioned, which are normally accepted.

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.

Q4: Differentiate between Volatile & Non- Volatile memories.

Ans: The volatile memory stores data and computer programs that the CPU may need in real-time, and it erases them once a user switches off the computer. Cache memory and RAM are types of Volatile memory. Non-volatile memory, on the other hand, is static. It remains in a computer even after a user switches it off.

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

Ans: System Software: System Software is the type of software which is the interface between application software and system. Low level languages are used to write the system software. System Software maintains the system resources and gives the path for application software to run. An important thing is that without system software, system can not run. It is a general purpose software.

Application Software: Application Software is the type of software that runs as per user request. It runs on the platform which is provided by system software. High level languages are used to write the application software. Its a specific purpose software.

The main difference between System Software and Application Software is that without system software, system can not run on the other hand without application software, system always runs.

Q6. 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.

Q6 b) Write steps regarding followings

- To change the font style: Select the text you want to modify. Select the Home tab and locate the Font group. Click the drop-down arrow next to font style box. Font style menu appears. With a left click select the desired font style.

- To change the font size: Select the text or cells with text you want to change. To select all text in a Word document, press Ctrl + A. On the Home tab, click the font size in the Font Size box. You can also type in any size you want, within the following limits.

- To change the font color: Select the text that you want to change. 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.

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

  Ans: Select the text that you want to highlight. Go to Home and, select the arrow next to Text Highlight Color. Select the color that you want.

Q7. 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 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 '**equations**'. Describe all steps involved in it.

Equations

$$X_2 + Y_5 = 30$$
$$Z^3 + Q^4 = 50$$
$$A_2 + B^8 = X_2 + Y^8$$

Q9. 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.
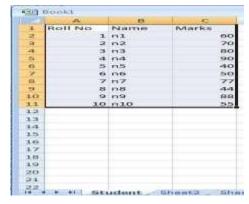
Select the text you want to convert.
Select the **Insert** tab.
Click on **Table** command. A dialog box appears.
Click on **Convert Text to Table, a new** dialog box appears
here set number of columns.
Click on OK Finally Selected text convert in a table

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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

Q10. Create a file in MS-Word to insert a table in the document. Describe all steps involved in it.

Q11. Create a following worksheet in MS-excel and save it with name 'book1'.

Q12. 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 of cells (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)

Q13 a) Describe various steps involved in the following

- To modify column width of a worksheet

Ans: Select one or more columns that you wish to resize. To select all columns, press Ctrl + A or click the Select All button. On the Home tab, in the Cells group, click Format > Column Width. In the Column width box, type the desired number, and click OK.

- *To modify the row height* of a worksheet

Ans: Select the row or rows that you want to change. On the Home tab, in the Cells group, click Format. Under Cell Size, click Row Height. In the Row height box, type the value that you want, and then click OK.

- *To delete rows and columns* of a worksheet

Ans: Select the cells, rows, or columns that you want to delete. Right-click, and then select the appropriate delete option, for example, Delete Cells & Shift Up, Delete Cells & Shift Left, Delete Rows, or Delete Columns.

Q13 b) Describe following terms in the worksheet

- Absolute reference and relative reference in formula

Ans: Relative and absolute references behave differently when copied and filled to other cells. Relative references change when a formula is copied to another cell. Absolute references, on the other hand, remain constant no matter where they are copied.

- Cell address

Ans: **A reference is a cell's address**.

It identifies a cell or range of cells by referring to the column letter and row number of the cell(s). For example, A1 refers to the cell at the intersection of column A and row 1. The reference tells Formula One for Java to use the contents of the referenced cell(s) in the formula.

Q14. a) What tools are available to customize our PowerPoint presentation?

Ans: 1. To find a theme to use in your presentation, click the Design tab, click a theme, and see how it previews on the slide.

2. You can further customize the theme by changing the fonts, colors, and background colors on the Design tab.

Q14 b) Write the steps for the following action for creation of power point presentation

- Open a Blank presentation

Ans: 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

Ans: Name your presentation, and then click the Save as type dropdown menu underneath. Select PowerPoint Presentation. It is usually the first option in the list, and may include the file extension, PowerPoint Presentation (*.pptx)

- Add a Title to the first slide: the name of your college

Ans: The first slide of a presentation is called a "Title slide" or a "Cover slide". This slide often contains the title of the presentation and hence the name title slide. It is also often referred to as the "Opening slide" of the presentation.

- Type your first name and last name in the Subtitle section

Ans: There are multiple ways to add titles to your slides in PowerPoint. Use the Layout option to create a standalone title slide or to add a title to a slide that contains other text. You can also use the Outline view or the Accessibility ribbon to create and update the titles of your slides.

- Add a New Slide which has a Title and Content

Ans: To insert a new slide in PowerPoint with a "Title and Content" slide layout, click the "Home" tab in the Ribbon. Then click the "New Slide" button in the "Slides" button group. Alternatively, to insert a new slide with a different slide layout, click the "Home" tab in the Ribbon.

Q15. 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 Excel Sheet
- Clip art and Text
- Slide show effects

Part -2

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

Ans: 1. High-level language: It can be easily interpreted as well as compiled in comparison to low-level language. It can be considered as a programmer-friendly language. It is easy to understand. It is easy to debug. It is simple in terms of maintenance. It requires a compiler/interpreter to be translated into machine code. It can be run on different platforms. It can be ported from one location to another. It is less memory efficient, i.e it consumes more memory in comparison to low-level languages. Examples of high level languages include C, C++, Java, Python. It is used widely in today's times.

2. Low-level language: It is also known as machine level language. It can be understood easily by the machine. It is considered as a machine-friendly language. It is difficult to understand. It is difficult to debug. Its maintenance is also complex. It is not portable. It depends on the machine; hence it can't be run on different platforms. It requires an assembler that would translate instructions. It is not used widely in today's times.

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

Ans:

Q18. Find the output of the following expressions

a) X=20/5*2+30-5 = Ans: X=33

b) Y=30 – (40/10+6) +10 = Ans: Y=30

c) Z= 40*2/10-2+10 - Ans: z=16

Q19. Describe the syntax of the following statements

      a) If – else statement b) for loop c) while loop d) do-while loop Q20. Find the output of the following program segments

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