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Name - Komol Devi
Reg.No - CCA/2021/117816
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Coulese Name - Fundamentals of I.T
and Progeamming

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CCA-101: FUNDAMENTALS OF IT AND PROGRAMMING

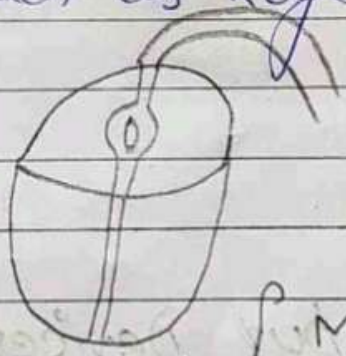
ASSIGNMENT-1

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

Ans A computer has four main components:

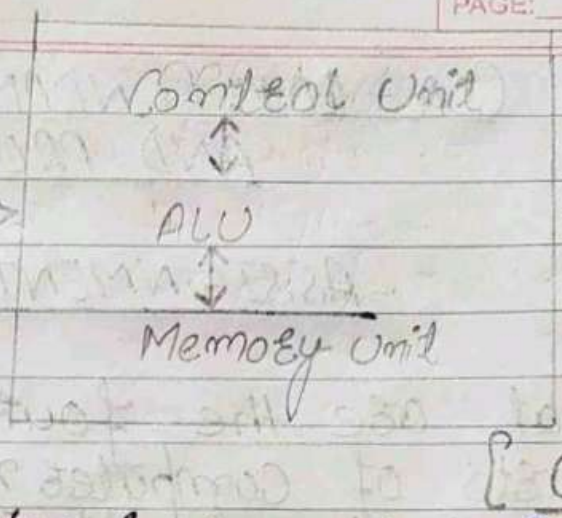
1. Input unit
2. The central processing unit or CPU.
3. The primary memory and
4. Output unit.

INPUT UNIT:- The devices to input information, such as keyboard, and mouse.

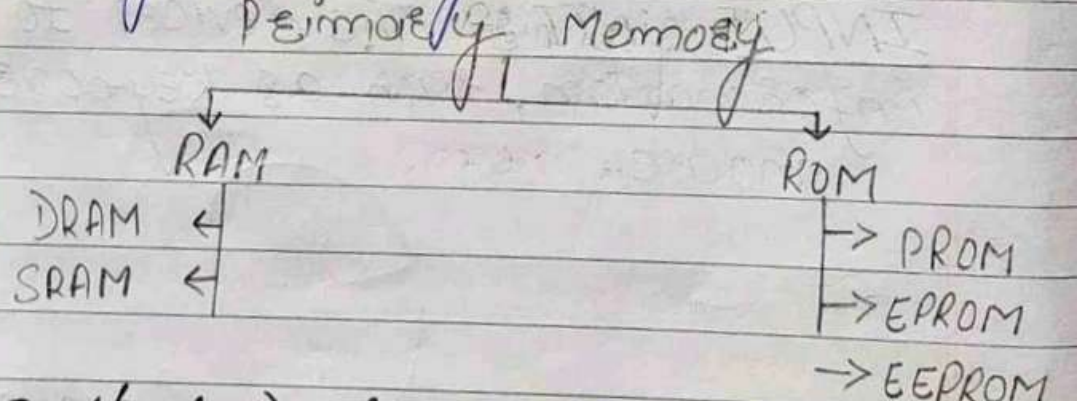


[MOUSE]

CPU:- CENTER PROCESSING UNIT:- The CPU is further broken up into ALU, control unit, and Instruction unit.



Primary / Main Memory:- Primary memory is the computer memory that is directly accessible by CPU. It is comprised of DRAM and provide the actual working space to the processor. It holds the data and instructions that the processor is currently working on.



Output Devices:- An O/P device is any peripheral that receive data from a computer, usually for display, projection, or physical reproduction e.g. the image show an inkjet printer, an O/P device that make a hard copy of anything

show on the monitor.

Output devices

Soft copy device	Hard copy device
→ Monitor	→ Printer
→ Projector	→ Plotter
→ Speaker	

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

Ans Based on size and capacity. are classified as follows.

Super Computer
Mainframe Computer
Mini Computers.
Micro Computer.

Super Computers

A super computer is a computer with a high level of performance compared to a general-purpose computer. Performance of a super computer is measured in floating-pt operations per second (FLOPS) instead of million instructions per second (MIPS)

Mainframe Computers.

A mainframe computer is a large

integreated machine with a lot of memory a lot of storage capacit and a lot of high-end processor for such a long functioning it has a lot of computational powe in comparison to normal computer system.

Mini Computers

Mini Computer, computer that was smaller, less expensive and less power-ul than a mainframe or supercomput but more expensive and more powerf than a personal computer. Minicomp-uter used for scientific and enginee-ing computations, business teansacti-on processing, file handling and database management.

Micro Computer.

A micro computer is a complete comp-et on a small scale designed for use by one person at a time. An antiquated term, a microcomp-uter is now peimarily called a peesonal computer (PC), or a device based on a single-chip microproc-essor. Common microcomputers

include laptops and desktop.

Q3 What is the meaning of computer gen. How many computers gen. are defined? Which technologies were / are used?

Ans Computer gen. is classification of computers into different groups according to their manufacturing date, memory device, hardware and s/w technologies used in them. There is five gen. of computer.

1st GEN.

The period of first gen. was from 1946 - 1959. The first computers of first gen. used vacuum tubes as the basic components for memory and circuitry for CPU. These tubes, like electric bulbs, produced a lot of heat and the instalations used to fuse frequently.

2nd GEN

The period of second gen. was from 1959 - 1965. In this gen, transistors were used that were cheaper, consumed less power, more compact in size, more

reliable and faster than the first gen. machines made of vacuum tubes.

3rd GEN

The period of third gen. were computer's that emerged due to the development of the integrated circuit (IC). They were the first steps toward computers as we know them today. Their main feature was the use of integrated circuits, which allowed them to be shrunk down to be as small as large to astees.

4th GEN

The period of 4th (fourth gen) was from 1971 - 1980. Computers of fourth gen. used very large scale integrated (VLSI) circuits. VLSI circuits and other circuits elements with their associated circuits on a single chip made it possible to have microcomputers of fourth generation.

5th GEN

The fifth Gen. Computer system (FGCS) was an initiative by Japan's Ministry of international trade and industry (MITI), began in 1982, to create computers using massively parallel computing and logic programming. It was to be the result of a govt./industry research project in Japan during the 1980's

Q4 Different b/w volatile and non-volatile.

Volatile Memory	Non-volatile Memory
① Volatile memory is the type of memory in which data is loss as it is powered-off	Non-volatile memory is the type of memory in which data remains stored even if it is
② It is faster than non-volatile memory	It is slower than volatile memory.
③ RAM is an example of volatile memory (Random Acess Memory)	ROM (Read only Memory) is an example of non-volatile memory

Q5 Distinguish among system software app. s/w and open source s/w on the basis of their features?

System Software

System software is a types of comp-ter program that is designed to run a computer's h/w and applic-ation progeams. If we think of the computer system as a layered model, the system s/w is the inter-face between the h/w and user applications. The O.S (operating system) is the best-know example of system software.

Application Software

An Application software progeam (application or app for short) is a computer peogeam designed to carry out a specific task other than one relating to the operation of the computer itself, typically to be used by end users. Word processors, media players, and accounting s/w are example.

Open Source Software

Open-source s/w (OSS) is computer

S/w that is released under a licens
in which the copy right holder gran
-s users the rights to use, study,
change and distribute the software and
its code to anyone and for any
purpose open-source S/w may develop
-ed in a collaborative public re mann
-er.

Q6(a) Create a file in MS-word to inse
-rt a paragraph about yourself
and save it with file Name "yoursel
-f". Describe cell steps involved in it

Ans① Open word or if word is already
open select file > New.

② In the search for online templates
box enter a search word like letter
resume, or invoice. Or select a
category under the search box like
Business personal or Education.

③ Click a template to see a preview.

④ Select create.

(b) Write steps regarding following :-

① To change the font style.

Ans Select the text you want to modify.

(2) To change the font size
Ans Select the home tab and locate the font group.

(3) To change the font color.
Ans Click the drop - down arrow next font style box.

(4) To highlight (in yellow) the line that reads "need to get IMS's address"
Ans If you want to change the font to bold or italic, click the 'B' or 'I' icons on the format bar

Q1 Create a file in MS word for the following documents and save it with file 'ms - word'. Describe all - steps involved in it.

MS word

MS word is a widely used comm -erical word processor developed by Microsoft

- Creating
- Editing
- Saving
- Printing any type of document.

Ans

Creating

1. Click the microsoft offic button/file tab.
2. Select New. the new document dialog box appear.
3. Select blank document, It will be high lited by ded default.
4. A New blank document appears in the word window.
5. New you can create document by inserting text
6. Finally save document.

Editing

1. Click the Edit tab.
2. Select the text you want to edit.
3. Using the tool in the edit toolbar, change the required foemating including font style, paragraph, alignment, List formatting, and inderlation option.

Saving

- To save doc. using save as command
1. Click the Microsoft office button/file tab.
2. Select save as - word document.
3. Select the location where you want.

to save the doc using the drop-down menu.

(4) Enter a name for the doc.

(5) Click the save button.

Printing any type of document

(1) Select file print.

(2) To preview each page, select the forward and backward arrow's at the bottom of the page. If the text is too small to read, use the zoom slider at the bottom of the page to enlarge it.

(3) Choose the no. of copies, and any other options you want, and select the print button.

Q8 Create a file in MS word for the following document and save it with the file.
Name 'equations' Describe all steps involved in it.
Eg, Eq.

$$x_2 + y_5 = 30$$
$$z^3 + 0^4 = 50$$
$$A_2 + B^6 = x_2 + y^8$$

Ans ① Select Insert > Equation or Press Alt+=

② To use a built-in formula, select design > equation.
③ To create your own, select design > eq > ink equation.
④ Use your finger, stylus, or mose to write your equation.
⑤ Select insert to bring your equation into the file.

Q9
Ans① Select the text and make sure its property formatted.
Word will insert a new coloumn when a tab characters is found, so make sure that columns are separated by tabs.
② Click the insert tab.
③ Click the table button.
④ Select convert text to table.
If the text was formatted right, some of the options in this dialog box should already be filled in otherwise, set the no's of columns and raws, and how to separate the text into columns.
⑤ (optional) customize Autofit behavior.
⑥ Click OK.
The selected text is automatically turned into a table.

Q10

Ans ① Open a blank word document.
② In the top ribbon, press Insert.
③ Click on the table button.
④ Select the no. of columns and rows you need, or click insert table and a dialog box will appear where you can specify the no. of columns and rows.
⑤ The blank table will now appear on the page after it as necessary. Standard features like bold, it a lics, and underline are still available. These items may be helpful for creating headings and calling out certain items in the table.

Q11 Create a following marksheet in MS-EXCEL and save it with name 'book 1'.

Ans ① Right-click the worksheet name tab
② Click select move and copy.
③ Click on the move selected sheet to Book drop-down menu select (new book)
④ Click ok your new workbook open with your moved worksheet.
⑤ Click file > save in your new workbook.

The sum of the marks using Autos-um in.

Q12 (a) A range of cell ($C_2 : C_{11}$)

Ans (1) To sum a column of number's select the cell immediately below the last numbers in the column. To sum a row of no's, select the cell immediately to the right.

(2) Autosum is in two locations: Home > Autosum and formulas > Autosum.

(3) Once you create a formula, you can copy it to other cells instead of typing it over and over.
e.g. if you copy the formula in cell B^{12} to cell C^{12}, the formula C_{12} automatically adjusts to the new location and calculates the numbers in $C_2 : C_{11}$

(4) you can also use autosum on more than one cell at a time.
e.g. you could highlight both cell B^{12} and C_{12}, click autosum and table both columns at the same time.

(5) you can also sum numbers by creating a simple formula.

(b) Average of the marks in a range of cells ($C_2 : C_{11}$)

Ans ① Click a cell below the column or to the right of the row of the numbers for which you want to find the average.

② On the home tab, click the arrow next to Autosum > Average, and then press Enter.

(c) Highest marks in a range of cells ($C_2 : C_{11}$)

Ans ① In a blank cell, type "=MAX("

② Select the cells you want to find the largest number from.

③ close the formula with an ending parentheses.

④ Hit enter and the largest number from your selection will populate in the cell.

(d) Minimum marks in a range of cells ($C_2 : C_{11}$)

Ans Select the cell C_2 and write the formula

② = MIN ($C_2 : C_{11}$) press enter on your keyboad.

③ The function will return - 3

④ 3 is the minimum value in the range ($C_1 : C_{11}$)

Q13@ Describe various steps involved in the following.

(1) To modify column width of a worksheet.

Ans (1) Select the column or colums that you want to change.
(2) On the home tab, in the cells group click format.
(3) Under cell size, click column width.
(4) In the column with box type the value that you want.
(5) click ok.

(2) To modify the row or hight of a work - sheet.

Ans (1) Select the row or rows that you want to change.
(2) On the home tab, in the cells group click format.
(3) Under cell size, click row height.
(4) In the row height box, type the value that you want, and then click ok.

(3) To delete rows and column of a works - sheet.

Ans (1) Select the cells, rows or columns that u want to delete.
(2) Right - click and then select the

appropriate delete option:
e.g. Delete cells and shift up,
Delete cells and shift left,
Delete rows or delete columns.

(b) Describe the following terms in the work - sheets

(1) Absolute reference and relative reference in formula.

Ans (1) Select the cell that contains the formula.

(2) In the formula bar select the reference that you want to change.

(3) Press F_4 to switch b/w the reference types.

(2) Cell Adress.

A cell is the intersection of a row and a column are identified by Letters (A, B, C) while rows are identified by no's (1, 2, 3) Each cell has its own name - or cell address - based on its column and row.
In this eg, the selected cell intersects column C and row 5, so the cell address in C_5.

Q14 (a) What tools are available to customize our power point presentation?

Ans (1) Templates and themes
(2) Slide Layouts
(3) Font
(4) Color Themes
(5) Icons
(6) Shapes
(7) Stock Photos
(8) Charts and Graphs
(9) Maps
(10) Tables
(11) Flowcharts
(12) Icon charts
(13) Radials
(14) Progress Bars
(15) Animation
(16) Transitions
(17) Interactivity
(18) Audio
(19) Video.

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

(1) open a Blank presentation

Ans (1) Select the file tab to go to back-stage view.
(2) Select new on the left, side of the window then click blank presentation.
(3) A new presentation will appear.

(2) Save the presentation as Lab1.pptx

Ans (1) Create a blank presentation.
(2) Save a presentation.

(3) Apply a Design.
(4) Compare presentation views.
(5) Format Text.
(6) Insert smartart.
(7) Insert and Modify shapes.
(8) Edit and Duplicate slides.

(B) Add a title to the first slides: The name of your college.

Ans (1) Select the slide whose layout you will change so that it can have a title.
(2) Click home > Layout.
(3) Select title slide for a standalone title page or select title and content for a slide that contains a title and a full slide text box.

May other layout options include titles, too Pick the ones that is best suited for your presentation.

(4) Select the click to add title text box.
Enter your title for that slide.

(4) Type your first name and last name in the subtitle section.

Ans (1) Using your mouse and cursor, click inside of the top textbox.
(2) Using your keyboard, type the name of the animal you have been researching in class.
(3) Using your mouse and cursor click inside of the bottom textbox.
(4) Using your keyboard type your first and last name, click enter and type your teacher's name.

(5) Add a new slide which has a title and content.

Ans (1) Click the "Home" tab in the Ribbon.
(2) Then click the "new slide" button in the "slides" button group.
(3) Alternatively to add a new slide with a different slide layout.
(4) Click the "Home" tab in the Ribbon

Q15 (a) Title slide and bullet list?

Ans

Title slide

The title slide is the first slide of a presentation. It usually contains a title and a subtitle. Of all the slides in a presentation, the first

slide is one of the most imporet-tant, as the title slide generally sets the tone.

① Click home > Layout.
② Select Title slides for a standalone title page or
③ Select title and content for a slide that contains a title and a full slide text box.

② Bullet List.

Ans ① On the left-hand slide of the powerpoint window.
② Click a slide thumb nail that you want to add bulleted or numbered text to.
③ On the slide, select the lines of text in a text placeholder or table that you want to add. Bullets or numbering to
④ On the home tab. in the paragraph group click Bullets or Numbering.

Part 2

Q16 What is the differente between Machine Long. and high Level Language?

Ans **Machine language :-** A machine lang. is the only lang. That a computer directly understands, it is usually written in zeoe (0) and ones (1). A progeam in steuction in machine lang. may look something like this 1100/0010 whereas.

High Level Language :

A high level language is a progr-amming lang. that uses English and mathematical symbols. Like +ve, -ve, % and many others, Pts instructions.

Q17 Discuse about different data types of C Progeamming Language?

Ans There are some common data types in C Progeamming language!

1. Int - used to stoee on integer value.
2. Char - used to stoee or single charact-er
3. float - used to stoee decimal no's with single precision.
4. Double - used to stoee decimal nos with double precision.

e.g,

```
# include stdio.h>
int main ()
{

// datatypes
int a=10;
Char b='S';
float c=2.88;
printf("Integer datatype:%d\n", a);
peint("Character datatype:%c\n", b);
peintf("float datatype:%f\n", c);
print("double datatype:%lf\n", d);
    return 0;
}
```

o/p
(i) Integer datatypes: 10
(ii) Chart datatypes: S
(iii) float datatypes: 2.880000
(iv) Double float datatypes: 2.888000

Q18 Find the output of the following expression.

a) $x = 20/5 * 2 + 30 - 5$

$x = \frac{20}{5} \times 2 + 30 - 5$

$x = 4 \times 2 + 30 - 5$

$x = 8 + 30 - 5$

$x = 8 + 25$

$\boxed{x = 33}$

b) $y = 30 - (40/10 + 6) + 10$

$y = 30 - 4 + 6 + 10$

$y = 30 - 0$

$\boxed{y = 0}$

Hence the value of y is 30 Ans

c) $z = 40 * 2/10 - 2 + 10$

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

$z = 8 - 2 + 10$

$z = 8 + 8$

$\boxed{z = 16}$

Hence the value of z is 16 Ans

Q9 Describe the syntax of the following statements?

a) If - else statement.

```
# include <iostream>
using namespace std;
int main()
{
    int number;
cout<< "Enter an integers:";
    in >> number:
    if (number >0)
{
cout<< "you entered a positive
 integer:" << number << endls;
```

```
else if (number < 0)
  {
    cout << "you entered a negative
    integer" << number << endl;
  }
  else
    {
      cout << "This line is always
              printed";
      return 0;
    }
```

O/P Enter an integer.

(b) for Loop.

Ans

```
# include <Stdio.h>
  int main()
  {
    int i;
    for (i=0; i<10; i++)
    {
      printf ("Hello world");
    }
    return 0;
  }
```

o/p
10 time write Hello world.

c) While Loop.

```
# include <stdio.h>
int main()
{
int i=0;
while (i<10)
{
printf ("Hello world");
i++;
}
```

o/p 10 time write Hellow world.

d) do-while Loop :-

```
# include <iostream>
using namespace std;
int main()
int i=1;
do
{
cout << i << "\n";
i++;
while (i<=10);
}
```

o/p 1 to 10 Ans

Q20 Find the output of the following progeame segments.

a)

```
# include <stdio.h>
  int main ()
{ int i;
  for (i=1; i<2; i++)
{ printf ("IM's Ghaziabad
  }
}
```

o/p IMS Ghaziabad.

b)

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

o/p Two time write IMS Ghaziabad.

c.)

```
# include <stdio.h>
  void main()
  {
  int a = 10, b = 100;
     if (a > b)
  printf ("Larger no. is %d \n", a);
    else
  printf ("Larger no. is %d \n", b);
  }
```

O/p Larger number is b.