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

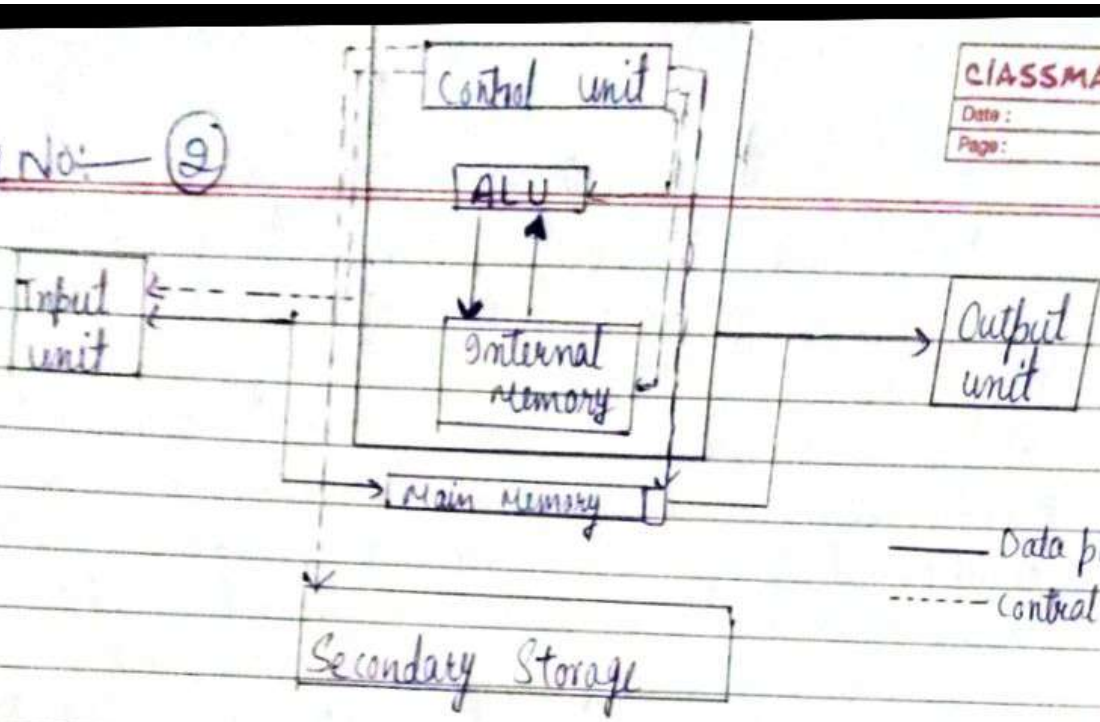
Ans The computer is the combination of hardware and software. Hardware is the physical component of a computer like mother-board, memory, devices, moniter, keyboard etc. while software is the set of programmes or instructions. Both hardware and software together make the computer system function.

Input device :- Input unit is used to feed any form of data to the computer, which can be stored in the memory unit of further processing.

e.g. keyboard, mouse, etc

Central processing unit (CPU) :- CPU is the major component which interprets and executes software instructions. It also control the operation of all other components of such as memory input and output units. It accepts binary data as input, process the data according to the instructions and provide the result as out. The CPU has three components which are control unit, arithmetic logic unit (ALU) and Memory unit.

(i) Arithmetic & logic unit :- The ALU is a part of the CPU where various computing



Components of a computer

function as performed on data. The ALU performs arithmetic operations such as addition, subtraction, multiplication & Division.

(ii) Control unit :- The control unit controls the flow of data between the CPU, memory & I/O devices. It also controls the entire operation of a computer.

(iii) Output unit :- An output unit is any hardware component that conveys information to users in an ~~understable~~ understandable form e.g. Moniter, Printer, etc.

Memory unit :- The memory unit is of two types which are primary memory and secondary memory. The primary memory is used to temporarily store the ~~data~~ programmes and data when the instructions are ready to excute. The secondary memory is used to store the data permanently

→ Primary Memory is volatile, i.e, the content is lost when the power supply is switched off. The Random Acess memory (RAM) is an example of main memory.

→ The secondary memory is non-volatile, i.e, the content is available even after the power supply is switched off. Hard disk, CD-ROM, DVD ROM are examples of secondary memory.

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

Ans Computer classification:—

Computer are classified on different parameters, such as storage capacity, procesing speed and component CPU used in computers. Depending upon the components used to and features of different computers, they are classified into four groups, Microcomputers, Minicomputers, Mainframe computer and Super computer.

1. Super computer:—

- Super-computer are the most powerful and physically largest by size.
- These are the systems designed to proce huge amount of data.
- The fastest supercomputer can performs over trillion calculations in a second.
- e.g. JAGUAR, ROADRUNNER, etc

2. Microcomputers :—
- Microcomputers are the most frequently used type of computer.
- It is also known as Personal computer (PC).
- A microcomputer is a small computer system designed to be used by one person at a time. eg
- e.g. Desktop computers, laptop, etc.

3. Minicomputers :—
- Minicomputers are much smaller than mainframes.
- These computers are also less expensive.
- Sometimes referred to as Midrange server or Midrange computer.
- Midrange computer are usually used by smaller and medium-sized bisaness as their serves.
- e.g. Apple, ~~ipad~~, iPod, CDC 1604.

4. Mainframe computer :—
- Mainframe computer are very large often filling on entire room → can process thousand of millions of instructions per second.
- In a mainframe computer environment, user connect to the mainframe through the many terminals wired to the mainframe
- Mainframes are capable of supporting hundred to thousands of users simitaneously.
- e.g. IBM Mainframe Z13, IBM system mainframe

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

Ans Generation in computer terminology is a change in technology a computer is/was being used initially, the generation term was used to distinguish b/w varying hardware technologies. Nowdays generation includes both hardware & software, which together make up an entire computer system.

First Generation (Vaccum Tubes) (1940-1956)

→ The first computer system used vaccum tubes for circuity & magnetic drums & memory.
→ These computers were very expinsive to operate.
→ Computers of this generation consumed a lot of electricity
→ First Generation computer relied on machine language the lowest level programming language understood by computers to perform operations. They could only solve one prblm at a time.
→ First generation computers generate a lot of heat, which was often the cause of malfunction. e.g. The UNIVAC.

Second Generation (Transistors) (1956-1963)

→ Transistor :- Replace vaccum tubes in a second generation of computer.
→ The transistor was far superior to the vacc tube allowing computers to become smaller fast cheaper, more energy efficient, etc.

→ Second generation computer still relied on punched cards for input & print outs for output.

Third Generation (Integrated circuit) (1964 - 1971)

→ The development of integrated circuits was the halmark of the third generation.
→ Transistors were replace by integrated circuits which drastically increase the speed and efficiently of computer.
→ Instead of puched cards and printouts users interacted with third generation computers through keyboards and monitors.
→ Computer for the first tym became accessible to a mass because they were smaller and cheaper than their predecessors.

Fourth Generation (Microprocessor) (1971 - Present) :- of

→ The microprocessor brought the fourth generation of computers as thousands of integrated circuit were built into a single silicon chip.
→ In 1981, IBM introduce is the first com- puter for the home users.
→ In 1984, Apple introduce the Macintosh
→ Microprocessor also moved out to the desktop computers.
→ Fourth generation computer also coverd t development ~~the~~ of Graphical users inter- face (GUIS), mouse and & handheld dev

Q4 Differentiate between Volatile & Non-volatile memories.

Ans 1. Primary Memory / volatile memory:
Volatile memory is a computer storage that only maintains its data while device is powered.
e.g:→ RAM (Random Access Memory) is volatile. when we are working on a document, it is kept in RAM; & if the computer loses power, your work will be lost.

2. Secondary Memory / Non-volatile memory:
Non-volatile memory is a type of computer memory that has the capability to hold saved data even if the power is turned off.
eg:→ (ROM) Read only memory, Hard disk, floppy disk etc.

Qs Distinguish among system software, application software & open source software on the basis of their functions features.

As * System Software:-
→ It is a type of software that is designed to run a computers hardware & application programmes.
→ Software like operating system, compilers, editors and drivers etc come under this catagory.
→ A computer cannot function without the presence of system software.

If we think of the computer system as a layered model, the system software is the interface b/w the hardware and users 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.
e.g :- Word processor, accounting application, a web browsers etc.

* Open Source Software :-
It is a type of computer software in which source code is released under a license in which the copyright holder grains users right to study, change & distribute the software to anyone for any purpose.

6 (a) Create a file M.S word to insert a paragraph about yourself & save it with file name "yourself". Describe all steps involved in it.
(b) Write steps regarding following.

→ To change the font style:
- The basic step to change the font of a text in a document are given below:
- Select the text you want to modify.
- Select the home tab & locate the font group

highlight word. bottom word is new in highlight word.

3. Drag the mouse over the text you want to highlight.
4. Click the Text highlight button again to return the mouse to normal operation.

Q7 Create a file in M-S word for the following document as save it with file name M-S word. Describe all step involved in it.

Ans M-S word

M-S word is a widely used commerical word processor develop. M-S word is application softw- are which is capable of -

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

Click the file tab to accen backstage view, choose export then select change file type Select a file type, then click save as. The save as a dialog box will appear.

Select the location whose you want to export the document enter a file name (M-S word) then click save.

Q8 Create a file in M-S word for the following document & solve it with file name equation. Describe all steps involved in it.

Equation

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

Ans 1. Open word and select file > new
2. On the search for online templates box, enter a search word like, letters, , resume, or invoice or select a catagory under the search box like Grainum. Personal or education click the template to see a preview.
Select create.
Select a file type then click save as.

The table and paragraph marks will produce a table with 3 coloumbs & 5 + 2 rows

Enter a file name (equation) & click save.

Q9 Create a file in M-S word that convert existing highlight text to table as shown below and save it as 'text-to-table'. Describe all steps involved in it.
Select the text you want convert.
Select the insert tab.
click on table command. A dialog box appear
click on convert text to table, a new dialog box appears. have set number of colums.

click on Ok Finally selected text convert in a table.

Ans To convert text into a table or a table to text, stand by clicking the show/hide paragraph mode on the home tab so you can see how text is seperated in your document.

Convert text into a table.

1. Insert seperator character - such as comman or tabs to indicate where divided to text into table columns.
2. Use paragraph marks to indicate where to divide want to being a new table rows. In this examples the tabs & paragraph marks will produce a table with columns & 5 + 2 rows.
3. Select the text that you want to convert and click Insert - table → convert text to table.
4. In the convert text to table box, choose the option you want.
   Under table size make sure numbers match the numbers of columns and rows you want. Under into fit behaviour, choose you want table to look. Word automatically choo a width for the table columns if you wa a different columns width, choose one of these options
5. Click Ok the text convert to a table show look something like this.

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

Ans 1. Open a blank word document
2. On the top ribbon press insert.
3. Click on the table button.
4. Either use the alignement to select the numbers of columns and rows you need, of click insert take a dialog box will appear, where you can specify.
5. The table will now appear on the page alter o it as message. Standard features like, Bold, italic, Underline are still available. These items may be helpful for creating headings or calling or certain items in the tables.

Q11 Create a following work-sheet in MS-word and save it with name 'book1'.

Ans 1. Right click the worsheet more table.
2. Click select move or copy.
3. Click on the move selected sheets to book drop-down menu. Select (new book).
4. Click Ok your new worksheet opens with your moved worksheets.
5. Click files > save in your new workbook.

Q12 Calculate the following things of a rang (C2:C11) of data in the worksheet crea 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)

Ans
- On a worksheet tab the first empty of cells after a range of cells that has numbers or tap & drag to select the range of cells you want to calculate (C2:C11) Tab autosume. Tap sum.
- Click a cell below the column or to the right side of the row of the nos. for which you want to find the average. On the home tab, click the arrow to next autosum > average, & then press enter.
- Select a cell below or to right of the numbers for which you want to find the smallest number.
- On the home tab in the editing group click the arrow next to autosums, click min (calculate the smallest) & (cal Max (calculate the largest) & then press enter

Q13(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

Select the column that you want to change on the home tab, in the cells groups, click format
On the cell size, click column width.
On the column width box type the value that you want.
Click Ok.

1. Select the row that you want to change
2. On the home tab, in the cells group click format.
3. On the cell size, click row right height.
4. On the row height box, type the value that you want & then click ok.

Select the cells, rows or columns that you want to other
Right click and then select the appropriate delete option. for example, delete cell, shift up delete cell & shift left delete rows or delete columns.

Q13 (b) Describe following terms in the workshit
⇒ Absolute refrence and relative refrence in formu
→ Cell adres.

Ans Relative and absolute refrence behaive differen wired copy copied and filled to other cells Relative references change when a formula is copied to r-cells.

- Absolute references on the other hand remains constant no matter where they are copied
- A cell refrences or cell adress is a combinat

of a column letter & a row number that identifies a cell on a worksheet.

Q14 (a) What tools are available to customize our Power-Point Presentation.

Ans 1. Pivotviewer 3. SmartArt 5. Visual Bee Powerpoint Add in
2. Autodesk 3DS Max 4. Wordle 6. Animations & transitions
7. Cacoo
8. Perspector is a tool used by designers to create 3D images on PowerPoint presentations.

Q14 (b) Write the steps for the following actions for creation of power point presentation.

→ Open a blank presentation
→ Save the presentation as Lab 1.Pptx
Ans → Add a title to the first slide: The name of your college
→ Type your first name and the last name in the subtitle section.
→ Add a new slide which has a Title and content

Ans → Select the file tab to go to the back-stage view.
→ Select new on the left side of the window then click blank presentation.
→ Select the slide whose layout you will change so, that it can have a title.

1. Ans On Microsoft powerpoint 2007, select powerpoint option. The option you can customize are grouped into catagories, that you can see in the left pane.

The default category is general. Fill your name and inital under persentage your copy of MS-office.

2. In Powerpoint for windows, you can add closed captions or subtitles to videos and audio fill in your presentation accessible to a large avidence, including people with heavy disabilities and those who speaks languages other then the one in your video.

- Select the slide whose layout you will change so, that it can have a title.
- Click home > layout
- Select tittle slide for a stand tille for page or select title and content for a slide that contains a title and a full slide text box.
- Select the click to add title text page.

Q15 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 & bullet list.
→ Inserting Excel sheet
→ Clip art and text
→ Slide show effects

→ Go to the slide that you want to add list formatting to.

2. On the slide, select the lines of text in a text placeholder or table that you want to add bullets or numbering to
3. On the home tab, in the Paragraph group, click Bullets or Numbering.
4. On the left side of the powerpoint window, click the slide thumbnail that you want to add bulleted or numbered text to.

→ 1. On Powerpoint, on the Insert tab, click or tap object.
2. On the Insert box, select create from file.
3. Click or tap Browse and in the Browse box find the Excel workbook with the data you want to Insert and link to.
4. Before you choose close the Insert box, select link, and click OK.

→ 1. Click the slide where you want to insert clip art file.
2. On the Insert tab, in the Images group, click Online pictures.
3. On the Insert Picture dialog box, enter your search term terms in the Bing.com & press e
4. Locate the clip art you want to Insert in your slide and double-click on it or click t item and select Insert.

1. Select the object or text on the slide that you want to animate.

then the slide

2. On the Animations tab of the ribbons, open the gallery of animations, and select the one you want.
3. On the Animations tab, open the effect options list to select from among the available options.

Q.6 what is the difference between Machine language and High level language?

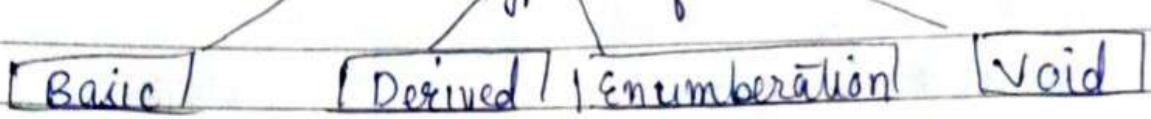
Ans

low level language	High level language
• It is also known as machine language.	• It can be easily interpreted as well as compiled in comparison to low level language.
• It can be understood easily by the machine.	• It can be considered as a programmer-friendly language.
• It is considered as a machine friendly language.	• It is easy to understand
• It is difficult to debug.	• It is easy to debug.
• Its maintaince is also complex.	• It is simple in terms of maintainence.
• It is not portable.	• It can be run on differ platforms.
• It depends upon the machine; hence it can't be run on different platforms.	• It can be ported fro one location to another.
• It requires an assembler that would translate instructions.	• It is less memory efficie i.e. it consumes more me in comparison to low le languages.
	• It is used widely i today's time.

Q17 Discuss about different Data types of C programming language.

Ans Data type of C

A data of C type specifies the type of data that a variable can store. Such as, integer, floating, character etc.



There are the following data types in C language.

Types	Data types
Basic data type	int, char, float
Derived Data type	double array, pointer structure, union
Enumeration Data types	enum
Void data type	Void

Q18 Find the output of the following expressions.

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

Sol
X = 20 ÷ 5 x 2 + 30 - 5
X = 4 x 2 + 30 - 5
X = 8 + 30 - 5
X = 38 - 5
X = 33

b) Y = 30 - (40/10+6) + 10

Sol
Y = 30 - (40 ÷ 10+6) + 10
Y = 30 - (4 + 6) + 10
Y = 30 - 10 + 10
Y = 30

c) Z = 40*2/10 - 2 + 10

Sol
Z = 40 x 2 ÷ 10 - 2 + 10
Z = 40 x 5 - 2 + 10
Z = 200 - 2 + 10
Z = 210 - 2
Z = 208

Q19 Describe the syntax of the following program segments

a) **if - else statement**

Use if to specify a block of code to be executed, if a specified condition is true. Use else to specify a block of code to be executed, if the same condition is false. Use else is to specify a new condition to test, if the first

condition is false.

(b) for loop

The initialization statement describes the starting point of the loop, where the loop variable is initialized with a starting value. A loop variable or counter is simply a variable that controls the flow of the loop. ~~the test test expression is the~~

(c) while loop

The syntax of a while loop in C programming language is - while (condition) (statement) (s). Here statement (s) may be a single statement or a block of statements.

(d) do - while loop

do - (statements) while (expression). As we saw in a while loop, the body is executed if and only if the condition is true. In some cases we have to execute a body of the loop at least once even if the condition is false.

Q2 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 GHAZIBAD
IMS GhaziBad

(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);
}
```

Output
largest no. is "6