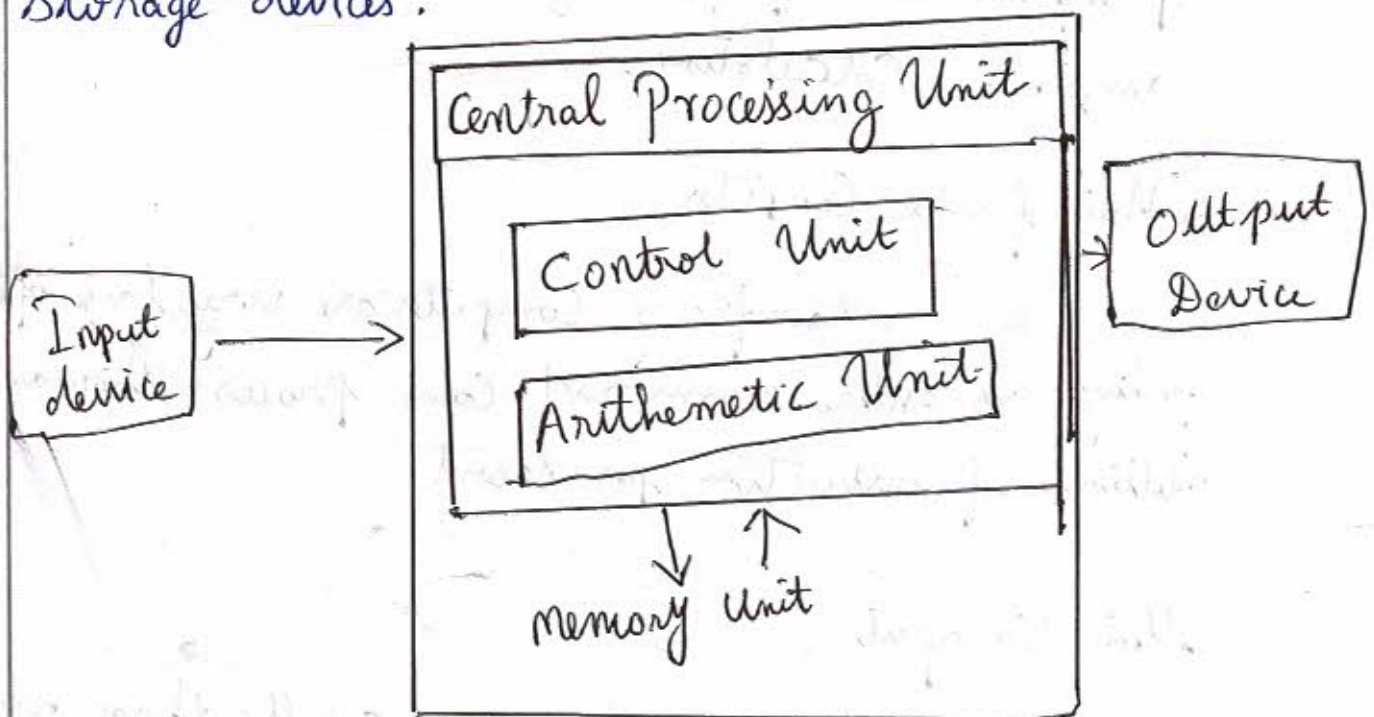


CA-101: Fundamentals of IT & Programming

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

Ans: The four fundamental parts of a Computer are input device, processing devices, output devices and storage devices.



Ques 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 Computers
- * Mini Computers
- * Micro Computers

Super Computers:

Super Computers are the most powerful and physically the largest by size. These are systems designed to process huge amounts of data and the fastest super computers can perform over one trillion calculations in a second. Super computers have thousands of processors. Because of their extraordinary speed, accuracy and processing power super computers are well suited for solving highly complex problems and performing tasks that demand huge amounts of calculations.

Main frame Computer:

Mainframe computers are very large often filling an entire room and can process thousands of millions of instructions per second.

Mini Computers:

Mini computers are smaller than mainframes and larger than micro computers, serving as servers for departmental tasks or smaller organizations.

Micro Computers:

These are the most common type, ranging from laptops and desktops to smartphones used for personal and business tasks.

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

In computer history, generation means a period of significant technological advancement categorized by the core hardware and software components used.

1. First Generation (1940-1950s) - Vacuum tubes
2. Second Generation (1950-1960s) - Transistors
3. Third Generation (1960-1970s) - Integrated circuits
4. Fourth Generation (1970-present) - Micro Processors

Q4. Different between Volatile & Non-Volatile memories?

Volatile memory is temporary and loses its data once the power is turned off, whereas Non-Volatile memory is permanent and retains its data even after power loss. Volatile memory is faster, but has less storage capacity compared to Non-Volatile memory.

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

System Software	Application Software	Open Source Software
Software that manages and controls hardware operations	Software designed for end users to perform specific tasks	Software with source code available for modification and redistribution
Helps in running and managing the computer system	Enable users to perform tasks like writing, designing or browsing	Allows users to study, modify and distribute the software freely
Operating Systems, Utility Software, Device Drivers	M.S. Office, Photoshop, Web Browsers, Games	Linux O.S. Apache Web Server, Libre office, GIMP
Work in the background interacting with hardware	Requires direct maintenance from users	Can be either system or application software but with modifiable code.
Cannot be easily modified by users	Typically Proprietary and cannot be modified	Freely modifiable by users and developers
Usually proprietary: Controlled by developers or companies	Mostly Commercial, requiring Purchase or Subscription.	Free or open-source licenses like GPL, MIT or Apache

Q. 6a)

Ans a) Steps to Create a file in M.S. Word and Insert a Paragraph about Yourself

1. Open M.S. Word:

- * Click on the Start Menu.

- * Type M.S. Word and Press Enter to open application

2. Create a new Document:-

- * Click on Blank Document to open New file

3. Type the Paragraph:

- * Click inside the document and type a paragraph about "yourself"

4. Save the file

- * Click on file in the top-left corner

- * Select Save As and choose a location

- * Enter the filename "yourself" in the File Name box

b) Steps for Formatting in Ms Word

To Change the font Style:

1. Select the text you want to change

2. Go to the Home Tab

3. Click on the Font dropdown menu in the Font Group

4. Choose the desired font style

To Change the Font Size:

1. Select the text.

2. Go to the Home tab

3. Click on the Font Size dropdown

4. Choose a size or type a custom size.

To Change the Font Colour:

1. Select the Text.

2. Go to the Home Tab

3. Click on the Font ^{Colour} ~~Size~~ dropdown

4. Choose a size the desired colour from the box

To Highlight :-

1. Find the line need to get Ims,'s address;:-

2. Select the text

3. Click on Highlight button

4. Choose Yellow from the colour options

Q7.

Ans:

1. Create a New file:

1. Open Microsoft word
2. Click on Blank Document to Create a New file

2. Edit the Document

1. Type the Content you want in the document
2. Format the text
3. Insert Tables, Bullet points etc. if needed

3. Save the Document

1. Click on file
2. Save as
3. Choose a location
4. Enter the file Name "ms-word" in the fileName
5. Click Save

4. Print the Document

1. Click on the file
2. Select Print
3. Choose the Correct Printer
4. Adjust settings like Page Range and Copies
5. Click Print

Q.8 Create a file in Ms. Word for the following document save it
Ans the File name 'Equations'.

1. Open the MS. Word application
2. Type 'Equations'
3. In Font Section, select U to underline the above text
4. Click Enter
5. Type x and 2, Select 2, and click Subscript icon and Enter + type y and 5 click Subscript icon, and Enter + type $= 30$
6. Type "2 and 3, + 0, 4, = 50, Select 3, 4 separately and click Super Script
7. Type ' $A^2 + B^8 = x^2 + y^8$ ', Select 2, 2 and click Sub script and select 8, 8 click Super Script.

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 step involved in it;

~~Select~~

1. Open ~~At~~ MS. Word
2. ~~B~~ click on Select the highlighted text

- 2
3. Go to the Insert tab on the toolbar
 4. Click Table → Convert Text to table
 5. In the popup window:
 - * Choose the number of columns and rows
 - * Select how the text is separated
 - * Click ok
 6. Format the table, width, height, alignment.
 7. Click on file → Save as.

Q. 10.

- Ans:
1. Open MS Word
 2. Click on blank document
 3. Place your cursor where you want the table to appear
 4. Click on the Insert tab in the toolbar
 5. Click on Table
 6. Choose one of the following methods
 - * ~~Drag to select~~ Insert Table: Click Insert Table and manually enter the number of rows and columns.
 7. Click on file → Save as.

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

Created :

Q.12 :

Ans :

★ 654

★ 65.4

★ 90

★ 40

Click File. - Save.

Enter - book-1

Click - Save

Q.13.

1. Modify Column Width in a Work Sheet

You can adjust the Column width to fit data properly

Methods: Using the Mouse (Drag to Resize)

1. Open your Excel worksheet

2. Place your cursor on the right boundary of the Column header

3. Drag left or right to increase or decrease the width

To delete Multiple Rows and Columns

1. Select Multiple rows or Columns by clicking and dragging
2. Right-Click and choose delete

Q. 14 a)

Ans.

1. Themes and Templates
 - ★ Design Tab
 - ★ Use Variants to modify
 - ★ Create a custom template for consistent branding
2. ~~Slide~~ Slide Layout
 - ★ Home layout
 - ★ Slide master
3. Fonts and Text Formatting
 - ★ Change Font style, Size, Color
 - ★ Use Text Effects
 - ★ Word art
4. Smart Art & Shapes
5. Animations & Transitions.
6. Multimedia Elements
7. Chart and Tables
8. Slide Show Customization

Method 2: Using the Format options

1. Select the columns you want to resize.
2. ~~Go to~~ Go to the Home tab → Click on Format
3. Select Column Width and Enter a Specific Number
4. Click ok.

Modify Row Height in a Work Sheet

1. Open Excel Sheet
2. Place your cursor on the bottom boundary of the Row Number
3. Drag up or down to increase or decrease the row height

Delete Rows and Columns

To Delete a Columns:-

1. Select columns by clicking on its header
2. Right click and choose Delete

To Delete a Row:

1. Select the row by clicking on its number
2. Right click and choose Delete

9. Hyperlink and Actions Buttons
10. Review and Collaboration Tools
11. Saving and Exporting options.

14b) Steps to Create a Power point Presentation

1. Open blank Presentation → open Power Point
Click Blank Presentation.
2. Save as "Lab. pptx" → click file → Save as → Enter lab
→ click Save.
3. Add Title → Click the Title box, type your
College Name
4. Add Subtitle → Click the Subtitle box, type
your first and last name
5. Add New Slide → click Home → New Slide
→ select Title and Content layout.

15. Steps to Create a Power Point Demonstrating Skills

1. Title Slide & Bullet list → add a Title Slide, type
"my Power Point Skills", and Create a bullet list on
the next slide
2. Insert Excel sheets → click Insert → Table.
→ Excel Spreadsheet Enter data
3. Add clip Art & Text → click Insert → Pictures
then add a Text Box

4. Apply Slide Show Effects → Use Transitions
For Slides and Animation for text / images

5. Save & Run → Click Save as → Name it "PowerPoint
Skills.pptx" then Run the Slide show.

16. Difference between Machine Language and High level
Language;

Machine Language	High level Language
Low level language using binary (0s and 1s) Hard to read and write Very fast Very Fast Hardware - dependent Binary Codes	User Friendly language with English-like Syntax Easy to understand and use Slower Portable across different Systems C, Phytl Python, Java etc.

Q17 Data Types in C Programming

- Ans
1. Basic Data Type
 2. Derived Data Type
 3. Enumeration (Enum)
 4. Void^{Def} Type

Q18 Output of the Expressions

Ans

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

$$x = 33$$

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

$$y = 30$$

c) $z = 40 \times 2/6 - 2 + 6$

$$z = 16$$

Q19 Syntax of C. Statements

Ans

a) if-else Statement

Used for decision Making

if (condition) {

} else {

}

b) for loop

Used for looping with initialization, condition and increment/decrement

```
for (initialization; condition; update) {  
    }  
}
```

c) while loop

Executes as long as the condition is true.

```
while (condition) {  
    }  
}
```

d) do-while loop

Executes at least once then repeats while the condition is true

```
do {
```

```
} while (condition);
```


Q20

Ans Output of the Programs Segments :

a) for loop Programs

ImS Ghaziabad

b) while loop Program

ImS Ghaziabad

ImS Ghaziabad

c) if else Program

Largest Number is 100