

# ASSIGNMENT ON FUNDAMENTALS OF IT & PROGRAMMING CCA-101

## 1. Input Unit:

Input is the data or set of instructions given to a computer. The input unit receives the data or instruction through input devices and sends it to the main memory of the computer for processing. Some common input devices are keyboard, mouse, light pen, OCR, BEK, MICR, trackball, scanner, microphone, digital camera, webcam and joystick.

## 2. Central Processing Unit:

The Central Processing Unit (CPU) is the most important component of a computer. It is used for carrying out calculations and processing data. As it is responsible for execution of instructions, arithmetic, and logical calculations, storing and controlling the input and output devices, it is rightly called the brain of the computer.

The CPU consists of three units. They are:

1. Arithmetic and Logic Unit
2. Control Unit
3. Memory Unit

2

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

A computer system consists of both hardware and software components that perform tasks based on four components. They are:

1. Input unit
2. Processing unit
3. Memory unit
4. Output unit

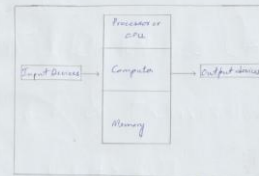


Fig: Functional components of a computer

1

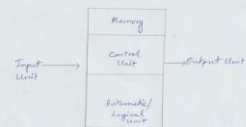
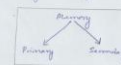


Fig: CPU

## 3. Memory Unit:

The memory unit stores programs and data received through the input unit. It is an area where all the instructions are stored. It is classified into following two types.

1. Primary Memory
2. Secondary Memory



3

Primary Memory: It is the main memory of a computer. It is the area in a computer system wherein the data is stored for quick and direct access by computer's CPU. It is of two types:

- a. Random Access Memory (RAM)
- b. Read Only Memory (ROM)

Secondary Memory: It is the cheapest form of computer memory. In comparison to the main memory, it is very slow. It is stored in secondary storage devices like hard disk, CD-ROM, DVD and floppy disk. It is permanent in nature.

#### 4. Output Unit:

The output unit of a computer system consists of different output devices attached to the computer. It yields the information that the computer processes based on your input. Some of the common output devices are: Monitor, printer, Plotter, Speaker.

4

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

Ans

Based on size and capacity, computers are classified as follows:

- i) Super Computers
- ii) Mainframe Computers
- iii) Mini Computers
- iv) Micro Computers

#### Super Computers:

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

Examples of Super Computers are: JAGUAR, ROADRUNNER, etc.

5

#### Mainframe Computers:

Mainframe Computers are very large, often filling an entire room and can process thousands of millions of instructions per second. In a mainframe environment, users connect to the mainframe through the many terminals wired to the mainframe.

Mainframes are capable of supporting hundreds to thousands of users simultaneously. Some of the functions performed by a mainframe include: flight scheduling, reservations, and ticketing for an airline, etc.

Example: IBM mainframes Z13, IBM System z9 mainframe.

#### Mini Computers:

Mini Computers are much smaller than mainframes. These computers are also less expensive. Sometimes referred to as Midrange Server or Midrange Computer. They are typically larger, more powerful and more expensive than desktop computers.

6

Midrange computers are usually used by small and medium-sized businesses as their servers. Users connect to the server through a network by using desktop computers.

Example: Apple iPod, CDC 160A.

#### Micro Computers:

Microcomputers are the most frequently used type of computer. It is also known as Personal Computer (PC). A microcomputer is a complete computer on a small scale, designed for use by one person at a time. Common microcomputers include laptops and desktops. Beyond standard PCs, microcomputers also include some calculators, mobile phones, notebooks, workstations and embedded systems. Smaller than a mainframe or mini-computer, a micro computer uses a single integrated semiconductor chip for its central processing unit (CPU). They also contain memory in the form of read-only memory (ROM) and random access memory (RAM).

7

input/output (I/O) ports, and a bus or system of interconnecting wires, all housed in a single unit usually referred to as a motherboard.

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

Ans Computer generation means the evolution or improvements of computers from the previous generation to the another in the terms of technology, internal organization of computers and programming languages.

There are five Generations of computers:

1. First Generation (1946-1955)
2. Second Generation (1956-1965)
3. Third Generation (1966-1975)
4. Fourth Generation (1976-1985)
5. Fifth Generation (1986 onwards)

8

#### First Generation (1946-1955):

The first computer systems used vacuum tubes for circuitry and magnetic drums for memory. These computers were very expensive to operate. Computers of this generation consumed a lot of electricity, they relied on machine language, the lowest-level programming language understood by computers to perform operations. They could solve only one problem at a time. It should take operators days or even weeks to set up a new problem.

Input was based on punched cards and paper-tape, and output was displayed on print-outs. First computers generated a lot of heat which was often the cause of malfunctions.

Examples are: The UNIVAC (Universal Automatic Computer), ENIAC (Electronic Numerical Integrator and Computer).

9

#### Second Generation (1956-1965):

In this generation, transistors replaced vacuum tubes. The transistor was far superior to the vacuum tubes, allowing computers to become smaller, faster, cheaper, more energy-efficient and more reliable than their first generation predecessors. Second generation computers still relied on punched cards for input and printouts for output. Second-generation computers moved from binary machine language to symbolic, or assembly language.

#### Third Generation (1966-1975):

In this generation, transistors were replaced by Integrated Circuits, which drastically increased the speed and efficiency of computers. Instead of punched cards and printouts, users interacted with the third generation computers through keyboards and monitors. For the first time,

10

Computers became accessible to a mass audience because they were smaller and cheaper than their predecessors.

#### Fourth Generation (1976-1985)

The microprocessors brought the fourth generation of computers as thousands of integrated circuits were built into a single silicon chip. What in the first generation filled an entire room could now fit on the palm of hand.

In 1981, IBM introduced its first computer for the home user. In 1974, Apple introduced the Macintosh. Microprocessors also moved out to the desktop computers. The fourth generation computers also caused the development of Graphical User Interface (GUIs), mouse and handheld devices.

#### Fifth Generation (1986 onwards)

Fifth generation computing devices, based on artificial intelligence, are still in development. They

11

are some applications, such as voice recognition, that are being used today. The use of parallel processing and super conductors is helping to make artificial intelligence a reality. Quantum computation and nanotechnology will radically change the face of computers in years to come.

The goal of fifth-generation computing is to develop devices that respond to natural language input and are capable of learning and self-organization.

Q4 Differentiate between Volatile & Non-Volatile memories.

Ans Volatile and Non-Volatile Memory are both types of computer memory. 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, whereas Non-Volatile Memory

12

is static and remains in the computer system even if computer is switched off. ROM (Read Only Memory) and HDD are non-volatile memory.

The following are the important differences between Volatile and Non-Volatile Memory.

| Volatile Memory                                        | Non-Volatile Memory                                                                               |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1. Data is present till power supply is present.       | 1. Data remains even after power supply is not present.                                           |
| 2. Volatile memory data is not permanent.              | 2. Non-Volatile Memory data is permanent.                                                         |
| 3. Volatile Memory is faster than non-volatile memory. | 3. Non-Volatile Memory access is slower.                                                          |
| 4. RAM is an example of Volatile Memory.               | 4. ROM is an example of non-volatile memory.                                                      |
| 5. Data transfer is easy in Volatile Memory.           | 5. Data transfer is difficult in Non-Volatile Memory.                                             |
| 6. CPU can access data stored in Volatile Memory.      | 6. Data to be copied from Non-Volatile Memory to Volatile Memory so that CPU can access its data. |

13

- |                                                                         |                                                                 |
|-------------------------------------------------------------------------|-----------------------------------------------------------------|
| 7. Volatile Memory has storage capacity.                                | 7. Non-Volatile memory like HDD has very high storage capacity. |
| 8. Volatile Memory such as RAM has high impact on system's performance. | 8. Non-Volatile Memory has no impact on system's performance.   |
| 9. Volatile memory is costly per unit size.                             | 9. Non-Volatile memory is cheap per unit size.                  |

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

Ans As we know that software is a set of instructions or programs instructing a computer to do specific tasks. Software is basically a generic term used to describe computer programs. Scripts, applications, programs and a set of instructions are all terms often used to describe software.

#### System Software:

System software is the type of software that is designed to run a computer's hardware

14

and application programs. System software are developed in low level language which is more compatible with the system hardware in order to interact with it. It is used for operating computer hardware. They are installed on the computer when operating system is installed. They are specific system hardware.

System software can run independently. It provides platform for running application software. Some examples are compiler, assembler, debugger, editors, etc.

#### Application Software

It is a type of software which runs as per user request. It runs on the platform which is provided by system software. High level language is used for their development as they are developed for some specific purpose software. It is used by user to perform specific task.

They are installed according to user's requirements. Application software user can interact with it as user interface is available in this case. They cannot run independently without the presence of

15

of open source software. Examples are word processors, web browser, media player, 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 grants users the rights to use, study, change, and distribute the software to anyone and for any purpose. Open source software may be developed in a collaborative public manner. Open source software is a prominent example of open collaboration.

A screenshot of Linux Mint running the Xfce desktop environment, Mozilla Firefox browsing Wikipedia powered by Media Wiki, a calculator program, the built-in calendar, VIM, GIMP and the VLC Media Player, all of which are open source software.

- Q6(c) 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.

Ans The steps to insert a paragraph in MS-Word are:

1. Click the Insert tab
2. The "Symbol" button in the Symbols group and then "More Symbols..."
3. Click on the "Special Characters" tab, select "Paragraphs" under character, click Insert and then Done.

- Q6(b) Write steps regarding following:

- 1) To change the font style
- 2) To change the font size
- 3) To change the font colour
- 4) To highlight (in yellow) the line that reads "need to get IMC's address"

Ans (i) The steps to change font style are:

- a) Select the text you want to modify
- b) Left-click the drop-down menu next to the font style box on the Home tab. The font style drop-down menu appears.
- c) Move the cursor over the various font styles. A live preview of the font will appear in the document.
- d) Left-click the font style you want to use. The font style will change in the document.

ii) The steps to change font size are:

- a) Select the text you want to modify
- b) Left-click the drop-down menu next to the font size box on the Home tab. The font size drop-down menu appears.

- c) Move the cursor over the various font sizes. A live preview of the font size will appear in the document.
- d) Left-click the font size you want to use. The font size will change in the document.

iii) The steps to change the font colour are:

- a) Select the text you want to modify
- b) Left-click the drop-down arrow next to the font color on the Home tab. The font color menu appears.
- c) Move the cursor over the various font colors. A live preview of the color will appear in the document.
- d) Left-click the font color you want to use. The font color will change in the document.

iv) The steps to highlight the line in yellow are:

- a) Click the Home Tab
- b) In the Font group, click the Text Highlight Button
- c) Drag the mouse over the text you want to highlight
- d) Click the Text Highlight Button again to return the mouse to normal operation.

- 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.

Ans 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.

Ans The steps involved in creating and saving a file name in MS Word are:-

1. Click the MS Office Button or File Tab
2. Select New. The new document dialog box appears
3. Select Blank Document.
4. A new blank document appears in the Word window
5. Insert text in the new document
6. Select Save MS-Word Document from the MS Office Button/File Tab
7. Select the location where you want to

20

save it using the drop-down menu

8. Click the Save button.

- Q8. Create a file in MS-Word for the following document and save it with file name 'equations'. Describe all steps involved in it.

Ans Equations

$$X_2 + Y_2 = 30$$

$$Z^2 + Q^2 = 50$$

$$A_2 + B^2 = X_2 + Y_2$$

Ans The steps to create and save a file name 'equations' are as follows:-

1. Click the MS Office Button or File Tab
2. Select New. The new document dialog box appears
3. Select Blank Document in which a new blank document appears in the Word window
4. Insert text in the new blank document
5. Select Save MS-Word Document from the MS Office button or File Tab

21

6. Select the location where you want to save it using drop down menu
7. Click the Save button.

- 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

|                                              |                                                          |
|----------------------------------------------|----------------------------------------------------------|
| 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    |

22

Ans The steps involved to convert existing highlight text to table are as follows:-

1. Select the text you want to convert
2. Select the Insert Tab
3. Click on Table command. A dialog box appears.
4. Click on Convert Text to Table, a new dialog box appears
5. Here set number of columns.
6. Click on OK
7. 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.

Ans The steps to insert a table in the document are as follows:

1. Place the insertion point in the document where we want to insert table
2. Select the Insert Tab.
3. Click the Table Command.

23

4. Drag your mouse over the diagram squares to select the number of columns and rows in the table.
5. Left-click your mouse, and the table appears in the document.
6. Enter text into the table.

Q.11 Create a following worksheet in MS-Excel and save it with name 'book 1'.

- Ans
- To create a worksheet in MS-Excel and to save it with name 'book 1' are as follows:-
1. Left-click the MS office button.
  2. Select New. The New Worksheet dialog box opens, and blank worksheet is highlighted by default.
  3. Click Create. A new blank worksheet appears in the window.
  4. Then, left-click the MS office button.
  5. Select Save or Save As.

24

Q.12 Calculate the following things of a range (C2:C11) of data in the worksheet created in question no. 11.

| Book1 |         |      |       |
|-------|---------|------|-------|
|       | A       | B    | C     |
| 1     | Roll 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   | 50    |
| 8     | 7       | n7   | 72    |
| 9     | 8       | n8   | 44    |
| 10    | 9       | n9   | 88    |
| 11    | 10      | n10  | 55    |
| 12    |         |      |       |
| 13    |         |      |       |

- Ans 1) The sum of the marks using Auto Sum in a range of cells (C2:C11) is 654.
- ii) The average of the marks in a range of cells (C2:C11) is 65.4.
- iii) The highest marks in a range of cells (C2:C11) is 90.
- iv) The minimum marks in a range of cells (C2:C11) is 40.

25

- Q.13) Describe various steps involved in the following
- i) To modify column width of a worksheet
  - ii) To modify the row height of a worksheet
  - iii) To delete rows and columns of a worksheet

- Ans
- i) The steps to modify column width of a worksheet are as follows:-
- a) Position the cursor over the column line in the column heading and a double arrow will appear.
  - b) Left-click the mouse, then drag the cursor to the right to increase the column width or to the left to decrease the column width.
  - c) Release the mouse button.
- ii) The steps to modify the row height of a worksheet are as follows:-
- a) Position the cursor over the row line you want to modify and a double arrow will appear.
  - b) Left-click the mouse, then drag the cursor upward to decrease the row height or downward to increase the row height.
  - c) Release the mouse button.

26

- iii) The steps to delete rows and columns of a worksheet are as follows:-

- a) Select the rows and columns to delete.
- b) Click the Delete command in the Cells group on the Home tab.

- Q.15) Describe following terms in the worksheet.
- i) Absolute reference and relative reference in formula
  - ii) Cell address

- Ans
- i) Absolute references in a formula always refer to the same cell or range in a formula. If a formula is copied to a different location, the absolute reference remains the same. An absolute reference is designed in the formula by the addition of a dollar sign (\$). Examples of absolute references:
- \$A\$2: The column and the row do not change when copied.
- A\$1: The row does not change when copied.
- \$A2: The column does not change when copied.

27

Cell references in formula automatically adjust to new locations when the formula is pasted into different cells. This is called a relative reference.

#### ii) Cell Address

Each rectangle in the worksheet is called a cell. Each cell has a name, or a cell address, based on the column and row where it is located. For example, this cell is C3 because it is where column C and row 3 intersect.

Q14 a) What tools are available to customize our Power Point presentation?

Ans The tools available to customize our Power Point Presentation are as follows:-

1. Home: The Home tab holds the Cut and Paste features, Font and Paragraph Options, and what you need to add and organize slides.
2. Design: On the Design tab, you can add a theme or color scheme, or format the slide background.

3. Insert: Click Insert to add something to a slide. This includes pictures, shapes, charts, links, text boxes, videos and more.

4. Transitions: Set up how the slides change from one to the next on the Transitions tab. Find a gallery of the possible transitions in the Transition to This Slide group. Click More at the side of the gallery to see all of them.

5. Animations: Use the Animations tab to choreograph the movement of things on your slides.

6. Slide Show: On the Slide Show tab, set up the way that we want to show the presentation to others.

7. Review: The Review tab lets to add comments, spellcheck, or compare our presentation with another.

8. View: View allows to look at the presentation in different ways.

9. File: File tab is used such as opening, saving, sharing, exporting, printing and managing the presentation.

10. Tools tabs: Tools tabs are Drawing Tools, Picture Tools, SmartArt Tools, Chart Tools, Table Tools and Video Tools.

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

- i) Open a Blank presentation
- ii) Save the presentation as Lab 3.pptx
- iii) Add a title to the first slide: the name of your college
- iv) Type your first name and last name in the SubTitle section.
- v) Add a new slide which has a Title and content

Ans i) The steps to open a blank presentation are:-

1. Select Office Button - New. The new Presentation window appears.
2. In the left side of the new presentation window, click installed templates.
3. Click a Template to select it.
4. Click create

ii) The steps to save the presentation as Lab 3.pptx are:

1. Locate and select the Save Command on the Quick Access Toolbar.
2. If the file is saved for the first time, the Save As pane will appear in the backstage view.
3. Choose the place to save the file and give a file name too.
4. The Save As dialog box will appear.

iii) The steps to add a title to the first slide: the name of the college are:-

1. Click on the Title, Sub Title, or Text placeholder
2. Type the text (the name of the college)
3. If necessary, press Enter to move to a new line.

iv) The steps to type the first name and last name in the SubTitle section are:-

1. Click on the Sub-Title section
2. Type the text (the first name and last name).

b) The steps to add a new slide which has a Title and Content are:-

1. On the Home Tab, click the New Slide button in the Slides group. PowerPoint adds a blank slide to the presentation.

OR  
2. Press Ctrl + M. Again, PowerPoint adds a blank slide.

OR  
3. Right click in the Slides or Outline tab on the left and then choose New Slides.

Q.15. 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:

1) Title Slide and Bullet List

2) Inserting Excel Sheet

3) Clip art and text

4) Slide Show effects

Ans. The steps for creation of a set of PowerPoint slides are:-

Step 1: Open Microsoft PowerPoint

Step 2: Go to the File at the top of the screen and click NEW.

32

Step 3: In the 'New Presentation' dialog box, click on 'From Design Template'.

Step 4: Slide Design

Select a design template by clicking on the template that you like. Different colors for the template may be chosen by clicking on 'Color Schemes'.

Step 5: Slide Layout

Slide layout can be changed by going to the top of the screen and clicking on Format -> Slide Layout.

Step 6: Adding Text

Enter the text by clicking and then typing in the box titled 'Click to Add Text' or 'Click to Add Title'.

Step 7: Adding Pictures

Pictures are added by clicking on the box that says 'Click to add content' inside the box. A new window will open, allowing to browse from picture on the computer or a CD. Once you find picture, click on it and then click 'Insert'.

33

Step 8: Resizing Pictures

By clicking on the picture, the size of a picture is changed.

Step 9:

Lastly, save the presentation.

Q.16. What is the difference between Machine language and High level language?

Ans. The difference between Machine language and High level language are as follows:

Machine Language:

Machine language, or machine code, 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 0s. A program instruction in machine language may look something like this:

100101011001010011

High level language:

A high-level language is a programming

34

that uses English and mathematical symbols, like +, -, % and many others, in its instructions. When using the term 'programming languages', 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.

Q.17. Discuss about different data types of C programming language.

Ans. The following are the different data types of C programming language:

1. char: The most basic data type in C. It stores a single character and requires a single byte of memory in almost all computers.
2. int: As the name suggests, an int variable is used to store an integer.
3. float: It is used to store decimal numbers (numbers with floating point value) with single precision.

35

4. double: It is used to store decimal numbers (numbers with floating point value) with double precision.

Different data types also have different ranges upto which they can store numbers. These ranges may vary from compiler to compiler. Below is list of ranges along with the memory requirement and format specifiers in 32 bit gcc compiler.

| Data Type          | Memory (bytes) | Range                           |
|--------------------|----------------|---------------------------------|
| short int          | 2              | -32,768 to 32,767               |
| unsigned short int | 2              | 0 to 65,535                     |
| unsigned int       | 4              | 0 to 4,294,967,295              |
| int                | 4              | -2,147,483,648 to 2,147,483,647 |
| long int           | 4              | -2,147,483,648 to 2,147,483,647 |
| unsigned long int  | 4              | 0 to 4,294,967,295              |
| long long int      | 8              | -(2^63) to (2^63)-1             |

36

|                        |    |                                 |
|------------------------|----|---------------------------------|
| unsigned long long int | 8  | 0 to 18,446,744,073,709,551,615 |
| signed char            | 1  | -128 to 127                     |
| unsigned char          | 1  | 0 to 255                        |
| float                  | 4  |                                 |
| double                 | 8  |                                 |
| long double            | 16 |                                 |

C language supports two different types of data types:

1. Primary data types: These are fundamental data types in C namely integer (int), floating point (float), character (char) and void.

2. Derived data types: They are nothing but primary data types but a little twisted or grouped together like array, structure, union and pointer.

37

8.18 Find the output of the following expressions

a)  $x = 20/5 * 2 + 30 - 5$  b)  $y = 30 - (40/10 + 6) + 10$

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

Sol

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

Sol:  $x = 20/5 * 2 + 30 - 5$

$= 4 * 2 + 30 - 5$

$= 8 + 30 - 5$

$= 8 + 25$

$= 33$

∴ The output of x is 33

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

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

$= 30 - (4 + 6) + 10$

$= 30 - 10 + 10$

$= 20 + 10$

$= 30$

∴ The output of y is 30

38

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

Sol:  $z = 40 * 2 / 10 - 2 + 10$

$= 40 * 0.2 - 2 + 10$

$= 8 - 2 + 10$

$= 8 + 10$

$= 18$

∴ The output of z is 18.

8.19 Describe the syntax of the following statements:

a) If-else statement b) for loop c) while loop

d) do-while loop

Sol

a) The syntax of if-else statement is:

if (expression)

{

Block statements;

}

else

{ Block of statements;

}

b) The syntax of for loop is:

39

```

for (expression 1; expression 2; expression 3)
{
    Single Statement
    or
    Block of statements;
}

```

In the above syntax:  
 expression 1 - Initializes variables  
 expression 2 - Conditional expression, as long as this condition is true, loop will keep executing  
 expression 3 - expression 3 is the modifier which may be simple increment of a variable

c) The syntax for while loop is:

```

while (expression)
{
    Single Statement
    or
    Block of statements;
}

```

d) The syntax for do-while loop is:

```

do
{
    Single Statement
    or

```

40

```

Block of statements;
} while (expression);

```

8.20 Find the output of the following segments:

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

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

41

```

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);
}

```

Solution a) The output is -

IMS Chhazibad 1

b) The output is -

IMS Chhazibad 1

c) The output is -

Largest number is 100

42