

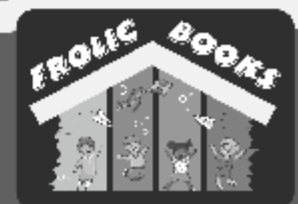
Help Kit : 6-8

Grow With COMPUTER

with *Windows 10*
and
MS-Office 2013

Special Features

- Add notes and comments
- Use the pencil and typing tools
- Copy and paste text
- Lab Activities
- Draw on and mark up pages
- Double-spread visuals



1

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. False 2. True 3. False
4. False 5. True

B. Fill in the blanks :

- Ans.** 1. A **keyboard** has different keys that can be used to performed different functions .
2. Primary memory consists of **RAM** and **ROM** .
3. RAM is also known as **volatile** memory .
4. The output generate by printer is referred as **hard** copy .
5. A **LCD projector** is used to display computer output on a large screen .

C. Choose the right one :

- Ans.** 1. (ii) 2. (i) 3. (iii)
4. (iv) 5. (iii) .

D. Write one word for the following :

1. ALU 2. RAM
3. Cache Memory 4. Impact Printer
5. ALU 6. CU

E. Answer the following:

- Ans.** 1. Keyboard, mouse, scanner, microphone.
2. An Optical Mark Reader (OMR) is a device that reads pencil or pen marks on a specially designed sheet of paper. Such sheets are known as OMR sheets. OMR sheets are used in objective-type examinations and application forms.
3. **RAM** : RAM is the place in a computer where the data and instructions in current use are kept. RAM consists of memory chips. A CPU can read data from it and also write data onto it in a very short time.

RAM is also called volatile memory because it stores data only as long as the power is turned on.

ROM : ROM tells the computer what to do after you switch it on. A CPU can only read data from it. ROM is a permanent memory system, as the data once written on it remain fixed and cannot be changed. ROM is also called a non-volatile memory because it does not lose data even after power is turned off.

4. A memory card or flash memory is a reusable memory chip. These chips are available with different storage capacities from 1 GB to 128 GB .
5. These printers use a print head to strike an ink ribbon to give an impression on a sheet of paper. A dot-matrix printer is an example of an impact printer. A dot-matrix printer uses dots to form an images.

Activity & Project Task

Ans. Do it yourself

2

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. False 2. True 3. True
4. True 5. False

B. Fill in the blanks :

- Ans.** 1. Software may be classified as **System software** and **Application software**.
2. **Operating system** acts an interface between the user and computer hardware.
3. Without system software **computers** would be useless.
4. **Utility program** is a small set of programs that support the operating system.
5. **Translation program** converts high level language instruction to machine code.
6. **A program** is a set of instructions.
7. Programming languages can be classified as **low-**

level languages and **high-level languages**.

C. Choose the right one :

- Ans.** 1. (iv) 2. (ii) 3. (i) 4. (iv)

D. Answer these questions :

- Ans.** 1. (i) High level languages are easy for the programmer. These languages are not machine dependent, i.e., once the program is written it can be used on different computers. While Low level languages are easily understood by the computer but are more difficult for the programmer to understand and write.
(ii) **Assembler**
(i) Written for a particular hardware.
(ii) Translates assembly language to machine language and vice versa.
(iii) Translates the entire program before running.
Compiler
(i) Written for a particular language.

- (ii) Translates high level language to machine language and vice versa.
- (iii) Translate the entire program before running.

Interpreter

- (i) Written for a particular language.
- (ii) Translates the entire program before running.
- (iii) Translates program instruction by instruction until completed.

2. **High Level Language** **Year** **Developed By**

(i) BASIC	1964	J.G. Kemeny and Tom Kurtz
(ii) C	1972	Bell Laboratories
(iii) FORTRAN	1957	IBM, John Backus
(iv) PASCAL	1970	Prof. Niklaus Wirth
(v) C++	1983-85	Bjarne Shoustrup
(vi) JAVA	1995	James Gosling
(vii) VISUAL BASIC	1991	Microsoft
(viii) COBOL	1959	Conference on Data System Languages

3. Operating System controls the overall activity of a computer.

It provides interface between the user and computer hardware. Examples of operating system are Windows 7, Windows 8, UNIX, OS 2.

4. **Multuser** : Multiuser property of operating system allows several users to access the same data at the same time.

Multitasking : Multitasking means ability of the computer to run two or more programs at the same time. For example, sending a file over the internet while listening to music and also making a presentation.

- 5. A language processor is a program that is used to convert high level language to machine language and vice versa. It is a part of System software.
- 6. Utility program is a small set of programs that supports the operating system by providing additional services that the operating system may not provide.

- 7. The tasks done by the operating system are :
 - (i) Operating system provides a way for application software to communicate with the hardware.
 - (ii) It manages the system resources.
 - (iii) It manages the transfer of data to and from various peripherals, such as keyboard, mouse, scanner and printer.
 - (iv) It manages system security and performance.
- 8. Utility program supports the operating system by providing additional services.
- 9. The advantages of a high level language are :
 - (i) Instructions are similar to English which makes high level languages easy to understand.
 - (ii) It is easy to correct errors and test programmes.
 - (iii) Programmes written in high level languages can be used for different types of computer.
- 10. Integrated Package consists of a collection of application packages that share a common set of commands. For example, MS Office. The advantage is that since the commands are common, so it is easier to get used to than using different packages. Moreover, integrated packages are cheaper than separate packages. While a tailor-made software is written as per the requirements of an organization. It is an expensive software.
- 11. (i) **Machine Language** : Machine Language is the language directly understood by the machine. It consists of a series of 1's and 0's. All languages are translated into machine language (machine code) before instructions can be carried out.
 - (ii) **Assembly Language** : Assembly language uses simple instructions, such as ADD, SUB, LDA for addition, subtraction, loading respectively.
- 12. Examples of operating system are Windows 7, Windows 8, UNIX, OS 2.

Activity & Project Task

Ans. Do it yourself



Exercise

Based on NEP 2020

A

Answer the following as 'TRUE' or 'FALSE' :

- Ans. 1. True 2. True 3. False
4. True 5. False

B. **Fill in the blanks :**

- Ans. 1. Presentations are made up of several pages called **slides**.
2. You can enter text in a slide in **Normal view**.
3. **Design Template** is a set of pre-designed formats and colour schemes which can be applied to the background of a presentation.
4. A **colour scheme** consists of eight different coordinated colours used by all the elements of a slide.
5. **Normal view** is a tri-pane view that allows you to see the three aspects of a presentation within one

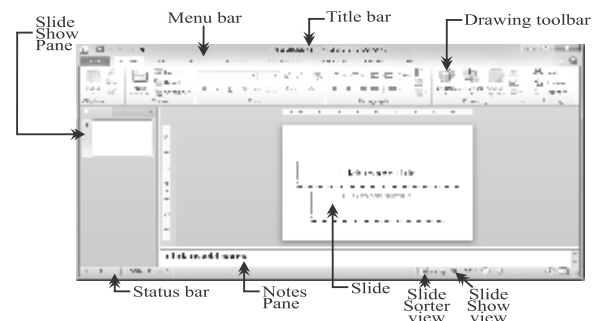
window.

- 6. **Notes page** view is used to enter explanatory notes in a slide.

C. **Choose the right one :**

- Ans. 1. (iv) 2. (ii) 3. (i) 4. (iv)

D. **Label the following MS PowerPoint 2010 window :**



PowerPoint application window

E. Write one word for the following :

- Ans.** 1. Footnote 2. Border 3. Design Template
4. Normal View 5. Slide Sorter View

F. Answer these questions :

- Ans.** 1. PowerPoint is a software used to make presentations. It is used to express one's idea to a large number of people.
2. A PowerPoint presentation is a series or a collection of several pages called slides arranged in an organised way to present information. Following points should be kept in mind while making a presentation :
- Text should be clear and legible.
 - Presentation should not contain a lot of slides.
 - Extra slides should be deleted.
 - Presentation should be attractive.
3. Transition is a special effect added to the slide's initial appearance on screen while. Animation is the special sound or visual effects that can be added to a title, bulleted points or an object such as chart or picture on a slide.
4. The different views in which we can work with the slides of a presentation and their purpose are :
- (i) **Normal View** : Normal View is a tri-pane view that allows us to see three different aspects of our presentation within one window.
- These three panes are** : Slide pane, Outline pane and Notes pane.
- (ii) **Outline View** : In the Outline view, we can

organise the structure of our presentation. In Outline View, only the main text of slides are shown. Graphic objects such as charts, tables, clips, pictures, etc. are not shown.

(iii) **Slide Sorter View** : In Slide Sorter view, all the slides of our presentation are displayed in miniature form. In this view, we can move or copy a slide. In this view, we can add, delete, move and copy all the slides of our presentation.

(iv) **Slide Show View** : The Slide Show runs our presentation from current slide and shows the presentation with one slide at a time in sequence as an automated Slide Show.

(v) **Notes Page View** : Switch to Notes Page view to enter explanatory notes in the Notes Page of a slide. To switch to Notes Page view, use View Notes Page view command.

5. The various components of a slide are :

- **Text** to highlight main ideas.
- **Charts** like Pie chart, Bar chart, Column chart, Line chart, etc. to clarify the relationship in data and information.
- **Multimedia Components** such as pictures, sound, video and animation to enhance the quality of presentation.

Activity & Project Task

Ans. Do it yourself



Advanced features of MS Word 2010

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. True 3. False
4. True 5. False

B. Fill in the blanks :

- Ans.** 1. **Header** is a text that is printed at the top of each page.
2. **Footer** is a text that is printed at the bottom of each page.
3. The **intersection** of a row and a column is called a cell.
4. You can **add** and even **delete** cells of a table.
5. A **table** is made up of horizontal rows and vertical columns.

C. Choose the right one :

- Ans.** 1. (i) 2. (iv) 3. (iii) 4. (iii)

D. Write the difference :

- Ans.** 1. **Header** is a text that is printed at the top of each page while **Footer** is a text that is printed at the bottom of each page.
2. **Footnote** is the text that is given at the end of a page whereas **Endnote** is the text that is given at the end of the document.
3. A **table** is made up of horizontal rows and vertical columns whereas the intersection of a row and a

column is called a **cell**.

4. Combining two or more cells in a table is called **merging cells** whereas **splitting cells** means to split one cell into two.
5. **Insert Table** option is used to create a table by specifying the number of rows and columns in Insert Table dialog box. Whereas **Draw Table** option is used for creating complex tables that may have cells of different heights or carrying a number of columns in the one row.
6. **Row** is a group of cells arranged horizontally in a table whereas a **Column** is a group of cells arranged vertically in a table.

E. Write short notes on the following :

- Ans.** 1. **Header** : Header is a text that is printed at the top of each page.
2. **Footer** : Footer is a text that is printed at the bottom of each page.
3. **Table** : A table is made up of horizontal rows and vertical columns.
4. **Cell** : The intersection of a row and a column is called a cell.
5. **Footnotes** : Footnote is the text that is given at the end of a page. It is used by authors when writing books.
6. **End Notes** : End Notes is a citation of sources which

are given at the end of a document .

F. Write the shortcuts for the following :

- Ans.**
1. To use tabs or indentation within a cell. **Ctrl + Tab**
 2. Adds a new line within a cell. **Enter key**
 3. To move backward to the previous cell in a line. **Shift + Tab**
 4. To move around within a table (up, right, left and down). **Arrow Keys**
 5. To move to the next cell in a row from left to right. **Tab Key**

G. Correct the following statements :

1. You can not creat header and footer that contain graphics.
2. Footnotes and endnotes are found at the bottom of the page.
3. Endnotes are given at the end of the document.
4. A table is made up of horrizontal rows and vertical columns,
5. Intersection of row and column is called cell.

H. Answer these questions :

- Ans.**
1. To insert header and footer in the document, we can follow these steps :

STEP 1 : Click on the Insert tab.

STEP 2 : In the Header & Footer group, click on the Header button. The Header gallery will open.

STEP 3 : Click on the Blank header style or choose any other style according to your requirement. The Design tab will appear under Header & Footer Tools. This tab will come only when the cursor is in the header or footer area.

STEP 4 : Type the header text in the header area.

STEP 5 : Click on Go to Footer button in the Navigation group. The cursor appears in the footer area. Type the text in the footer area.

OR

Click on the Insert tab. In the Header & Footer group, click on Footer to display the Footer gallery. Click on the footer style of choice. Type the text in the footer area.

STEP 6 : Click on Close Header and Footer button in the Close group of Design tab or press the Esc key.

2. To insert footnotes and endnotes, we can follow these steps :

STEP 1 : Place the cursor where you want to insert a footnote or endnote.

STEP 2 : Click on the References tab. In the Footnotes group, click on Insert Footnote or Insert Endnote button.

This inserts the note reference mark immediately.

STEP 3 : Type the required text for the footnote/endnote.

STEP 4 : Double click on the footnote/endnote reference number to return to the document.

3. There are many advantages of using tables :
 - It is an effective way of arranging text.
 - We can catalogue information on a specific topic.
 - Data arranged in a table looks more meaningful, neat and organized.
 - Large amount of information can be presented in a concise manner.
4. **i. Using the Draw Table option**

To create a table using the Draw Table option, we can follow these steps :

STEP 1 : Place the cursor where we want to draw a table.

STEP 2 : Click on the Insert tab.

STEP 3 : Click on the Table button in the Tables group.

STEP 4 : Click on the Draw Table option.

STEP 5 : Click in the document. The mouse pointer changes to a pencil pointer. Start in the upper-left corner where we want to place our table and drag to the lower right corner.

Now, draw rows and columns one by one. The Table Tools tab appears for adding styles to the table.

STEP 6 : To erase a line or a block of lines, click on the Erase button in the Draw Borders group, and then click on the line we want to erase.

STEP 7 : To change the mouse pointer from pencil to normal, click on the Draw Table button on the Draw Borders group or press the Esc key.

ii. Using the Insert Table option

To create a table by using the Insert Table option, we can follow these steps :

STEP 1 : Place the cursor where we want to insert a table.

STEP 2 : Click on the Insert tab.

STEP 3 : Click on the Table button in the Tables group.

STEP 4 : Click on the Insert Table option. The Insert Table dialog box appears.

STEP 5 : Specify the number of rows and columns we want.

STEP 6 : Click on OK to insert the table.

iii. Using the Table Button

To create a table using the Table button, we can follow the steps given below :

STEP 1 : Place the cursor where we want to insert the table.

STEP 2 : Click on the Insert tab.

STEP 3. Click on the Table button in the Tables group.

A drop down grid appears.

STEP 4 : Drag the mouse down and across the grid to select the required number of columns and rows.

STEP 5 : Release the mouse button to create the table at the insertion point.

5. To delete cells, columns or rows, we can follow these steps :

STEP 1 : Select the cell, column or row that we want to delete.

STEP 2 : Click on the Delete option in the Rows & Columns group of Table Tools Layout tab. We will get a delete drop down list.

STEP 3 : Select the appropriate option. If we choose Delete Cells, a dialog box appears. Use this to decide what we want to do with the other cells in the row or column.

STEP 4 : Click on the appropriate button and then click on OK.

Activity & Project Task

Ans. Do it yourself

**Exercise**

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. True 3. True 4. False
5. True 6. False 7. True 8. True
9. False 10. True

B. Fill in the blanks :

- Ans.** 1. A procedure always starts with the **To** command.
2. **End** command is given to end a procedure.
3. A procedure that is embedded inside another procedure is known as **nested procedure**.
4. The **SAVE** command saves the procedure in **secondary** memory.
5. **LOAD** command loads a procedure from a disk to Primary memory.

C. Choose the right one :

- Ans.** 1. (iv) 2. (i) 3. (iii) 4.(i)
5. (iii) 6. (ii) 7. (i)

D. Which of the following are not valid procedure names :

- Ans.** 1. Not a valid procedure
2. Not a valid procedure
3. Valid procedure
4. Valid procedure
5. Valid procedure
6. Not a valid procedure

E. Define these :

- Ans.** 1. A LOGO Procedure is a set of LOGO commands given one after the other and referred to by a name to perform a particular task.
2. **SAVE** Command in LOGO, is used to save the procedure in the Secondary Memory, so that it can be used in future.
3. **EDIT** Command in LOGO, is used to make changes in an already written procedure.
4. **LOAD** Command can be used to recall a saved procedure. It loads the procedure into the Primary Memory from the Secondary storage media where it is saved.
5. **Nested Procedure** is a procedure used within a procedure. The process is called nesting of procedures.
6. **Master Procedure** is a procedure which contains one or more other procedures.
7. **Recursive Procedure** is a procedure which goes back and uses itself as a part of the instructions.
8. **FENCE** Command creates a fence around the screen so that the turtle cannot go beyond the screen

F. Answer these questions :

- Ans.** 1. A LOGO Procedure is a set of LOGO commands given one after the other and referred to by a name to perform a particular task. It is actually a program written in LOGO language. A procedure is divided into three parts, namely, Title Line, Body, and End Line.
2. The rules for naming a procedure are :
• The name of a procedure can include letters,

numbers or symbols.

- The first character should always be a letter.
 - Blank spaces can not be included.
 - Arithmetic operators like +, -, /, * cannot be included.
 - LOGO command names cannot be included.
3. To execute a procedure, we can simply type the name of the procedure in the Input box and press the Enter key.
 4. We can use a procedure within a procedure. This is called nesting of procedures.
 5. Yes, we can use more than one variable in a procedure.

Using Two or More Variables in a Procedure :

Type the following commands in the Input box.

```
TO RECTANGLE : LENGTH : WIDTH
REPEAT 2 [FD : LENGTH RT 90 FD : WIDTH RT 90]
END
```

We can see from the above example that we can use two or more variables while naming a procedure. A colon sign (:) separates the name of each variable.

6. **Main procedure** or **Master procedure** is a procedure which contains one or more other procedures whereas a **Subprocedure** is a procedure which is embedded with another procedure.

Example : TO DESIGNSQ

```
CS
REPEAT 8 [SQUARE RT 45]
END
```

To execute this procedure, we type

```
DESIGNSQ
```

The result, the procedure **DESIGNSQ** repeatedly calls and executes the procedure **SQUARE** to form a design.

In the above example, **SQUARE** is embedded or nested inside the procedure **DESIGNSQ**. **SQUARE** is called the **Subprocedure** and **DESIGNSQ** is called the **Main procedure** or **Master procedure**.

7. We can save a procedure in two ways.
 - (i) By giving the **SAVE** command in the Command-Input box
Syntax of the Save command is :
SAVE "Procedure name"
 - (ii) By using File menu in the Main screen.
 - Click on File in the Menu bar in the Main screen.
 - Click on Save As option in the drop down menu. A Save As dialog box appears.
 - Type a name in the File name: box
 - Click on Save button in the dialog box. The Procedure gets saved by the specified name.
8. To make changes in an already written procedure, **Edit** command is used.

The Syntax of the **EDIT** command is :

```
EDIT "Procedure name"
```

It opens the LOGO Editor where we can make changes

in the set of LOGO commands written in the procedure.

9. Recursion means 'going back'. So, as the name implies, a Recursive Procedure is a procedure which goes back and uses itself as a part of the instructions.

Example : TO STAIR : STEP
FD : STEP
RT 90
FD : STEP
LT 90
STAIR : STEP
END

10. Recursion can be stopped by use of IF statement in a procedure. The syntax of IF statement is

IF : <variable> <condition> [STOP]

Example :

- IF : UNIT = 100 [STOP]
- IF : UNIT > 150 [STOP]
- IF : UNIT < 90 [STOP]

Let us make use of IF statement in a procedure to stop recursion.

```
TO SPIRAL : LENGTH  
IF : LENGTH > 100 [STOP]  
REPEAT 2 [FD : LENGTH RT 90]  
SPIRAL : LENGTH + 5  
END
```

To see the result of procedure, type

```
SPIRAL 5
```

The result will be a spiral.

Activity & Project Task

Ans. Do it yourself



6

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. True 3. False
4. True 5. True

B. Fill in the blanks :

- Ans.** 1. **Adobe Photoshop** is a graphics software that can be used for image manipulation.
2. Photoshop was developed in **19 February, 1990** by two American brothers, Thomas and John Knoll.
3. The **Options Bar** is beneath the menu bar and holds options for different tools.
4. **Palettes** are individual “panes” that hold information or options for working with your file float on the right-hand side.
5. Digital images are made up of **pixels**, which can be defined as colored squares.
6. **Bitmap** images are made up of colored squares called pixels.
7. Photoshop files are saved with the extension **.psd**.

C. Choose the right one :

- Ans.** 1. (i) 2. (i) 3. (iii)
4. (ii) 5. (iii)

D. Write one word for the following :

- Ans.** 1. Selection Tools 2. Painting Tools
3. View Tools 4. Elliptical Marquee Tool

E. Answer these questions :

- Ans.** 1. Photoshop is a photo-editing software by Adobe. It is used to create and modify drawings and photographs that transform the digital photographs into works of art which we can share with our family and friends.
2. To make a rectangular selection, we can follow the given instructions :
STEP 1: Click on the Rectangular Marquee tool from the toolbox.
STEP 2: Click on the image and drag the mouse pointer till the point of selection.
STEP 3: Release the mouse pointer.
The portion of the image will be selected rectangular.

Adobe Photoshop

3. Palettes are individual “panes” that hold information or options for working with our file, known as palettes (or panels), float on the right-hand side.
4. The steps to crop an image are :
STEP 1: Click on the Crop tool from the toolbox.
STEP 2: Use the Crop tool to select that part of the image that is to be cropped.
STEP 3: Press Enter on the keyboard. The image will be cropped.
5. To create a new Photoshop image file, we can follow the given steps :
STEP 1: Click on File menu → Click on New option.
Step : A dialog box appears, using this we can name our file and specify the size (Using the preset option or setting values for both width and height).
Step 3 : Click OK.
6. **Bitmap images** are made up of colored squares called pixels. While **Vector images** are made up of lines and curves.
7. Selection Tools are of three main types-the Marquee tool, the Magic Wand tool and the Lasso tool.
8. Magic Wand tool allows us to select an area of an image based on its color.

Activity & Project Tasks

Ans. Do it yourself



Exercise

Based on NEP 2020

- A. Answer the following as 'TRUE' or 'FALSE' :**
Ans. 1. True 2. False 3. True 4. True
- B. Choose the right one :**
Ans. 1. (iv) 2. (ii) 3. (iii)
- C. Answer these questions :**
Ans. 1. A computer network is an interconnected collection of autonomous computers.
 2. The advantages of a network are :
 • A network enables access to database located centrally on a server or distributed on machines.
 • It provides effective data communication system over the network reduces the paper work. Thus, it helps in making almost a paperless office.
 • It helps to transfer files from one computer to another.
 3. Five main computer network components are :
 (i) **Servers** : Servers can be mainframes, minis and micros which can support various software, to store and process information at high speed.
 (ii) **Nodes** : Nodes are the computers attached to the network for the users to carry out their tasks using network and server. Even printers, scanners etc. attached to the network are called nodes.
 (iii) **Workstation** : A powerful node which can handle local information processing is called a

workstation. A workstation has a small hard disk attached it to carryout local tasks.

(iv) **Network Operating System** : To control all the information transfer activities on the network, a software called Network Operating System is used.

Example—Windows NT, Windows 2000.

(v) **Cables** : It is the medium or channel over which the information travels from computer to computer. Various types of cables viz. Coaxial, Fiber Optic, Twisted Pair are used for transmission of data in a network.

4. Topology is the term used to describe the way through which computers are connected in a network. There are four basic types of topologies used for networking of computers.
 (i) Linear Bus Topology
 (ii) Ring Topology
 (iii) Star Topology
 (iv) Tree Topology
5. Various types of cables are used in networking. These cables are Coaxial, Fibre Optic, Twisted pair, etc. used for transmission of data in a network.

Activity & Project Tasks

Ans. Do it yourself



Exercise

Based on NEP 2020

- A. Answer the following as 'TRUE' or 'FALSE' :**
Ans. 1. True 2. True 3. True
 4. False 5. True
- B. Fill in the blanks :**
Ans. 1. FOR... NEXT is a **structural** type of QBASIC statement.
 2. **Esc key** is used to end DO loop.
 3. **WHILE....WEND** works similar to DO.... WHILE loop.
 4. A **loop** is used to repeat certain steps a fixed number of times.
 5. The DO... LOOP can be used either with WHILE statement or UNTIL statement.
- C. Choose the right one :**
Ans. 1. (iii) 2. (ii)
- D. Find out the errors in the given programs :**
Ans. 1. Error : DO UNTIL A<=10
 Correct:DO UNTIL A = 10
 2. Error : X
 Correct : NEXT X
- E. Give the output of the following programs :**
Ans. 1. **Output** : 1 25 50

- 5 30
 10 35
 15 40
 20 45
2. **Output** :
 1
 2
 3
 4
 5
 6
 7
 8
 9

F. Write the difference :

- Ans.** 1. A DO WHILE... LOOP is performed as long as the condition being tested is 'true'. It means that the statements written within DO... LOOP will be repeated till the condition is true. While FOR... NEXT structure is used when we want to perform a loop a specific number of times. It uses a counter variable which is incremented or decremented with each repetition of the loop.
 2. DO UNTIL... is different from DO WHILE... as it executes the statements until the condition is true. In

other words, it executes the statement if the condition is false and it exits the loop if the condition is true.

A DO WHILE... LOOP is performed as long as the condition being tested is 'true'. It means that the statements written within DO... LOOP will be repeated till the condition is true.

3. The purpose of DO... LOOP and WHILE... WEND is similar except for the syntax. If the condition is placed at the end of the loop, the loop is executed at least once.

A DO WHILE... LOOP is performed as long as the condition being tested is 'true'. It means that the statements written within DO... LOOP will be repeated till the condition is true.

G. Answer these questions :

- Ans.** 1. Sometimes, there is a need to repeat a set of statements more than one based on a certain condition. This process of repetition is called loop or iteration in programming. For example :

```
DO WHILE ... LOOP
FOR ... NEXT
WHILE ... WEND
```

2. FOR... NEXT structure is used when we want to perform a loop a specific number of times. It uses a counter variable which is incremented or decremented with each repetition of the loop.

A small code of FOR ... NEXT statement :

Program : To print numbers from 1 to 5

```
CLS
FOR A = 1 TO 5
PRINT A
NEXT A
```

Output : 1
2
3
4
5

3. The purpose of WHILE.....WEND is similar to DO.....LOOP. In this statement, if the condition is placed at the end of the loop, the loop is executed at least once.

A small code of WHILE..... WEND statement :

Program : To generate multiples of 5 from 5 to 50

```
CLS
LET num = 5
WHILE num <= 50
PRINT num
num = num + 5
WEND
```

Output : 5
10
15
20
25
30
35
40
45
50

4. A DO WHILE ... LOOP is performed as long as the

condition being tested is 'true'. It means that the statements written within DO... LOOP will be repeated till the condition is true.

DO UNTIL... is different from DO WHILE ... as it executes the statements until the condition is true. In other words, it executes the statement if the condition is false and it exits the loop if the condition is true.

5. EXIT command is used to come out of a loop before the expected number of executions. EXIT command is used followed by either FOR or DO.

Example : CLS
FOR M = 1 TO 5,
PRINT M
IF M = 3 THEN EXIT FOR
NEXT M

Output : 1
2
3

6. A program to print numbers from 1 to 10 :

Example : CLS
FOR A = 1 TO 10
PRINT A
NEXT A

Output : 1
2
3
4
5
6
7
8
9
10

7. **Syntax :** DO UNTIL test condition
Statement1
Statement2
...
LOOP

8. Program to print natural numbers, 1-50 :

```
Let a = 1
DO WHILE a >= 50
PRINT a
a = a + 1
LOOP
```

Output :

1	11	21	31	41
2	12	22	32	42
3	13	23	33	43
4	14	24	34	44
5	15	25	35	45
6	16	26	36	46
7	17	27	37	47
8	18	28	38	48
9	19	29	39	49
10	20	30	40	50

Activity & Project Tasks

- Ans.** Do it yourself



Test Your Progress

Section-1

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. True 3. False 4. True

B. Fill in the blanks :

- Ans.** 1. **Inbox** folder of the e-mail account keeps a record of all the received mails.

2. **Trash** folder keeps the record of all the deleted mails.
3. **Cc** and **Bcc** allow us to send e-mail to more than one person.

4. **Forward** option forwards the message.

A. Answer these questions :

- Ans.** 1. We need the following to use the Internet facility :
• A multimedia computer.

- An account or registration with an ISP (Internet Service Provider) like VSNL and Airtel. The ISP will register our name and give us a user name, a password, and the phone number for us to dial for connection.
 - A modem and a telephone line connected to it.
 - A browser or Internet software is also needed that helps us to surf the net, like Microsoft Internet Explorer and Netscape Navigator.
 - We also need a dial-up network connection, software of the particular ISP that helps us to connect. For example, VSNL's software is VSNL auto dialer.
2. Search engines are the websites used to get information from the Internet. MSN, Google, and Yahoo are some of the most commonly used search engines.

3. E-mail is the short form of electronic mail. It is a service on internet to send or receive messages electronically. It is free of cost service.
We need an e-mail account to use this service. There are many websites like Gmail, Yahoo mail and Hot mail that allow us to open our e-mail account free of charge.
4. There are many websites like Gmail, Yahoo mail, and Hotmail from which we can create an e-mail account.
5. Besides sending plain text we can send graphics, audio, video, Word file, Excel file, PowerPoint file, etc by attaching them through e-mail.

Activity & Project Tasks

Ans. Do it yourself



10

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans. 1. True 2. False 3. True
4. False 5. True

B. Fill in the blanks :

- Ans. 1. A computer virus is a **destructive** software program.
2. **Relax** and **Melissa A** are examples of Macro Virus.
3. The **Trojan Horse** program disguises itself as a utility program but can destroy the data stored in the computer.
4. **Dr. Solomon** and **Norton** are popular Anti-Virus programs.
5. The first PC virus was created in **1986** by **Amjad** and **Basit**.

C. Choose the right one :

- Ans. 1. (ii) 2. (iv)

D. Write one word for the following :

- Ans. 1. Multipartite Virus 2. Logic Bomb
3. Boot Sector Virus 4. Network Virus
5. Worm

E. Answer these questions :

- Ans. 1. A computer virus is a destructive software program.
2. The things a computer cannot do :
(i) Computer virus cannot infect write-protected discs (CD-ROMs) or infect written documents.
(ii) Viruses do not infect compressed files, unless the file was infected prior to compression.
3. We can detect the presence of a virus in our computer. The following are some primary indicators that a computer may be infected :
• The computer runs slower than usual.
• The computer stops responding, or it locks up frequently.
• The computer crashes, and then it restarts every few minutes.
• Applications on the computer do not work correctly.
• Disks or disk drives are inaccessible.
4. The three types of computer virus are :
(i) **Macro Virus** : Since the 1980's Macro viruses

have become very common. Macro virus infects data files. These viruses spread by infecting documents and spreadsheets like a Word or Excel file. The first macro virus (CONCEPT) was written for Microsoft Word. Relax, Melissa A, Bablas are examples of this type of virus.

(ii) **Network Virus** : This kind of virus spreads across networks in computers, for example, Nimda and SQL SLAMMER worms are viruses which spread over corporate networks or the Internet via e-mails.

(iii) **Logic Bomb** : A logic bomb is a program that gets executed only when a specific condition is met. The virus Friday the 13th was so programmed so as to get executed on that particular date.

5. A Trojan Horse program is a file that appears harmless unless it has been executed. The Trojan Horse program disguises itself as a game or a utility program but when executed it can destroy the data stored in the computer.
6. **Trojan Horse Program** : These programs can spread from one computer to another by infected pen drives, CDs and e-mails.

Worms : These programs can spread using networks and by e-mail programs.

Network Virus : This kind of virus spreads across networks in computers. Some viruses spread over corporate networks or the Internet via e-mails.

7. We can protect our computer against virus by installing a good anti-virus software, updating the anti-virus regularly; avoid downloading programs from unknown sources and scanning the floppies, CDs, flash drives before using them.
8. Stealth viruses try to hide themselves from Anti-virus software by resorting to tricks. Stealth virus can falsely show an Anti-virus software that a certain file is uninfected.

Activity & Project Tasks

Ans. Do it yourself

**Exercise**

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :**Ans.** 1. False 2. True 3. True**B. Fill in the blanks :****Ans.** 1. Press the **Windows + C** key to open charms menu to the right of the screen.
2. To navigate through the **Start Screen**, either click and drag on the scroll bar at the bottom of the screen.
3. The **Lock Screen** is also called the Welcome screen.**C. Choose the right one :****Ans.** 1. (ii) 2. (i)**D. Answer these questions :****Ans.** 1. Windows 8 is an operating system that controls all the operations of computer. It is the most recent version of Microsoft Windows. It is one of the most popularly used operating system. It is produced to use on personal computers including home and business desktop, laptops, net books, tablet PC's and media centre PC's.
2. We can customize the Start screen by changing the name or appearance of a group of tiles, and than organize the Start screen by creating new groups for frequently used or similar apps.
(i) To create a new group, select a tile, drag it to an open space, and drop it. We can have many groups on the Start screen. Scroll right or left to see our groups by clicking and dragging the scroll bar at the bottom of the screen.
(ii) To change the order of the groups, first reduce the size of the groups. Click the Zoom button in the lower right corner of the screen, or hold down the Ctrl key and turn the mouse wheel. Then drag the groups into the new order.
(iii) To name a group, while in the Zoomed view,

right-click the group we want to name. Then in the lower left corner, click Name group.

- (iv) In the Name box, type a name for the group, and then click Name.
- (v) Click anywhere on the screen to return to the normal view. The new name for the group displays.
3. To close the Lock screen and sign in to the computer, we can use one of the following methods :
- Tap the space bar.
 - Spin the mouse wheel.
 - Swipe upwards on a touch screen.
4. The Lock screen (also called the Welcome screen) covers the sign-in screen and displays the date and time, as well as notifications for email, calendar, and other apps. We can customize the lock screen by changing the picture and choosing which apps display notifications.

Activity & Project Tasks**Ans.** Do it yourself

Computer Hardware and Software

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans. 1. True 2. False 3. False
 4. True 5. True 6. True
 7. False 8. True

B. Fill in the blanks :

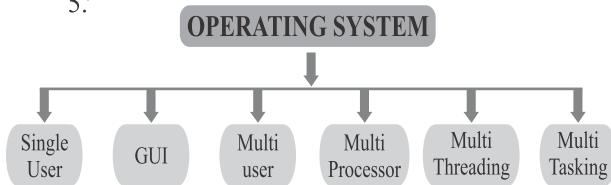
- Ans. 1. The term 'Software' was first used by **John Tukey**.
 2. A **device dependent** software product was one that used to run only on a specific type of computer.
 3. Windows 3.1 was succeeded by **Windows 95**.
 4. A **device driver** is a small program that tells the operating system how to communicate with a device.
 5. The most popular example of spreadsheet software is **MS Excel**.
 6. A computer language is a set of words, symbols and codes that is used to write a computer **program**.
 7. The people who write programs are called **programmers**.
 8. **Compilers** are the language processors that translate the complete source program as a whole, in machine code before execution.

C. Choose the right one :

- Ans. 1. (i) 2. (ii) 3. (ii) 4. (iii) 5. (ii)
 6. (ii) 7. (iv) 8. (i) 9. (iii)

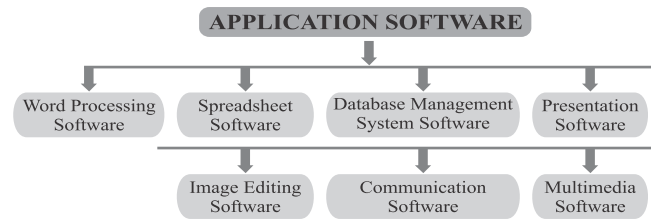
D. Short answer type questions :

- Ans. 1. System software, Application software, Programming software.
 2. Internet or Market
 3. System software
 4. (i) Managing information
 (ii) Control hardware
 (iii) Run software
 (iv) Accessing the web
 5.:



6. Operating system
 7. Application software utilises the capacities directly for a dedicated task. It is used to accomplish a specific task of computer. Application software programs have varied functional usages:
 (i) It is a productivity business tool.
 (ii) It assists graphic and multimedia projects.
 (iii) It supports household activities, personal business, educational programs.
 (iv) It facilitates communication tools.

Different Types of Application Software :



8. Photoshop
 9. Database Management System
 10. Java, C++, NET
 11. Compiler, Interpreter, Debugger, Linker, Text editor.

E. Long answer type questions :

- Ans. 1. Software is the collection of computer programs, procedures and documentation that performs different tasks on a computer system. The term 'Software' was first used by John Tukey in 1958. Software is a set of instructions that are aimed at changing the state of computer hardware. It enables a computer (hardware) to perform specific tasks. Example : Excel, Photoshop etc.

2. Difference between System software and application software

System software : System software is a computer software, that is designed to operate the computer hardware and to maintain a platform for running the application software. It helps in running the computer hardware and the computer system.

System software serves as the interface between the user. The applications software and the computer's hardware such as a printer, scanner, monitor, keyboard, etc. It includes operating system, device drivers, diagnostic tools, utilities and more.

Application Software : Application Software utilizes the capacities directly for a dedicated task. It is used to accomplish a specific task of computer. Application Software programs have varied functional usages :

1. It is a productivity business tool.
 2. It assists graphic and multimedia projects.
 3. It supports household activities, personal business, educational programs.
 4. It facilitates communication tools
3. An Operating System or OS is a software program that enables the computer hardware to communicate and operate with the computer software. The operating system recognises input from an input device such as the keyboard, mouse, microphone, or PC camera; coordinates the display of output on the monitors; instructs a printer how and when to print information; and manages data and instructions in memory and information stored on disk. The operating system resides on the computer's hard disk.
4. **Microsoft Operating System :** The following is a list of some commonly used operating systems made

by Microsoft.

MS-DOS : MS-DOS is an operating system that performs tasks using text commands you enter.

Windows 3.1 : Windows 3.1 works with MS_DOS to control the overall activity of a computer. Window 3.1 depends on MS_DOS to operate as it cannot be operated on its own. Hence, it is not a true operating system.

Windows 95 : Windows 3.1 was succeeded by Windows 95. This operating system is more graphical and easier to use than Windows 3.1. Windows 95 was released in August 1995.

Windows 98 : Windows 98 is the successor to Windows 95. This operating system includes many new improved features but is otherwise very similar to Windows 95.

Windows ME : An upgrade version of the Windows 98 operating system is Windows Millennium Edition. It is also called Windows Me and is an operating system that has features designed specially for the home user.

Windows XP : Windows XP is the successor to Windows ME. Windows XP puts the exciting experiences of the digital age at your fingertips. There are two versions of Windows XP : Windows Home edition and Professional.

Windows Vista : Windows Vista is the successor to Windows XP. Windows Vista comes in five editions: Windows Vista Home Basic, Home Premium,

Windows Vista Ultimate, Windows Vista Business and Windows Vista Enterprises.

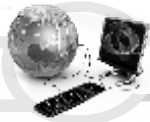
Windows 7 : Windows 7 is the successor to Windows Vista . It is a GUI (Graphical User Interface) based operating system in which pictures, images, icon and menus are used to give commands. The commands are operated with the help of mouse instead of using keyboard.

Windows 8 : Windows 8 is the next version of operating system. It contains a new user interface called Metro UI.

- Device Drivers** : Device drivers are the software that act like " liaisons " between hardware in computer system and the OS. The operating relies on device drivers to communicate with each device in the computer. A device driver, also called a driver, is a small program that tells the operating system how to communicate with a device.
- Utility Software** : Utility program is a type of system software that performs a specific task, usually related to managing a computer, its devices or its programs. It is also called a utility. It helps in the management of computer hardware and application software. It performs a small range of tasks. Disk defragmenters, system utilities, disk scanner, virus scanner are some of the typical examples of utility software.

Activity & Project Tasks

Ans. Do it yourself.



2

Exercise

Based on NEP 2020

A. Fill in the blanks :

- Ans.**
- Operating System** tells a computer what to do and how to do it.
 - IOCS stands for **Input/Output Control System**.
 - Unix is a **multiuser** and **multiprocessing** operating system.
 - The inner workings of **Linux** are available in the public to examine and change.
 - Unix was originally written in **1969**.

B. Choose the right one :

- Ans.** 1. (iii) 2. (iv)

C. Write one word for the following :

- Ans.** 1. Operating System 2. Input/Output Control System
3. Windows 4. Linux 5. 'C' Language

D. Define these :

- Ans.**
- A **software** is a set of instructions that tells a computer how to perform a specific task. Different types of software are used for different types of work. There are mainly two types of software : System software and Application Software.
 - The **operating system** is the most important program that runs on a computer because it manages all the other programs. It is a special software that manages system resources.
 - An operating system with a Graphical User Interface is known as a **GUI Operating System**. It allows a user to give commands to it by clicking the mouse on specific objects or words on the screen. An example

of a GUI Operating System is Microsoft Windows.

- An operating system with a Character User Interface is known as a **CUI Operating System**. In order to give commands to such an operating system, keywords associated with specific tasks must be typed using the keyboard. An example of a CUI operating system is MS DOS.
- Multiprocessing Operating System is an operating system that allows a program to be run on more than one CPU. Examples are Linux, Unix, Windows etc.
- Multiuser Operating System is an operating system that allows two or more users to run programs at the same time. Some operating systems permit hundreds or even thousands of parallel users. Examples are Linux, Unix, Windows etc.
- Multitasking Operating System is an operating system that allows more than one program to run in parallel. Examples are Linux, Unix, Windows, etc.

E. Answer these questions :

- Ans.**
- The operating system is the most important program that runs on a computer because it manages all the other programs. It is a special software that manages system resources. It is essential for computer because it coordinates the activities of a computer system. It also facilitates the sharing of the system resources among different applications.
 - IOCS stands for **Input/Output Control System**. It was developed to get over the problem of writing codes and complicated machine level input/output instructions by each user. It marked the beginning of

use of operating systems in computers. The first major IOCS was designed by the General Motors Research Laboratories in 1956 for their IBM 701 mainframe.

3. The important functions of an operating system are :
 - (i) **Allocation** : The operating system allocates input/output devices and central processing unit to specific applications according to their requirements. It also controls the flow of data between these devices. This link is maintained through the driver program. Each input/output device has its own driver.
 - (ii) **Program Execution** : The operating system loads the application programs in the memory and executes them.
 - (iii) **Error Handlings** : The operating system generates error messages whenever an error occurs while the execution of an application program.
 - (iv) **Data Management** : It is the function of the OS to manage data storage in the computer's memory and storage devices.
4. Operating systems may be classified as :
 - (i) **Multuser Operating Systems** that allow two or more users to run programs at the same time. Some operating systems permit hundreds or even thousands of parallel users. Examples are

Linux, Unix, Windows etc.

- (ii) **Multiprocessing Operating Systems** that allow a program to be run on more than one CPU. Examples are Linux, Unix, Windows etc.
 - (iii) **Multitasking Operating Systems** that allow more than one program to run in parallel. Examples are Linux, Unix, Windows, etc.
 - (iv) **Multithreading Operating Systems** that allow different parts of a single program to run simultaneously. Examples are Linux, Unix, Windows etc.
5. Linux is a Unix-like operating system. It has a graphical user interface. It was designed to provide computer users a free or a very low-cost operating system as compared to the more expensive Unix operating system. It is very efficient and fast. It is a popular operating system in web servers and is gaining popularity in workstations as well.
 6. Windows XP is a line of operating systems developed by Microsoft for use on personal computers. It was released worldwide in 2001. It provides a better graphical user interface. It is user friendly. It allows a new user to login even if the previous user has not logged out.

Activity & Project Tasks
Ans. Do it yourself.



3

Computer Languages

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. False 3. True 4. True
 5. False 6. False 7. False

B. Fill in the blanks :

- Ans.** 1. Basically, computers perform operations on **set of instructions**.
 2. Most programming languages describe computation in an **imperative** style.
 3. Object-oriented (OO) languages are the **most** common these days.
 4. BASIC combines both programming and computer control into a **single** interface.
 5. You will need to put CLS at the very top of your program to **clear** the screen before you print anything.

C. Choose the right one :

- Ans.** 1. (iii) 2. (i) 3. (iv)
 4. (iv) 5. (i) 6. (iv)

D. Write the year of inception of the following programming languages :

- Ans.** 1. Prolog : **1970** 2. Simula : **1962**
 3. Ada : **1983** 4. dBASE II : **1980**
 5. Standard ML : **1984** 6. CLOS : **1988**
 7. Oberon : **1988** 8. C++ : **1986**
 9. Smalltalk-80 : **1983** 10. Eiffel : **1986**
 11. Scheme : **1975** 12. Haskell : **1990**

E. Define the following :

- Ans.** 1. **Programming language** : A computer language is

also known as a Programming language. There are various types of programming languages. These languages are used to write programs to tell the computer what to do.

2. **Procedural languages** : This family of languages has fallen out of favour recently. They are perhaps best described as OO languages without objects. Examples include, C, FORTRAN, ALGOL, COBOL and Pascal.
3. **Stack languages** : In stack languages, the management of variables via the stack is made explicit. Access to value is made by relative position on the stack rather than via names.
4. **QuickBASIC** : QuickBASIC is the origin of all modern BASICS. A few people have spurred a cult for the language, as many games and tutorials based on QuickBASIC are available on the Internet.
5. **DarkBASIC** : DarkBASIC is significant commercial variant of BASIC, which utilizes the DirectX library and is great for writing games quickly.
6. **QBASIC Editor** : QBASIC Editor checks syntax errors and capitalizes QBASIC reversed words. It provides all the facilities that are required for programs. In the QBASIC Editor, we can write, edit, run and debug programs

F. Write the difference :

- Ans.** 1. **Procedural programming** uses a list of instructions to tell the computers what to do step-by-step. A procedure contains a series of computational steps to be carried out. While **Functional programs** are a

separate line of attack which work by not allowing values of change 'at all'. This seems counter-intuitive, but there are two details that make it work.

2. **Logic programming** is a programming paradigm based on formal logic. A program written in a logic programming language is a safety sentences in logical form, expressing facts and rules about some problem domain.

In **Stack languages**, the management of variables via the stack is made explicit. Access to value is made by relative position on the stack rather than via names. Such languages may be simpler and more compact, but the loss of direct naming of local variables perhaps the most fundamental abstraction can make programming more difficult.

3. **BASIC** stands for **Beginner's All purpose Symbolic Instructions Code**. It was originally implemented as a combined computer language and command interpreter invented in 1964 at Dartmouth college by J. Kemeny and T. Kurtz. While **QBASIC** is a shareware and a limited version of the commercial software QuickBASIC. It is a programming language used to create computer games and other programmes of many uses.

4. **QuickBASIC** is the origin of all modern BASICS. A few people have spurred a cult for the language, as many games and tutorials based on QuickBASIC are available on the Internet.

While **FreeBASIC** has many more modern features, such as pointers, 64-byte types and support for larger amounts of memory. FreeBASIC is recommended, as this is the standard dialect for many tutorials.

5. **DarkBASIC** is a significant commercial variant of BASIC, which utilizes the Direct-X library and is great for writing games quickly.

VisualBASIC was developed by Microsoft in early 1990s. It is slightly inaccurate to say that this is a dialect, as it uses a much different code other than the standard BASIC, and is very popular for commercial use.

6. **QBASIC**, a shareware is a limited version of the

commercial software QuickBASIC. While QBASIC is shareware, QuickBASIC is commercial software. Compared to QuickBASIC, QBASIC is a limited version.

G. Answer these questions :

- Ans.**
1. A computer language means a set of rules and symbols used to operate a computer.
 2. Object-oriented (OO) languages are the most common these days, and probably what most people learn first. Objects bundled together values and commands in a single entity programs, are the collections of interacting objects.
 3. Object-Oriented programming, or OOP is an approach to problem-solving where all computations are carried out using objects. A method in object-programming is like a procedure in procedural programming. The key difference here is that the method is part of an object. While **Procedural programming** uses a list of instructions to tell the computer what to do step-by-step. A procedure contains a series of computational steps to be carried out. It is also referred to as imperative programming.
 4. Logic programming is a programming paradigm based on formal logic. A program written in a logic programming language is a set of sentences in logical form, expressing facts and rules about some problem domain.
 - (i) FORTRAN
 - (ii) LISP
 - (iii) APL
 - (iv) BASIC
 - (v) ISWIM
 - (vi) C
 - (vii) Scheme
 - (viii) CSP
 - (ix) dBASE II
 - (x) ALGOL
 6. Types of BASIC can be divided into several groups, on the basis of their usage and ability such as :
 - Their platform (Windows, Linux, etc.)
 - Their application/purpose (games, GUI applications, etc.)
 - Their ability to be compiled or interpreted

Activity & Project Tasks

- Ans.** Do it yourself.



4

Formulae and Functions in MS Excel 2010

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. False 3. False
4. False 5. True 6. False

B. Fill in the blanks :

- Ans.** 1. Formulae are used to perform **calculations**.
2. Formula must be started with = sign.
3. **Today ()** function shows the current date.
4. **Sorting** refers to arranging data systematically.
5. Cell referencing is mainly of **two** types.

C. Choose the right one :

- Ans.** 1. (iii) 2. (iv) 3. (i) 4. (ii) 5. (i)

D. Write one word for the following :

- Ans.** 1. MS Excel
2. MAX ()
3. COUNT ()
4. NOW ()

E. Short answer type questions :

- Ans.** 1. Sum() function in Excel is used to find the sum of numerical values.
2. Round() function in Excel is used to round off the selected number of the specified number of digits.
3. Count() function in Excel is used to count the number of cells containing numeric data (leaving the blank cells), out of a selected range.
4. Today() function in Excel is used to display the

current system date.

F. Long answer type questions :

Ans. 1. Sorting refers to arranging data systematically in an order. For example, we may want to arrange the names of students in an order in a worksheet can be in the alphabetical order or in the total marks scored by students of the class.

We may also arrange the data in ascending or descending order.

To quickly sort the data, the steps are as follows :

STEP 1 : Select the range of cells whose data needs to be sorted, such as A1:A30. The range can include the column titles also.

STEP 2 : Click on the Data tab.

STEP 3 : From the Sort & Filter group, click on option to arrange data in ascending order, that is, from the smallest to the largest or from A to Z. OR click on option to arrange data in descending order, that is, from the largest to the smallest or from Z to A.

2. When we copy a formula to a cell or a range of cells, the row/column reference gets automatically adjusted depending upon the row/column we are copying the formula to. This feature of Excel is called Cell Referencing.

Cell referencing is mainly of two types :

- Relative Cell Referencing
- Absolute Cell Referencing

When we drag the formula written in a cell like A4 down to the cell range A1-A6, the cell reference automatically changes. This type of referencing is called Relative Cell Referencing in which the cell reference changes as per the column or row we are copying to.

On the other hand, in Absolute Cell Referencing, the

cell reference does not change even when we copy the formula horizontally or vertically.

3. A formula in a worksheet is a mathematical equation or expression that is used to calculate a value.

For example : A reputed book store uses Excel to maintain a record of the textbooks sold on each day and the total amount of money earned from the sale of each book.

	Function	Purpose	Example
1.	AVERAGE	To calculate the average range of numbers	=AVERAGE (B2:B50)
2.	MAX	To display the maximum value out of a given range of numbers	=MAX (A1:A200)
3	MIN	To display the minimum value of a given range of numbers	=MIN (A1:K1)
4	COUNT	To count the number of cells containing numeric data (leaving the blank cells) out of a selected range	=COUNT (B1:K20)
5	COUNTA	To count the number of cells that are not empty (leaving the blank cells), out of a selected range of cells.	

Activity & Project Tasks

Ans. Do it yourself.



Working in Photoshop

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. True 3. False
4. False 5. False

B. Fill in the blanks :

- Ans.** 1. **Photoshop** provides various tools for selecting, painting, drawing, editing, erasing and viewing images.
2. The feature that allows two or more separate images to merge as one is **gradient tool**.
3. At the time of creating a new image, you can adjust **size of image**.
4. A **Color mode** determines the colour model used to display and print images.
5. **Layer** provides a powerful method of working of one element of an image without disturbing the others.

C. Choose the right one :

- Ans.** 1. (iii) 2. (ii) 3. (iv)

D. Write one word for the following :

- Ans.** 1. .PSD 2. Filter 3. Wrap Text

4. Clone Stamp

F. Long answer type questions :

Ans. 1. Adobe Photoshop is an image editing software developed by a leading software company named Adobe Corp. It is the most popular software package for creating and modifying images for various purposes including designing of web pages, advertisements, book production, etc. Using Photoshop we can modify our old photographs to give them a cleaner and brighter look.

2. There are many tools like Crop tool, Color Replacement tool, Eraser tool, Red Eye tool, etc. which are used to edit images in Photoshop. The uses of some tools are given below :

- (i) **Crop tool** : This tool is used to remove unwanted portion of the image and in other words to retain the desired area of an image.
- (ii) **Color Replacement tool** : This tool is used to replace any colour of an image without losing any detail.
- (iii) **Eraser tool** : This tool is used to erase the colour

.of the image.

- (iv) **Red Eye tool** : It darkens a specific point to hide red eye in an image.
3. Lasso tool is used to select areas on the image; however, it gives the freedom to choose irregular shape areas. Polygon Lasso tool is used to select objects with a lot of angles because it draws only straight. Meanwhile, Magnetic Lasso tool is used to select areas which have reasonably well-defined edges.
- These tools consist of Freehand, Polygon and Magnetic selection tools.
- Steps are given below :
- STEP 1 : Right-click on Lasso Tool. Sub-palette opens.
- STEP 2 : Select any one of the three Tools from palette.
- STEP 3 : Drag the mouse over the image to get the desired selection of an image.
4. Crop tool is used to remove unwanted portion of the image and in other words to retain the desired area of an image. The area outside the selection is removed from the screen.
- To crop an image, we can follow the given steps :
- STEP 1 : Open the image. Click on the Crop Tool.
- STEP 2 : Drag the mouse over the part of the image we want to retain. Rest of the portion will be removed. Press Enter.
- Image gets cropped.

5. File format is the extension required necessarily after the name of the file. Photoshop file formats are used to save the images in different formats according to the usage.

Five Photoshop file formats are :

- | | | |
|---------|----------|---------|
| 1. .PSD | 2. .JPEG | 3. .GIF |
| 4. .PNG | 5. .TIFF | |

G. Short answer type questions :

- Ans.** 1. Filter helps to give special effects to the image or selected portion of an image. There is long list of built-filters in Photoshop.
2. **.JPEG** file format is commonly used extension to image files. JPEG stands for Joint Photographic Expert Group. While **.GIF** file format is commonly

Activity & Project Tasks

- Ans.** Do it yourself.



6

More About Internet

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. False 2. True 3. False
4. False 5. True 6. False

B. Fill in the blanks :

- Ans.** 1. **Internet Explorer** and **Mozilla Firefox** are popular web browsers.
2. The online buying and selling of goods and services is known as **E-commerce**.
3. **Usenet** is an example of a newsgroup.
4. TTFN stands for **Ta Ta For Now**.
5. Search engines are useful when you don't know the **URL** of a site.

C. Choose the right one :

- Ans.** 1. (iii) 2. (ii) 3. (iv)

D. Write one word for the following :

- Ans.** 1. World Wide Web
2. Web browser
3. URL
4. Search Engine
5. E-mail

E. Write the difference :

- Ans.** 1. **Shareware** are software which can be downloaded for free but after sometime we will have to pay to use the software. While **Freeware** are software that can be downloaded for free and used by anybody.
2. A **Hacker** is an intelligent person who is an expert on programming languages and computer systems. Hackers enjoy breaking into computer systems and gaining unauthorized access to private networks for fun. While a **Cracker** is a person who gets unauthorized access into an individual or organization's computer system to cause harm. Crackers should cause damage to the data stored in the computer or steal the confidential data.
3. The **E-mail** is a fast, easy and inexpensive way of communicating over the Internet. It is one of the earliest and most popular services of the Internet whereas **Instant Messaging** programs allow us create a group which consists of friends, family or people at work, with whom we can engage in a private chat when we are online.

F. Answer these questions :

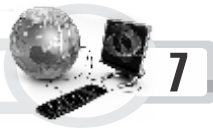
- Ans.** 1. While sending e-mails, certain etiquettes should be followed. They could be listed as :
- Our e-mail should always have a subject.
 - It is rude to use all uppercase letters while typing a message. IT LOOKS LIKE WE ARE SHOUTING.
 - We should check the mail for spelling and grammatical mistakes before sending it.
 - Do not send Spam (junk mail).
 - We should avoid sending large attachments with the e-mails unless we have notified the receiver.
2. The Internet is an open forum. Anyone has the right to upload the information they want over the Net. In fact, there is very little control over what is being published. Net users believe what they find on the World Wide Web to be authentic and are often cheated. No, all the information we find on the Net is correct, hence it is important to look for reliable sources only.
- The **Internet Watch Foundation (IWF)** was established in 1996 to focus on removing illegal material from the Internet.
3. Video Conferencing is a facility provided by the Internet where a group of people placed all over the globe can have an online conversation. They can hear and see each other and at the same time exchange text messages. It is a form of communication using a combination of video, audio and text data.
4. The Internet is a global network of computers and is constantly increasing in size and capability. With the

growth of the Internet the quality, quantity and variety of information has also changed. The Internet has no single governing body and so there are no official rules and regulations to control the activities involving it. This has led to many problems being associated with the Internet.

5. E-Commerce refers to the buying and selling of goods and services online. The Internet is becoming extremely popular as a place to carry out business, manufacturing and can only be read and used; they cannot be modified by the user.

Activity & Project Tasks

Ans. Do it yourself.



7

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. True 3. False 4. True
5. False 6. True 7. True 8. True

B. Fill in the blanks :

- Ans.** 1. HTML stands for **Hyper Text Markup Language**.
2. HTML elements that include both an ON tag and an OFF tag are called **container** elements.
3. HTML elements that include only an ON tag and no OFF tag are called **empty** elements.
4. An HTML document can have **.html** or **.htm** as its extension.
5. HTML documents have two distinct parts, **the Head section** and **the Body section**.
6. The **bgcolor** attribute allows you to specify a colour to be used as background in the web page.

C. Choose the right one :

- Ans.** 1. (iv) 2. (i)

D. Write one word for the following :

- Ans.** 1. World Wide Web 2. .html
3. Tags 4. HTML
5. Web browser 6. HTML 5.1
7. Tag 8. Container Element
9. Empty Element 10. Title Element

E. Answer these questions :

Introduction to HTML

- Ans.** 1. HTML is the acronym for Hypertext Markup Language. It is a computer language that is used for creating web pages.

HTML is a language for describing the structure of a document. It defines a set of common styles for web pages, for example, headings, paragraphs, lists etc. It is a **scripting language** (or markup language) which differs completely from programming languages.

2. HTML is a simple scripting language, mainly used for developing web pages. It is easy to learn and simple to understand. It is an important language because it is the base of Internet.

Today, Internet has become a part of our life and this service has become possible due to this language.

Some features of HTML are :

- HTML is not a programming language but a markup language.
 - It creates simple text files using an HTML editor.
 - It consists of markup tags.
 - It is saved with the extension of .htm or .html.
 - It is not case sensitive, that is <HTML>, <html> or <HTml> are the same.
3. The elements that contain both the ON and OFF tags (also known as Opening and Closing tags) are called **Container Elements**. While **Empty elements** have only an ON tag and no OFF tag. The Empty elements

do not act on blocks of text, but perform a general operation on their own.

4. Document tags are needed for every HTML document. These tags are used to describe the overall structure of the page and also provide the header information.

Four basic document tags are :

- (i) **HTML Element** : It is a container element having both the ON and the OFF tags. The HTML element identifies the document as an HTML document.

```
<HTML>
```

```
...
```

```
...
```

```
</HTML>
```

- (ii) **HEAD Element** : HEAD is a container element. It is the first thing given after the HTML element and marks the beginning and the end of Head section of the HTML document.

- (iii) **TITLE Element** : TITLE is also a container element and is used within the HEAD element. It is used to give a title to the document. It does not have any other attribute with it.

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> WELCOME TO HTML
```

```
</TITLE>
```

```
</HEAD>
```

```
</HTML>
```

- (iv) **BODY Element** : BODY element is also a container element. This element identifies the main part, i.e., the Body section of the document which includes all the text, graphics, images and tags that make the web page.

5. Tag attributes are the features that provide further options for the tag.

Five attributes of BODY tag are :

- (i) background (ii) bgcolor
(iii) text (iv) link
(v) alink

bgcolor Attribute

The bgcolor attribute is used to set the color of the background. The colors are specified in RR GG BB format (Red, Green, Blue).

The syntax of BODY element with bgcolor attribute is

```
<BODY bgcolor = "color">
```

```
...
```

```
...
```

```
</BODY>
```

where color means a name or code of a color.

Example :

The following example of HTML codes shows the use of bgcolor attribute.

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> USAGE OF BGCOLOR </TITLE>
```

```
</HEAD>
```

```
<BODY bgcolor = "Aqua">
```

```
<H1> WELCOME TO HTML </H1> <H3> This page
```

```
displays the use of a color the background
```

```
</H3>
```

```
</BODY>
```

```
</HTML>
```

Activity & Project Tasks

Ans. Do it yourself.



8

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans. 1. True 2. False 3. True 4. True
5. True 6. False

B. Fill in the blanks :

- Ans. 1. The full form of HTML is **Hyper Text Markup Language**.
2. There are **6** different levels of headings in HTML.
3. The align attribute can be added to the **heading** tag to center, left or right align the heading.
4. Blank spaces can be added in the text by using the ** ** code.
5. To start a new line, the empty element **
** is used.

C. Choose the right one :

- Ans. 1. (ii) 2. (iv) 3. (ii)

D. Write one word for the following :

- Ans. 1. Paragraph **<P>.....</P>** tag
2. ** **
3. Break **
** tag
4. six
5. **<Center>.....</center>** tag

6. Bold **.....** tag
7. Italic **<I>.....</I>** tag
8. **<Strike>.....</Strike>** tag

E. Answer these questions :

- Ans. 1. To change the alignment of text in a paragraph, Align attribute can be used. Align attribute can take any one of the four values, i.e., align = left, align = center, align = right or align = justified.

Syntax : **<P align = label> </P>**

where label can take the values left, center, right or justified.

Example :

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> PARAGRAPH ALIGNMENT </TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<P align = left>
```

```
This Paragraph is aligned to the Left </P>
```

```
<P align = center>
```

```
This Paragraph is Center aligned </P>
```

```
<P align = right>
```

This Paragraph is aligned to the Right </P>
 <P align = justified>
 This Paragraph has Justified alignment </P>
 </BODY>
 </HTML>

2. (i) **The syntax for changing the Font :**

 Where 'name' stands for the name of a font.
- (ii) **The syntax for changing the Font size :**

 Where 'val' stands for the value that the size attribute can take.
3. To bolden or italicise text, the container elements or <I>.....</I> can be used.

Example :

```
<HTML>
<HEAD>
<TITLE> Text Style </TITLE> </HEAD>
<BODY>
<B> HELLO WORLD </B>
<I>HELLO WORLD </I>
</BODY>
</HTML>
```

4. Text can be made to appear in the center by using the

container element <CENTER>.
 Syntax : <CENTER> </CENTER>

Example :

```
<HTML>
<HEAD>
<TITLE> CENTER TEXT </TITLE> </HEAD>
<BODY>
<H1>
<CENTER> WELCOME TO HTML </CENTER>
</H1>
</BODY>
</HTML>
```

Activity & Project Tasks

Ans. Do yourself



Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

Ans. 1. True 2. False 3. False 4. True

B. Fill in the blanks :

- Ans.**
1. GUI stands for **Graphical User Interface**.
 2. A single VB project can have many **forms**.
 3. **Specified action** is one of the properties of a command button.
 4. Option button Control is used to create **radio** buttons.

C. Choose the right one :

Exercise

A. Answer the following as 'TRUE' or 'FALSE' :

Ans. 1. True 2. False 3. False 4. True

B. Fill in the blanks :

- Ans.**
1. GUI stands for **Graphical User Interface**.
 2. A single VB project can have many **forms**.
 3. **Specified action** is one of the properties of a command button.
 4. Option button Control is used to create **radio** buttons.

C. Choose the right one :

Ans. 1. (ii) 2. (iv) 3. (ii)

D. Answer these questions :

- Ans.**
1. The file extension of a Visual Basic form is **.frm**.
 2. The Toolbox contains the tools (like buttons, check boxes, etc.) which can be clicked and drawn in the form. Each tool in the toolbar is accessed by a click of a mouse button and each control in the toolbox has a unique purpose to perform.
 3. Executing the first visual basic program :
 The steps are :

- (i) First we open our first project “Project1”.
- (ii) From the Menu Bar, click Run → Start. Key F5 can also be pressed to directly run the project.
- (iii) We see the window when the project is executed.
- (iv) To stop the execution and return back to the editing mode, we click the cancel/close button (×).

4. Adding controls in the project

The steps are :

- (i) In the new project window. we select the command button and drag the control in the form area.
- (ii) Default name “Command1” will appear on the command button. To make any change in the command button, its properties should be changed.
- (iii) To open the property of any control, say command1, we select it and then from the menu bar, click View → Properties Window (Key F4 can also be pressed.)
- (iv) **The property window appears on the right side of the screen.**
- (v) **Select option Property and change the name to “EXIT”.**
- (vi) Form name can also be changed in the similar manner to “Beginner Form”.
- (vii) Execute the Form by pressing key F5.

Activity & Project tasks

Ans. Do it yourself.

**Exercise**

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. True 2. False 3. True
4. False 5. False

B. Fill in the blanks :

- Ans.** 1. A **computer virus** are small software programs that are made in such a way that they spread from one computer to another and interfere with the computer operation.
2. VIRUS stands for **Vital Information Resource Under Siege**.
3. Computer viruses are in fact similar to the **biological** viruses which infect the living things.
4. **Multipartite** is hybrid of both boot and program viruses.
5. **Antivirus** software is used to prevent, detect and remove malware, including computer viruses, worms and Trojan horses.

C. Choose the right one :

- Ans.** 1. (ii) 2. (iv) 3. (iii)
4. (iii) 5. (iv)

D. Write one word for the following :

- Ans.** 1. Stealth Virus 2. Boot Virus
3. Program Virus 4. E-mail Virus
5. Metamorphic Virus

E. Answer these questions :

- Ans.** 1. The similarities between a biological virus and computer virus are :
- A biological virus destroys the cells of the body, likewise a computer virus is a program that is secretly put onto a computer in order to destroy the information that is stored in it.
 - Like a biological virus, it can form multiple copies of itself inside another computer. It needs some other program or document in order to launch. Once it is running, it can infect other programs and

documents.

- Like a biological virus, we do not realise the presence of a computer virus until our computer has already been affected.
2. Computer viruses are small software programs that are designed to spread from one computer to another and to interfere with computer operation. By definition, a virus program is able to replicate itself. This means that the virus multiplies on a computer by making copies of itself.
3. The word “Heuristic” is Greek for “To find”. When the word is applied in the world of computer science, it generally refers to a software that's able to resolve a problem with alternative methods with the goal of reducing overall processing time. Various software companies use heuristics to scan files and programs for suspicious code likely to be found in a virus and not in a legitimate program.
4. Antivirus software is used to prevent, detect and remove malware, including computer viruses, worms and Trojan horses. Some commercial antivirus scanners use heuristic signatures to look for specific attributes and characters for detecting viruses. Examples of Antivirus software are Kaspersky, AVG, Norton etc.
5. Antivirus software is very useful to us. It is useful in preventing, detecting and removing destructive programs which are very harmful to our computer. Trojan like programs are extremely dangerous to our computer's security. These programs help hackers and crackers to steal data from our computer. Antivirus programs remove these type of programs.

Activity & Project Tasks

- Ans.** Do it yourself

Transferring of Data in a Computer

Exercise

Based on NEP 2020

A. Choose the right one :

Ans. 1. i 2. ii.

B. Fill in the blanks :

- Ans. 1. The Number system used for codes in digital computers is **binary number system**.
2. An 8-bit unit used to code digital data is called a **byte**.
3. The unit used to measure computer clock speed is **GHz**.
4. The two main components of a computer are **hardware** and **software**.
5. In the decimal system $1+1 = 2$, but in the binary system $1 + 1 = 10$.
6. Total number of unique digits in a hexadecimal number system is sixteen.
7. A pen drive is a **secondary** storage media.
8. The process of recording data onto CDs is called **burning data**.

C. Answer the following as 'TRUE' or 'FALSE' :

- Ans. 1. True 2. False 3. False
4. False 5. False 6. True

D. Correct the following statements :

- Ans. 1. Earlier humans used rocks, pebbles for counting.
2. Pascaline was introduced in 18th century.
3. Punched cards were developed by Herman Hollerith.
4. The computer has two main components.
5. The Binary system has only two digits.

E. Answer these questions :

- Ans. 1. (a) John Napier developed Napier's bones.
(b) Blaise Pascal developed Pascaline Machine.
(c) Charles Babbage developed Analytical engine.
2. Parts of CPU are :
(a) **ALU** : It performs all the arithmetic calculations.
(b) **CU** : It controls the flow of control of each operation.
(c) **Storage Unit/Memory Unit** : It holds the results of calculations.
3. (i) 7

Convert decimal to binary.

$$7 = \begin{array}{r|l} 2 & 7 \text{ Remainder} \\ \hline 2 & 3 \quad 1 \\ \hline 0 & 1 \quad 1 \end{array} = 111$$

$$13 = \begin{array}{r|l} 2 & 13 \text{ Remainder} \\ \hline 2 & 6 \quad 1 \\ \hline 2 & 3 \quad 0 \\ \hline 0 & 1 \quad 1 \end{array} = 1101$$

$$25 = \begin{array}{r|l} 2 & 25 \text{ Remainder} \\ \hline 2 & 12 \quad 1 \\ \hline 2 & 6 \quad 0 \\ \hline 2 & 3 \quad 0 \\ \hline & 1 \quad 1 \end{array} = 11001$$

$$88 = \begin{array}{r|l} 2 & 88 \text{ Remainder} \\ \hline 2 & 44 \quad 0 \\ \hline 2 & 22 \quad 0 \\ \hline 2 & 11 \quad 0 \\ \hline 2 & 5 \quad 1 \\ \hline 2 & 2 \quad 1 \\ \hline & 1 \quad 0 \end{array} = 1011000$$

$$121 = \begin{array}{r|l} 2 & 121 \text{ Remainder} \\ \hline 2 & 60 \quad 1 \\ \hline 2 & 30 \quad 0 \\ \hline 2 & 15 \quad 0 \\ \hline 2 & 7 \quad 1 \\ \hline 2 & 3 \quad 1 \\ \hline & 1 \quad 1 \end{array} = 1111001$$

(ii) Convert from binary to decimal system.

$$111, 1011, 111000, 10101, 100001$$

$$111 = 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0 = 4 + 2 + 1 = 7$$

$$1011 = 1 \times 2^3 + 0 \times 2^2 + 1 \times 2^1 + 1 \times 2^0 = 8 + 0 + 2 + 1 = 11$$

$$111000 = 1 \times 2^5 + 1 \times 2^4 + 1 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 0 \times 2^0 = 32 + 18 + 8 = 56$$

$$10101 = 1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 = 16 + 4 + 1 = 21$$

$$100001 = 1 \times 2^5 + 0 \times 2^4 + 0 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 = 32 + 1 = 33$$

(iii) Convert into binary and add.

$$4 = \begin{array}{r|l} 2 & 4 \\ \hline 2 & 2 \quad 0 \\ \hline & 1 \quad 0 \end{array}, \quad 6 = \begin{array}{r|l} 2 & 6 \\ \hline 2 & 3 \quad 0 \\ \hline & 1 \quad 1 \end{array}$$

$$4 + 6 = \begin{array}{r} 100 \\ = 10 \quad 110 \\ \hline 1010 \end{array}$$

$$13 = \begin{array}{r|l} 2 & 13 \\ \hline 2 & 6 \quad 1 \\ \hline 2 & 3 \quad 0 \\ \hline & 1 \quad 1 \end{array}, \quad 23 = \begin{array}{r|l} 2 & 23 \\ \hline 2 & 11 \quad 1 \\ \hline 2 & 5 \quad 1 \\ \hline 2 & 2 \quad 1 \\ \hline & 1 \quad 0 \end{array}$$

$$\begin{array}{r}
 13 + 23 = \quad 1101 \\
 = 36 \quad \quad 10111 \\
 \quad \quad \quad 100100
 \end{array}$$

$$\begin{array}{r}
 15 = 2 \mid 15 \mid \\
 \quad 2 \mid 7 \mid 1 \\
 \quad 2 \mid 3 \mid 1 \\
 \quad \mid 1 \mid 1 \\
 \quad \quad \quad , \\
 22 = 2 \mid 22 \mid \\
 \quad 2 \mid 11 \mid 0 \\
 \quad 2 \mid 5 \mid 1 \\
 \quad 2 \mid 2 \mid 1 \\
 \quad \mid 1 \mid 0
 \end{array}$$

$$\begin{array}{r}
 15 + 22 = \quad 1111 \\
 = 37 \quad \quad 10110 \\
 \quad \quad \quad 100101
 \end{array}$$

$$\begin{array}{r}
 50 = 2 \mid 50 \mid \\
 \quad 2 \mid 25 \mid 0 \\
 \quad 2 \mid 12 \mid 1 \\
 \quad 2 \mid 6 \mid 0 \\
 \quad 2 \mid 3 \mid 0 \\
 \quad \mid 1 \mid 1 \\
 \quad \quad \quad , \\
 10 = 2 \mid 10 \mid \\
 \quad 2 \mid 5 \mid 0 \\
 \quad 2 \mid 2 \mid 1 \\
 \quad 2 \mid 1 \mid 0
 \end{array}$$

$$\begin{array}{r}
 50 + 10 = \quad 110010 \\
 = 60 \quad \quad 1010 \\
 \quad \quad \quad 111100
 \end{array}$$

$$\begin{array}{r}
 122 = 2 \mid 122 \mid \\
 \quad 2 \mid 61 \mid 0 \\
 \quad 2 \mid 30 \mid 1 \\
 \quad 2 \mid 15 \mid 0 \\
 \quad 2 \mid 7 \mid 1 \\
 \quad 2 \mid 3 \mid 1 \\
 \quad \mid 1 \mid 1 \\
 \quad \quad \quad , \\
 133 = 2 \mid 133 \mid \\
 \quad 2 \mid 66 \mid 1 \\
 \quad 2 \mid 33 \mid 0 \\
 \quad 2 \mid 16 \mid 1 \\
 \quad 2 \mid 8 \mid 0 \\
 \quad 2 \mid 4 \mid 0 \\
 \quad 2 \mid 2 \mid 0 \\
 \quad \mid 1 \mid 0
 \end{array}$$

$$\begin{array}{r}
 122 + 133 = \quad 1111010 \\
 = 255 \quad \quad 10000101 \\
 \quad \quad \quad 11111111
 \end{array}$$

4. Let's learn how to save our work in a pen drive.

Saving Files in a Pen Drive

Step 1 : Insert a pen drive in the USB port of your computer.

Step 2 : Right click the file that you want to save in the pen drive.

Step 3 : A drop-down menu appears. Click on Copy.

Step 4 : Now, double click on the My Computer icon.

Step 5 : A window opens up with all the drives installed on your computer.

Step 6 : Double click on the icon, showing the pen drive.

Step 7 : A window opens and shows the existing content. Right click anywhere, a menu appears, select Paste.

Step 8 : The file that was copied gets transferred into your pen drive.

5. Saving Files in a CD

It is essential to keep a back up of the data we feed into our computers. If the computer crashes, all data is lost. To save the files on a CD, special software like Express Burn, Nero Pyro, Roxio Creator, etc., is required. CD burning (writing) software makes copying important data easy and fast.

To burn a CD :

Step 1 : Double click on the CD writer program Nero icon on the desktop. It opens a window.

Step 2 : Select CD from the drop-down menu that appears on the top, and then click on Make Data CD.

Step 3 : A Nero Express Essentials dialog box opens up. Click on Add.

Step 4 : A dialog box opens. Locate the files in the computer and select one or more files that you want to copy to the CD. Click on Add. Once you have added the files, click on Close.

Step 5 : The selected files get copied, ready to be burned on the CD.

Step 6 : Click on Next.

Step 7 : Check the two boxes given there. This will verify once your data is burned on the CD and will allow you to add data later in the same CD.

Step 8 : Click on Burn

Step 9 : The burning process starts.

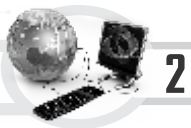
Step 10 : Once the CD-burning process is complete, a message will indicate the successful completion of the process. Click on OK. Your CD automatically comes out.

Step 11 : Click on Next.

Step 12 : Click on the Close button to close the application.

Activity & Project Tasks

Ans. Do it yourself.



2

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

Ans. 1. TRUE 2. FALSE 3. TRUE 4. FALSE

B. Fill in the blanks :

- Ans.**
- Quick Access Toolbar** allows access to common commands.
 - File tab** is similar to the Office Button Menu of PowerPoint 2007.
 - PowerPoint files are called **presentations**.

4. **Placeholders** are areas on the slide that are enclosed in dotted borders.
5. Text can be inserted in a **place holder** and **text box**.
6. **Screenshots** are pictures that capture that visible windows and items displayed on your computer screen.

C. Choose the right one :

Ans. 1. iv. 2. i. 3. iii. 4. iv. 5. ii.

D. Find and match the names of the icons to the words in the box :

Ans.

New Slide
My Templates
Title Slide
Text Box
From Beginning
PowerPoint
Insert Table
Insert Chart
Insert Smart Art Graphic
Insert Picture from File
Clip Art
Insert Media Clip

E. Write one word for the following :

- Ans. 1. The Ribbon 2. Quick Access Toolbar
3. PPT 4. Normal View
5. Slide Sorter View

F. Answer these questions :

Ans. 1. **Features of MS PowerPoint 2010**

1. The Ribbon

The Ribbon contains multiple tabs, each with several groups of commands. Some tabs, like Drawing Tools or Table Tools appear only when we are working with certain items like images or tables.

2. Quick Access Toolbar

Quick Access Toolbar is located above the Ribbon. It allows access to common commands. By default, it shows the Save, Undo, and Repeat commands.

2. A slide represents a page in a Slide Show. Slides contain placeholders, which are areas on the slide that are enclosed by dotted borders.
3. A placeholder is a kind of text box, but is unique because it is a part of the slide layout, and often contains formatting specific to the slide. It can contain many different items including text, pictures, charts and more.

We can use a placeholder by single or double click on it. To write text in a placeholder, we can double click inside the placeholder and to use a table, chart, smart art, picture, clipart or media file, we need to single click on the icons inside the placeholder.

4. A presentation can be viewed in the following ways after it is ready.

Normal View : This is the default view where we can create and edit our slides.

Slide Sorter View : In this view, miniature slides are arranged on the screen. We can drag and drop slides to easily reorder them, and see more slides at one time.

Reading View : This view includes easily accessible buttons for navigation, located at the bottom right.

Slide Show View : This view completely fills the computer screen and is what the audience will see when they view the presentation.

5. Creating a New Presentation

Step 1 : Click the File tab. This takes us to Backstage view.

Step 2 : Select New.

Step 3 : Select Blank presentation under Available Templates and Themes. It will be highlighted by default.

Step 4 : Click Create. A new blank presentation appears in the PowerPoint window.

Activity & Project Tasks

Ans. Do it yourself.



E-Governance

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans. 1. FALSE 2. TRUE 3. FALSE
4. TRUE 5. TRUE.

B. Fill in the blanks :

- Ans. 1. **E-Government** gives transparent access to government services.
2. **E-Governance** increases automation of government formalities.
3. The website of your local government is **www.up.gov.in**
4. Payment of utility bills comes under **G2C** category of interaction.
5. E-government is also referred to as the **digital** government.

C. Choose the right one :

- Ans. 1. iii. 2. ii. 3. ii.

D. Write one word for the following :

- Ans. 1. e-government 2. G2C
3. G2E 4. G2B
5. G2G

E. Answer these questions :

- Ans. 1. E-Governance is a digital service that aims to be a one-step portal where the citizens of the nation can have easy and transparent access to government services and their related information.
2. E-government plays an important role in judiciary and legislature departments. Any scheme launched by government can be checked on web portal. The web portal provides access to the information and services offered by the government like Indian government to the citizens. We can check the record of cases processing in High Court and Supreme Court on the web portals.
3. E-governance is gaining popularity day by day

because it reduces paperwork and increase automation of tedious government formalities. This system brings transparency between the government and the citizens of the country. It has improved the efficiency of the functioning of government departments and the related public services.

4. The interaction is defined to be of the following categories :

G2C—Government to Citizens

Citizens get a transparent view of how the government functions and also interact directly with the government through a powerful one-stop portal.

G2B—Government to Business

Large corporations and business can carry out the legal formalities through these portals.

G2E—Government to Employees

This type of interaction deals with governmental interactions between an active worker and the government.

G2G—Government to Government

In this type of interaction, the information is shared among the government departments for carrying out various activities.

5. There are many non-internet based technologies that are involved to regulate the functioning of e-government. Some examples include using FAX, PDA, SMS, wireless services, CCTV, automatic tracking systems, Bluetooth technologies, biometric verification technologies, smart cards and id-cards.
6. The modern polling stations, road traffic management, mailing lists, instant chat and messaging services, digital notification of transactions, newsgroups fall under e-governance initiatives.

Activity & Project Tasks

Ans. Do it yourself.



Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. TRUE 2. FALSE 3. TRUE 4. FALSE
5. TRUE 6. TRUE 7. FALSE 8. TRUE

B. Choose the right one :

- Ans.** 1. iii. 2. i. 3. iv. 4. i.

C. Define these :

- Ans.** 1. A record is a collection of related fields. In a table, rows are consider as records. Records and fields together make the table.
2. Quick Access Toolbar has access to the most-frequently used commands like Save, Undo and Redo. We can add more commands to it.
3. Status Bar displays information about the database and includes button to change views.
4. Hyperlink is the text or combination of text and numbers stored as text and used to navigate.
5. A Primary Key is a field which uniquely identifies a record. For example, Roll No is a Primary Key for the table 'Student'.

D. Match the following :

- Ans.** 1. Database — i. A collection of values
2. Record — ii. A collection of data records
3. Value — iii. A collection of files
4. File — iv. A collection of fields
5. Field — v. The smallest unit

E. Answer these questions :

- Ans.** 1. Database management involves creating, modifying, deleting and adding data in a database. The software that performs these functions is known as Database Management System (DBMS). Some popular DBMS software are MS Access, Clipper, and FoxPro.
2. To start Microsoft Access 2010, we can follow the steps given below :
Step 1 : Click on the **Start** button.
Step 2 : Click on **All Programs**.
Step 3 : Select Microsoft Office and click on **Microsoft Access 2010**.
We see the opening screen of Microsoft Access 2010.

Introducing MS Access 2010

Step 4 : Click on Blank database (it is selected by default when we start MS Access 2010 for the first time). Type a name for the database file in the File Name box on the right pane. To change the location of the file, click of Browse button.

Step 5 : Click on Create. We will get the MS Access 2010 window.

3. **Text :** It stores text, combination of text and numbers (like addresses) and numbers that will not be used in calculations (like phone numbers and postal cards). It can store upto 255 characters

Memo whereas **Memo** stores long text like notes and descriptions. It can store upto 65,536 characters.

4. To define a Primary key, we can follow the steps given below :

Step 1 : Click on the down arrow of the View option in the Views group under the Fields tab. A list of views appears.

Step 2 : Click on the Design View from the list.
OR

Click on the Design View button on the Status bar.

Step 3 : Select the field name ID.

Step 4 : Click on the Primary Key button, present on the Tools group under the Design tab.

OR
Right-click on the header of the column that will be the Primary key and then click on Primary Key from the shortcut menu that appears.

Step 5 : Change the name of the field to Roll No.

5. To change the width of a column, the steps are as follows :

Step 1 : Take the mouse pointer on the right border of a column header. The mouse pointer changes into a horizontal double arrow crossed by a vertical line.

Step 2 : If we double-click now, the column would be resized to the widest possible size of that type.

OR
We can click the columns' right border and drag it to the desired direction, left or right, until we get the desired width.

6. Sorting is the way to arrange numbers in ascending or descending order. To sort data, we can follow the steps given below :

Step 1 : Click on the drop down arrow on the right of the field name we want to sort.

Step 2 : Click on Sort Smallest to Largest to sort data in ascending order or click on Sort Largest to Smallest to sort data in descending order. Choose according to the requirement.

The records will be arranged in the ascending/descending order as per the selection.

A small upward/downward arrow will also appear in the sorted field name.

OR

We can click on the **Ascending/Descending** option in the **Sort & Filter** group under the **Home** tab.

7. Table, Form, Query and Report are the different types of database objects.
8. **Query** is used to retrieve data from one or more tables based on some criteria and to display it on screen. Where **Report** displays the data in a printed format.
9. The Create tab contains commands that allow users to create database objects.

To create a table, open the Create tab, and then click on the Table button. We will get the MS Access window. This window contains an empty table named Table 1 in the Datasheet view. This table contains a field, called ID.

10. Rules for typing a field name are :
- A field name can be from 1 to 64 characters long.
 - A field name can include letters, numbers and some special characters. The underscore (_) sign is allowed.
 - A field name cannot type [] symbol.
 - Field names cannot start with a blank space. They can be written in uppercase, lowercase or both.
11. To rename a field name, we follow the steps given below :
- Step 1 : Take the mouse pointer to a field that we want to rename.
- Step 2 : Right-click on that field. A pop-up menu will appear.
- Step 3 : Click on the Rename Field option and change the field name.

Activity & Project Tasks

Ans. Do it yourself.



5

Macromedia Flash 8

Exercise

Based on NEP 2020

Section : 1

A. Answer the following as 'TRUE' or 'FALSE' :

Ans. 1. TRUE 2. FALSE 3. TRUE 4. TRUE

B. Fill in the blanks :

- Ans. 1. **Rectangle** tool is used to make a square.
2. **Frame** represents the content of the movie at one point of time.
3. The layer that you work on is called **Active layer**.
4. **Timeline panel** is an area on the screen to work with layers and frames.

C. Choose the right one :

Ans. 1. ii. 2. iv. 3. iv. 4. i

D. Write one word for the following :

- Ans. 1. CS6 document 2. Stage
3. Symbol 4. Library

E. Short answer type questions :

- Ans. 1. A layer is a transparent sheet which contains various objects and can be played on top of each other. We can add layers, delete and change the position of layer. To add a layer, we can simply click on Insert layer icon present on the Timelin panel.
2. A symbol is a graphic, image, animation or button. The use of symbol helps to keep the file size small. There are mainly three types of symbols i.e., Graphics, Buttons, Movie Clips.
3. A frame represents the content of movie at one moment of time.
4. Eyedropper tool is used to copy the color from one object to another.
5. Keyframes are those frames where major changes in animation take place. We can say that a keyframe is a

major frame which signals a change or action. A keyframe is identified by a black circle in a frame (.

F. Long answer type questions :

- Ans. 1. Free Transform tool can be used to scale, rotate, compress, stretch and skew the object or shape. It has four options i.e. Rotate and Skew, Scale, Distort and Envelope.

To Rotate and Skew

Step 1 : Select the object and click on Free Transform tool.

Step 2 : Choose Rotate and Skew from Options in Tools Palette.

Step 3 : Drag the corner handle to rotate the object and drag left or right the center handle to skew the object.

To Scale

Step 1 : Select the object and click on Free Transform tool.

Step 2 : Select Scale from Options in Tools Palette.

Step 3 : Drag the corner handle up and down to scale the object.

To Distort

Step 1 : Select the object and click on Free Transform tool.

Step 2 : Choose Distort from Options in Tools Palette.

Step 3 : Drag the handle to distort the object.

To Envelope

Step 1 : Select the object and click on Free Transform tool.

Step 2 : Choose Envelope from Options in Tool Palette.

Step 3 : Drag the handle to give the desired shape to

an object.

2. Advantages of Using Flash

- It provides interactive graphics and animation for the web.
 - It is a powerful drawing tool and a movie editor.
 - It is easy to use with drag-and-drop user-interface components.
 - It provides several special effects that we can add to objects.
 - It is not dependent on browsers.
 - Graphics created in Flash are much smaller in file size.
 - Animated presentations created in Flash can be converted into executable .exe files. This file then can be executed directly by the computer system.
 - We can attach and work with sound files to enhance an animation.
3. The Property Inspector displays the properties of the selected objects. Some of the properties are Stroke Color, Fill Color, Stroke Height and Stroke Style. To set the frame rate, color, background and ruler units, we use the following steps :
- Step 1 :** Click **File** → **New**. The **New Document** dialog box appears. Select the **Flash File** → **Click OK**.
- Step 2 :** Select **Modify** → **Document**. The **Document Properties** dialog box appears. Then we can make the desired changes with the help of **Document Properties** dialog box.
4. Grouping allows us to combine different shapes together as one. To group the shapes, select all the shapes one by one and click on **Modify** menu and select **Group**. Or press **Ctrl + G**. To ungroup the shapes, select **Ungroup** from the **Modify** menu. Or press **Ctrl + Shift + G**.
5. Animation is the display of sequence of images in a manner to show movement. There are two ways of creating animation.
1. Frame by Frame Animation
 2. Animation with Tweening Effect : Motion tweening and Shape tweening

Frame by Frame Animation

The basic form of animation is frame-by-frame animation. We need to create the object for each frame to produce an animation sequence.

The steps to create frame-by-frame animation are :

Step 1 : Select the Text tool from the Tools panel and type "T". Set the font, font size, and color for the text

in the Property Inspector.

Step 2 : Click on second frame on the timeline window. Insert a keyframe by selecting

Insert→ Timeline → Keyframe or by pressing F6.

Step 3 : Click on stage and type "E" next to "T".

Step 4 : Similarly, keep on adding keyframes for each letter and type N, D, U, L, K, A and R.

Animation with Tweening Effects

Motion Tween Animation

Motion tweening is moving an object from one place to another. Motion tween can also mean changing colors over time.

Steps to create motion tween are :

Step 1 : Select the first frame and draw a shape. For example, a ball and convert it into a symbol. You can see a blue square around the image.

Step 2 : Select desired frame, say 25 and insert a keyframe by pressing F6.

Step 3 : We see all the frames from 2 to 24 are grey in color. And last frame i.e. 25 has a fill with a black dot. It indicates that it is keyframe.

Step 4 : Select the frame 25 and move the ball to another location on stage.

Step 5 : Select any frame between 2 to 24.

Step 6 : Right-click at the grey area and select **Create Motion Tween**.

Step 7 : Play the movie, we see the ball moving from one place to another.

Shape Tween Animation

Shape tween makes a drawing changes into another drawing. There is no need to convert drawing into symbol as it doesn't work in symbols.

The shape to create shape tween animation :

Step 1 : Select the first frame and draw an object, say square.

Step 2 : Select frame 30 and insert a keyframe. Select the object on frame 30 and delete it.

Step 3 : Draw another object from 30 for example circle.

Step 4 : Click any frame between 2 to 30 and select **Shape** from **Tween** drop-down list in the Property Inspector.

Step 5 : Timeline window changes into light-green color with an arrow appears in between the frames.

Activity & Project Tasks

Ans. Do it yourself.

Introduction to Networking

communication.

2. The types of transmission channels are **wired** and **wireless**.
3. In **Star** topology, all the workstations are connected to the central hub.
4. A **Server** is a computer that manages the storage and retrieval of files.



6

Exercise

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. TRUE 2. TRUE 3. TRUE
4. TRUE 5. FALSE.

B. Fill in the blanks :

- Ans.** 1. Bluetooth technology is a form of **wireless**

5. In **Local Area Network (LAN)** the computers are interconnected within a limited geographical area.

C. Choose the right one :

Ans. 1. iv. 2. iii. 3. i

D. Match the following :

- | | | |
|-------------------------------|---|---|
| Ans. 1. Coaxial cables | → | iii. Wired transmission channels |
| 2. Microwaves | → | iv. Wireless transmission channels |
| 3. Workstation | → | v. Terminal for the end use |
| 4. Server | → | ii. Manages the network |
| 5. Peer-to-peer | → | i. Equivalent capabilities of computers |

E. Answer these questions :

Ans. 1. Networking can be defined as a way to connect computers so that they can communicate, exchange information and share resources. It allows multiple users to access shared data and programs instantly.

Advantages of Computer Network

Networking of computers is a basic need of today's world. The advantages of a computer network are :

1. Speed : Sending and receiving files using a computer network is rapid. It saves time, and is more convenient as compared to files which are manually delivered.

2. Cost efficient : Individually licensed copies of many popular software programs can be costly. Storing the software on a file server and then making it available to the other computers connected to it saves money.

2. **Disadvantages of Network**

The following are the disadvantages of a computer network :

1. If the server develops a fault then users may not be able to run the application programs and chances of data loss are more.
 2. If the network stops operating then the computers connected to the network cannot be used, thus affecting the performance of the whole system.
 3. As traffic increases on a network, the performance degrades unless it is designed properly.
 4. It becomes difficult to manage as the number of computers on the network increases.
3. The different components listed here are required to connect the computers in a network.

1. Server

A Server is a computer that manages the network resources, software and files. It is normally dedicated,

i.e., it performs no other task besides the allocated task.

For example, a File server is a computer that manages storage and retrieval of files.

2. Workstation

A workstation is a computer intended for individual use in a networking environment. It is like a personal computer except that it is connected to other computers as well as to the main computer i.e., the server.

3. Network Interface Card

Network interface card is a piece of hardware placed inside the system unit. It is designed to allow computers to communicate over a computer network. It provides physical access to a networking medium.

4. Transmission Channels

Each computer in a network is interconnected through transmission channels. These channels can be wired or wireless. Data is exchanged between two computers in a network using these channels.

4. The physical arrangement of the cables, computers and other peripheral devices to form a network is known as a **topology**. A few examples of network topologies are Bus topology, Star topology, Ring topology, Mesh topology, etc.
5. The different types of topologies for a computer network are :

1. Bus Topology

Bus topology is made up of a main single cable with the terminators at both ends. It is the shared communication medium that makes the backbone of the system. Computers and the other devices including the server are connected to this linear cable for communication.

2. Star Topology

Star topology is the most common topology used. Here all the workstations are connected to a central connection point called a **hub**. Any data that is sent to the other computer, first goes to the central hub and from there it is redirected to the destination computer.

3. Ring Topology

In a ring topology, every workstation has exactly two neighbours for communication purposes. All messages travel through a ring in the same direction either 'clockwise' or 'anticlockwise'.

r

Activity & Project Tasks

Ans. Do it yourself.



7

Exercise

Based on NEP 2020

A. Fill in the blanks :

- Ans.** 1. **The Healing Brush** tool allows you to fix image imperfection such as blemishes, scratches, etc.
2. **The Clone Stamp** tool can be used to fix your image by creating a clone.

3. **The Redeye** tool is used to correct the red eye error.
4. **Eraser** tool deletes the pixels in the image.
5. **The Sharpen** tool focuses on soft edges to increase clarity.
6. **The Smudge** tool simulates the actions of dragging a finger through wet paint.

B. Choose the right one :

- Ans.** 1. i. 2. i. 3. iii. 4. ii. 5. iii.

C. Name the following :

- Ans.** 1. Rectangle Tool, Rounded Rectangle Tool, Ellipse Tool, Polygon Tool, Line Tool, Custom Shape Tool
2. Horizontal Type Tool, Vertical Type Tool, Horizontal Type Mask Tool
3. Clone Stamp Tool, Pattern Stamp Tool

D. Write the difference :

- Ans.** 1. The To rename a field name, we follow the steps given below : is one of the most important tools that helps to paint. It has numerous presets defined that can also be used whereas **Eraser tool** helps to delete pixels in the image we drag our mouse through them.
2. The **Gradient tool** fills blended colour on the image or selected part of the image whereas **Shape tools** enable us to draw geometric and predefined shapes. Using the Shape tool, different types of shapes of various sizes can be created.

E. Answer these questions :

- Ans.** 1. Photoshop provides six Shape tools that enable us to draw geometric and predefined shapes. Using the Shape tool, different types of shapes of various sizes can be created. Shape tool can also be used to create path. The step to use this tool are :
Step 1 : Create a new image file in Photoshop.
Step 2 : Select the Shape tool (use different tools) and click the mouse on the document and draw using the selected Shape tool.
2. Text can be added in Photoshop with the help of the Type tool. Text added can be like a sample heading, sample textual content, footer-copyright information, etc. Photoshop provides four different types of tools that help to add text.
The steps to add text in image are :
Step 1 : In the open image, click the Horizontal Type tool to select it. Take the mouse pointer and click on the image to start writing.
Step 2 : Using the options in the 'Options Palette', we can change the style of writing.
We can specify the color, font, size, etc. We can also add filters, alignment, spacing, leading, etc.
Step 3 : Take the mouse pointer, click and start

typing the text.

Using the type tool, we can also write text in different styles—circular, slanting, etc. For this the text path needs to be specified. The path can be specified using the pen tool or any of the shape tools and other similar tools. The steps are :

Step 1 : In the open image, use the Custom shape tool to create a shape.

Step 2 : Click the Horizontal Type tool to select it. Take the mouse pointer and it changes to Start writing.

3. The Red Eye Tool can be used to correct red eye error that may have occurred by using electronic flash. We can roughly select around the eye and set pupil diameter to easily correct the red eye. The steps to use this tools are :

Step 1 : Click File and select Open, Browse the photo on the computer, select the File name and click Open.

Step 2 : Click on the Red Eye Tool to select it.

Step 3 : Select the area we want to correct and click on that area.

4. The steps to use this tool are :

Step 1 : Select the healing brush tool in the toolbox.

Step 2 : Check the setting in the option bar and adjust if necessary. The options you may change include the Brush size.

Step 3 : If you're using sampled mode, Alt + click on area near the imperfection to define the starting point.

Step 4 : Click on and drag over the imperfection. (This can be seen here in the form of light blue dots.)

5. This tool softens hard edges or areas in an image to reduce detail as you drag. It blurs the image by lessening the amount of color contrast between neighbouring pixels. The effect of this tool can be seen from this image.

6. This tool focuses on soft edges to increase clarity and selectively sharpens by increasing the contrast between neighbouring pixels.

Activity & Project Tasks

Ans. Do it yourself.

**Exercise**

Based on NEP 2020

A. Fill in the blanks :

- Ans.** 1. **Font** property of the Form can change the font size of text of the Form title.
 2. **Command_Click ()** event is invoked when the command button is clicked.
 3. **Label** is a control which is used to display some content on the 100m.
 4. **Name** is one of the properties of the label control.
 5. **Text Box** control is used to accept values during execution.

B. Choose the right one :

- Ans.** 1. iii. 2. i. 3. iv. 4. iii. 5. iv.

C. Write the difference :

- Ans.** 1. **END Command** ends or stops the execution of the program whereas **VAL function** converts text to a number value.
 2. **Msgbox Command** is used to display a message in a separate window during the execution whereas **End Command** is used to end or stop the execution of the program.
 3. **Name Property** gives name to the Command button. The default name is **Command 1**. While **Caption Property** allows to change the name appearing on the Button.

D. Answer these questions :

- Ans.** 1. The term **Event** means “action”, which is involved through a program. An event can be invoked by clicking a button or by pressing a key. **Event Procedures** are used to handle such events. To handle events by using **Event procedures** is called **Event Handling**.
 2. **Name** and **Caption** are the two properties of a **Label**.
 3. **Value property** is used to extract the value from the text box.
 4. **The three properties of Command Button are :**
- | Property | Description |
|-------------------|--|
| 1. Name | It gives name to the command button. The default name is Command1 . |
| 2. Caption | It allows to change the name appearing on the Button. |
| 3. Font | It specifies the Font, Font style and Size of the text appearing on the button. |
5. **Text Box Control** is used to create a text box to accept value during execution. It is a control which creates a box where single line text can be entered.

6. This command ends or stops the execution of the program.

Syntax : **END**

Follow these simple steps to learn event, where **End** command is used.

Step 1 : In continuation to the program in the previous chapter, first close the executable mode of the VB program by selecting the close button.

Step 2 : Double click on the command button and the adjacent screen will appear.

Step 3 : Type the end command as shown.

Step 4 : Now re-execute the program and click the command button.

7. This command is used to display a message is used to give some indication in the program, which could be a welcome note or error message, etc.

Syntax : **Msgbox ("any message" & "control Value")**

8. Properties of Commonly used Control

Property	Description.
Name	It gives the name to the Form. The default name is Form 1 . The name is referred at the time of handling the event.
Caption	It allows to change the name appearing on the Form.
Visible	It specifies where the Form should be visible during execution or not.
BackColor	It gives the Background color to the Form.

Activity & Project Tasks

Ans. Do it yourself.

**Exercise**

Based on NEP 2020

A. Answer the following as 'TRUE' or 'FALSE' :

- Ans.** 1. TRUE 2. TRUE 3. TRUE
4. FALSE 5. TRUE

B. Fill in the blanks :

- Ans.** 1. A **network** is a collection of individual computers that are interconnected so that information can be easily exchanged.
2. The Internet is a network of **computers** spread across the world.
3. Online shopping is known as **E-Commerce**.
4. The two most commonly used protocols are **Transmission Control Protocol** and **Internet Protocol**.
5. **Macro Viruses** infect data files.

C. Answer these questions :

- Ans.** 1. A network is a collection of individual computers that are interconnected in order to facilitate and expedite the exchange of information.
2. The Internet is a network of computers spread across the world. There are millions of computers connected with this network. These computers are connected to each other using telephone lines, cables and other means.

The four uses of Internet are :

1. We can search information on any topic by using the Internet and we can also share information with anyone.
 2. We can get the latest news of the world including live videos.
 3. We can do online shopping also known as E-Commerce by using the Internet. We can place the order and the product will get delivered to our home.
 4. We can read jokes, listen the latest songs, play games and download them. So, it is also an important source of entertainment.
3. A protocol is a set of rules that the computers connected in a network have to follow.

The two most commonly used protocols are TCP (Transmission Control Protocol) and IP (Internet Protocol). Together, they are known as **TCP/IP**.

Some other example of protocols are :

1. HTTP (Hypertext Transfer Protocol)
 2. FTP (File Transfer Protocol)
 3. Telnet (Telnet Remote Protocol)
 4. SMTP (Simple Mail Transfer Protocol).
4. When information is transferred from one computer to another, it is important that both the computers, i.e.

the sender and the receiver, are using the same, set of rules. This is essential because it determines the format in which data is being sent. This set of rules is called **File Transfer Protocol (FTP)**.

File information can be transferred through channels like a telephone line. When a file is sent to another computer, the process is called uploading.

When the file is copied in a remote computer, the process is called downloading.

5. Viruses are categorized by their infection targets. They can be :

Program Viruses : These infect program files that commonly have extensions such as .COM, .EXE, .SYS, .OVL, or .SCR. The most common programs attacked by viruses are standard DOS programs that have the .COM and .EXE file extensions. Examples of such viruses are Acid Rain, Trojan, Amoeba 298°, etc.

Boot Viruses : These infect the non-file areas of the hard disk and floppy disks. These areas offer an efficient way for a virus to spread from one to another. Examples are Danish Boot, Devil.941, etc.

Macro Viruses : These infect data files. They spread rapidly as infected documents are shared across networks. Examples are XM.Yohimbe.A, Melissa.mp, etc.

6. Five ways in which we can protect our computer from viruses are :

- We should have our automatic protection turned on all the time. Automatic protection is already set for us when install most antivirus using the preset options.
- We should perform a weekly manual scan of our hard disks. Manual scans are an added protection and they help to ensure that our computer is virus free. Most anti-virus programs have these automatic scans scheduled during installation.
- Scan all floppy disks before using them for the first time.
- Update the anti-virus programs regularly.
- Make regular backups of the hard disk

D. Correct the following statements :

1. The Internet is a network of computers.
2. You can search any information from search engine.
3. Online Shopping is called e-commerce.
4. FTP Stands for Files Transfer Protocol.
5. Anti viruses protect the computer programs.

Activity & Projects Tasks

Ans. Do it yourself.

**Exercise**

Based on NEP 2020

A. Fill in the blanks :

- Ans.** 1. CorelDRAW files are saved with the extension **.cdr**.
 2. The **Drawing Page** is the main area of the interface in which you work.
 3. **Color Palette** is a bar that displays a variety of color swatches. This is the default color palette.
 4. **Property Bar** contains commands specific to activated tool or object.
 5. **Tool Box** contains several button-like tools, which you can use to create and modify objects.

B. Choose the right one :

- Ans.** 1. i. 2. i. 3. i

C. Answer these questions :

- Ans.** 1. Fun, flexible and user-friendly, CorelDRAW is one of the most intuitive graphics design application that makes it easy to create professional artwork from logo creation and Web graphics, to brochures, or eye-catching signs.
2. **Installing CorelDRAW Graphics Suite X3**
 The installation wizard makes it easy to install CorelDRAW Graphics Suite X3 applications and its components. Try the following steps :
- Close all applications.
 - Insert CD in the CD drive.
 - If the installation wizard does not start automatically, click **Start** on the Windows taskbar, and click **Run**. Type D:/CGS13/Setup, where D is the letter that corresponds to the CD drive.
 - Follow the **InstallShield** Wizard instructions for installing the software. We can also activate the installation wizard by clicking Start on the Windows taskbar, clicking Run, and typing

D:/autorun.

3. The components of the CorelDRAW interface are :
 1. Title Bar 2. Menu Bar 3. Standard Toolbar
 4. Property Bar 5. Tool Box 6. Drawing Window
 7. Drawing Page 8. Rulers 9. Document Navigator
 10. Status Bar 11. Docker 12. Navigator 13. Color Palette
4. i. Drawing page is the solid outer rectangle in the Drawing window. We can print all the drawings that we create on this page.
 ii. Rulers are horizontal and vertical scales, which we can use to determine the size and position of objects in a drawing.
 iii. Document Navigator provides controls to navigate between pages and insert pages into document.
 iv. Status Bar displays information such as the size and the position of a selected object. It also shows the current position of the pointer.
 v. Docker is a pane on the right side of the application window that contains commands and setting specific to a tool or a task.
 vi. Navigator is a small rectangle in the lower-right corner of the Drawing window (adjoining vertical and horizontal scrollbars). When we click this button, a thumbnail preview of the Drawing page appears in which we can navigate.
5. Rectangle tool and Ellipse tool are both the basic Shape tools but **Rectangle tool** is used to draw rectangles by dragging diagonally in the Drawing window whereas **Ellipse tool** is used to draw an ellipse or a circle by dragging diagonally in the Drawing window. The Ellipse tool lets us quickly create an ellipse at an angle, eliminating the need to rotate the ellipse.

Activity & Project Tasks

Ans. Do it yourself.

**Exercise**

Based on NEP 2020

A. Choose the right one :

- Ans.** 1. iii. 2. ii.

B. Fill in the blanks :

- Ans.** 1. To show a process taking place we use the **process** box.
 2. Flowcharts help us to understand the **solution** of a program.
 3. Flowcharts are a **graphical** representation of an algorithm.
 4. The **input** box is used to accept the data from user.

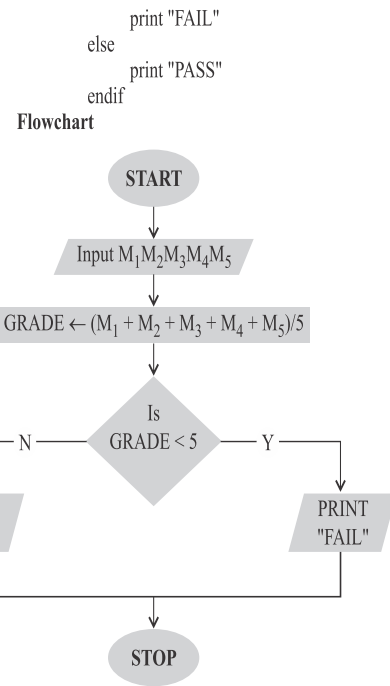
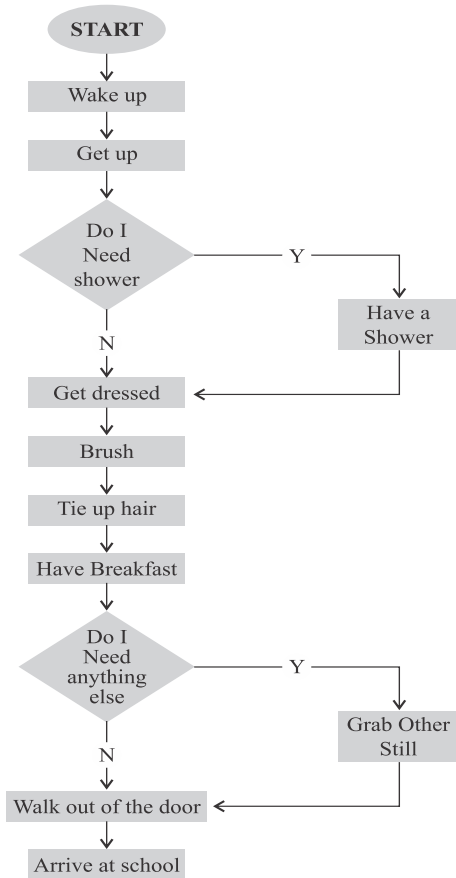
C. Answer these questions :

- Ans.** 1. **Algorithm** : An algorithm is a logical sequence of instructions that give the complete solution to a given problem.
Flowchart : A flowchart is a graphical representation

of the steps requires to solve a problem.

2. We use various symbols to draw flowcharts. Each symbol represents a different function and is used for a different purpose.
 These symbols represent various actions and decisions. Connecting arrows show the flow of control between the symbols.
3. **Algorithm**
Step 1 : START
Step 2 : Wake up.
Step 3 : Eat breakfast.
Step 4 : Practice good hygiene.
Step 5 : Get dressed
Step 6 : Take everything you need.
Step 7 : Head out of the door.
Step 8 : STOP

Flowchart



Activity & Project Tasks

Ans. Do Yourself

4. A flowchart is a programming tool which helps us to understand a problem and the sequence of steps required to be taken to solve the problem.

5. **Algorithm**

Step 1 : START

Step 2 : Input M_1, M_2, M_3, M_4, M_5

Step 3 : Grade $(M_1 + M_2 + M_3 + M_4 + M_5)/5$

Step 4 : If (GRADE < 50) then